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Sabeth Tödtli

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Diego A. Barrado Timón

Abstract - German

Im Bestreben einer 'Nachhaltigen Entwicklung' plädiert diese Masterarbeit für den Schwerpunkt auf 'Soziale Nachhaltigkeit', namentlich auf Lebensqualität und soziale Gerechtigkeit.

Diese Forschungsarbeit befasst sich mit den 'Sozialen Vorteilen' einer reduzierten Automobilität.

Im theoretischen Teil werden die möglichen Vorteile von reduzierter Automobilität identifiziert. Nebst ökologischen und wirtschaftlichen Vorteilen liegt das Potential vor allem in den Bereichen Gesundheit, Sicherheit, Komfort, Freiheit, Identität, Kultur, Ästhetik, Demokratie und Bürgerbeteiligung und Gemeinschaft.

Der empirische Teil der Arbeit besteht aus zwei Fallstudien – zwei autofreien Wohnsiedlungen – in welchen diese potentiellen sozialen Vorteile untersucht und evaluiert werden: das Quartier Vauban in Freiburg, Deutschland, und die Autofreie Mustersiedlung Floridsdorf in Wien, Österreich. Die sozialen Vorteile, die von den Bewohnern am stärksten wahrgenommen werden sind Gemeinschaftseinrichtungen, gemeinschaftliche Aktivitäten, und die Möglichkeit in die Entwicklung und die Organisation der Siedlung miteinbezogen zu werden.

Dieses Konzept der Mitbestimmung, sowie das starke Gemeinschaftsempfinden, bilden somit den Schlüssel zum Erfolg für autofreie Wohnsiedlungen. Die aus dieser Erkenntnis resultierende Empfehlung lautet: In der Planung zukünftiger autofreier Wohnsiedlungen sollen mehr 'soziale Vorteile' von vornherein eingeplant, gefördert, und ausserdem angesprochen werden. Dazu bietet Quartier Vauban ein gutes Beispiel, einerseits bezüglich der mittleren Siedlungsgrösse, sowie bezüglich der nicht allzu radikalen Umsetzung des autofreien Konzeptes.

Abstract - English

This research is concerned with 'Sustainable Development', focusing on the potential of reducing automobility. It advocates a focus on 'Social Sustainability', namely on efforts towards more 'Quality of Life' as well as more 'Social Equity'.

The theoretical part of this research identifies the 'Potential Social Benefits' of carlessness (a reduction in car-traffic). Aside from ecological and economic benefits, the social potential is around issues such as health, security, comfort, freedom, identity, culture, Aesthetics, democracy, participation, and community.

The empirical part consists of two casestudies – two carfree living projects – in which these 'potential benefits' are investigated: Quartier Vauban in Freiburg, Germany, and Autofreie Mustersiedlung Floridsdorf in Vienna, Austria. The research detects the main social benefits that are perceived by the project's residents: namely the communal life, the communal infrastructure, and the possibility to be involved in the development and the management of the project.

This participatory approach, and the strong relevance of community, are identified as the main keys to success for carfree living projects. Thus, as final suggestions, it is suggested that future carfree living projects implement and promote 'social benefits'. Finally, the ideal scale of such projects is discussed, concluding that the Quartier Vauban project provides a good compromise concerning its local scale and its sustainability- and mobility-approach based on voluntarism.

«Quand tu veux construire un bateau,
ne commence pas par rassembler du bois,
couper des planches et distribuer du travail,
mais reveille au sein des hommes le desir de la mer grande et large.»
(Antoine de Saint-Exupéry 1943)

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Part I

INTRODUCTION

1 Introduction

1.1 Introduction and Hypothesis

Background and Basic Assumption

Facing the acuteness of climate crisis the world is in urgent need for a 'Green Change'. But Sustainable Development shall not be limited to ecological measures. The convergence of multiple crises today calls for an all-embracing approach, following the tri-fold concept of Sustainable Development, encompassing ecological, economic and social concerns. This research paper advocates a focus on Social Sustainability, along with re-urbanisation.

The basic assumption is that a development towards 'Urban Sustainability' has great potential to take into account the two main concerns of Social Sustainability: Efforts towards 'Quality of Life' and the issue of 'Social Equity'.

>> For a comprehensive essay on these issues, see Appx 1

Focus and Hypothesis

To examine the question of 'Urban Sustainability' in a more confined realm of study, the topic is narrowed down to the problem of traffic in cities, and finally to the notion of 'carfreeness'. Why? Because automobility uses up large amounts of resources such as energy, material, and land, it pollutes the environment, and it costs a lot of money. In contrast, a reduction in automobility offers various advantages for the environment, the economy, and consequently the society.

The data and knowledge on ecological advantages in this context is already extensive, but yet has not caused far-reaching changes in mobility behaviour. Why not? Because to the majority of people, 'saving the environment' as an argument is not persuading enough. Nor is any other altruistic reason.

Therefore, the proposal in this research paper is to redefine the central motivation for 'Sustainable Development'. What is necessary for a 'Green Change' to happen? The society as a whole has to be willing to change. In order to convince people, the necessary change has to meet human needs and human desires, and contribute to their 'Quality of Life'. In order to be appealing and become 'normal', the proposed lifestyle must have obvious social benefits.

The main hypothesis and the resulting aim of this research are:

- Carfreeness has the potential to provide a range of 'social benefits'
- These 'potential social benefits' must be identified, and shall become decisive arguments for a reduction of automobility.

In particular, these 'potential social benefits' shall be implemented or encouraged in future carfree living projects.

1.2 Research Question and Methodology

The main research questions are:

- What are the 'Potential Social Benefits' of carfreeness?
- What are the 'Social Benefits' of carfree living projects?

These research questions cannot be answered with yes or no, they are not hypotheses that can be confirmed or rejected. They rather call for an elaboration on these 'Social Benefits', on their potential, and on their relevance. Moreover, the research questions clearly call for qualitative research methods. Existing indicators do not seem useful. Instead, the method throughout this research is to collect statements, opinions, ideas, observations etc. both from existing literature (in Part II) and from concrete projects (in Part III). And as this collection of 'Potential Social Benefits' is supposed to be as complete and thus as diverse as possible, the methodology must be open for unexpected results.

The paper is divided into four parts:

Part I

Part I is an introduction into the motivation for this research paper and indicates the necessary background knowledge. It explains why this research paper suggests carfree living projects to re-focus on 'Social Benefits'. It presents the main hypothesis and research questions, and it explains the structure of the paper and the applied methodologies.

Part II

Part II presents a state of the art of why automobility is not sustainable. It then proposes an alternative form of mobility, and an appropriate urban form. And it theoretically elaborates on the potential ecological, economic, and mainly the social benefits that can result from reducing automobility. The method used for Part II was literature research.

This theoretical inquiry does not necessitate its empirical prove or its complimentary practical counterpart in a casestudy. The assemblage of 'potential social benefits' of carfreeness is not true or false. Neither can this potential be measured by quantitative fieldwork.

Instead the theoretical part of this research shows a potential, which is then supplemented by the practical part. The common aim of both parts is, to collect as many 'potential social benefits' of carfree living projects, in order to support new projects with ideas and suggestions.

Part III

Part III first gives a short introduction into the history, the concept, and the conditions of 'carfree living projects' in Europe.

This is followed by two casestudies: Quartier Vauban in Freiburg (QV), Germany, and Autofreie Mustersiedlung Floridsdorf (AMF) in Vienna, Austria.

A variety of different sources and methods were used for the case studies to firstly create a short description of the projects (already with a focus on social aspects) and secondly to summarise and emphasise the 'social benefits' that are perceived by the project's residents (and users).

The leading question is:

What 'Social Benefits' are being perceived in the carfree living project?

Thus, the aim was not to apply existing quantitative indicators, or to accurately measure sustainability. The aim was to investigate in the perception of benefits.

The desk research involved an extensive analysis of material on the projects (papers, existing casestudies, reports, articles, brochures, movies, websites etc.). The primary external sources for the casestudies are mentioned in the beginning of each casestudy (or in Appx 9+10). In

addition, what influenced the description of the projects, was the author's participant observation, which was carried out during visits to the project areas, taking notes and pictures, and talking to people. In order to get a better idea of the project's 'Social Benefits', a survey was conducted in the process of this research.

Survey:

Through numerous written questionnaires, filled out by residents (and users) of both projects, it was possible to gain an idea of what respondents perceive as 'Social Benefits' in their living environment. The posed questions focus on the project's 'Social Benefits', and almost half of them were open-response questions, which allowed the respondents to elaborate, and to spontaneously contribute their very own thought, ideas, and preferences. Only in a second step, questions became more concrete, proposing 'Potential Social Benefits', and asking respondents to rate them – again according to their very personal perception. The results were manifold and sometimes unexpected, and turned out to be a very valuable counterpart to the facts and figures, or the PR-statements concerning the project.

>> See Appx 22

Part IV

In part IV, the two casestudies are being compared, considering their success, their main social benefits, their key to success, and their differences in scale. And finally the question of adaptability is raised: Is the project a model for new development? What is the best approach? What are the 'Social Benefits' that can be the potential – and thus the key to success – of new projects?

The conclusion is rather short, because the most important research result is represented by the extensiveness of the demonstrations and elaborations throughout the research paper, and these shall not be summarized, but taken as inspiration and suggestions as such.

Part II

AUTOMOBILITY

VS.

CARFREENESS

2 Towards Carfreeness

Concerning the climate crisis, one main problem today is mobility, particularly automobility. Car-traffic today consumes massive amounts of resources, in form of energy, material, land, and money, and it is one of the most destructive forces, degrading land and polluting the air and the environment in general. That is why this research paper strongly advocates a radical reduction of automobility, carfreeness at best.

The following chapter offers an explanation of these car-related disadvantages, which make apparent what could be saved (resources) and protected (environment) through car-reduction or carfreeness.

Subsequently this research elaborates on possible changes, such as changing mobility patterns or a changing urban form. The conditions for appropriate changes are time and scale on the one hand, and the strength of intention (or will) of society on the other hand.

Finally, this paper will discuss the potential of such changes. Various 'potential benefits' can be a result of car-reduction directly, or can indirectly result from new forms of urbanity, mobility, and lifestyle. Ecological benefits will be mentioned first, but then the focus will be on the social (and economic) benefits resulting from car-reduction, directly or indirectly.

2.1 'Automobility'

Spatial mobility of people includes migration and housing mobility, which both involve a permanent change of residence, it includes travelling, mobility of long distances. And most importantly it refers to mobility of short and frequent distances within the region (commuting for job, education, shopping, leisure...).¹ This latter form of mobility is the most frequent and significant.

Spatial mobility can happen by various modes of transport. People are mobile on foot or by bicycle, by horse, boat, by all means of public transportation, by plane etc... Most often, people are automobile. The word 'automobile' comes from the Ancient Greek word 'autos' for 'self' and the Latin word 'mobilis' for 'movable'. An 'automobile' is a vehicle that moves itself. Considering this, even the human being is an automobile. But most often, automobility refers to 'mobility by means of an individual motorized vehicle', namely a car. (In this research paper, the term 'automobility' is used for mobility by individual cars).

¹ Kaufmann et al. 2004. In: Martinez Lopez 2011

Transportation in general, and individual mobility in particular, are the most significant fields of energy consumption, and amongst the biggest sources of pollution nowadays. To tackle this problem, many researchers, engineers, planners, and politicians have developed various solutions. The main debate around the problem of mobility is proposing two opposite directions: reducing mobility, or increasing its efficiency.

The following chapters will elaborate on how automobility is the most inefficient and the most destructive form of mobility.

2.2 **Automobility: Resource-Use and Impacts**

According to Sheller and Urry, automobility is «the single most important cause of environmental resource-use resulting from the exceptional range and scale of material, space and power used in the manufacture of cars, roads and car-only environments, and in coping with the material, air quality, medical, social, ozone, visual, noise and other consequences of pretty well global automobility»¹

Automobility uses up large amounts of resources such as energy, material, and land, it pollutes the environment, and it costs a lot of money. A reduction in car traffic can thus have various positive impacts on the environment, the economy, and consequently the society.

¹ Sheller & Urry 2000: 739

Use of Energy / Material, and Pollution

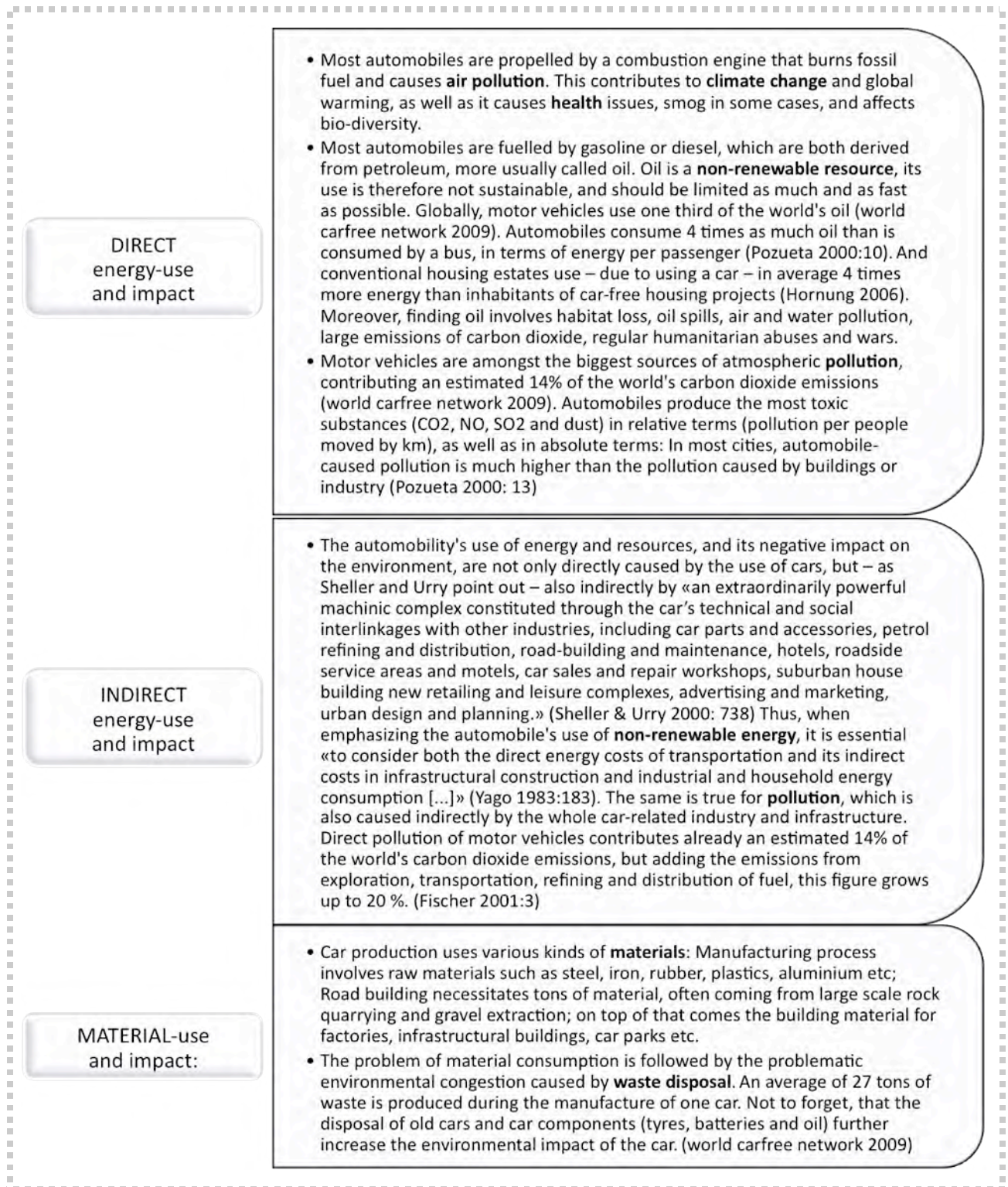


Figure 1. Automobility's resource-use (energy, material) and impact

Land-Use

Apart from energy and material, another resource that is highly consumed by automobility is land. O'Meara writes: «Cars devour not just energy but land.»¹

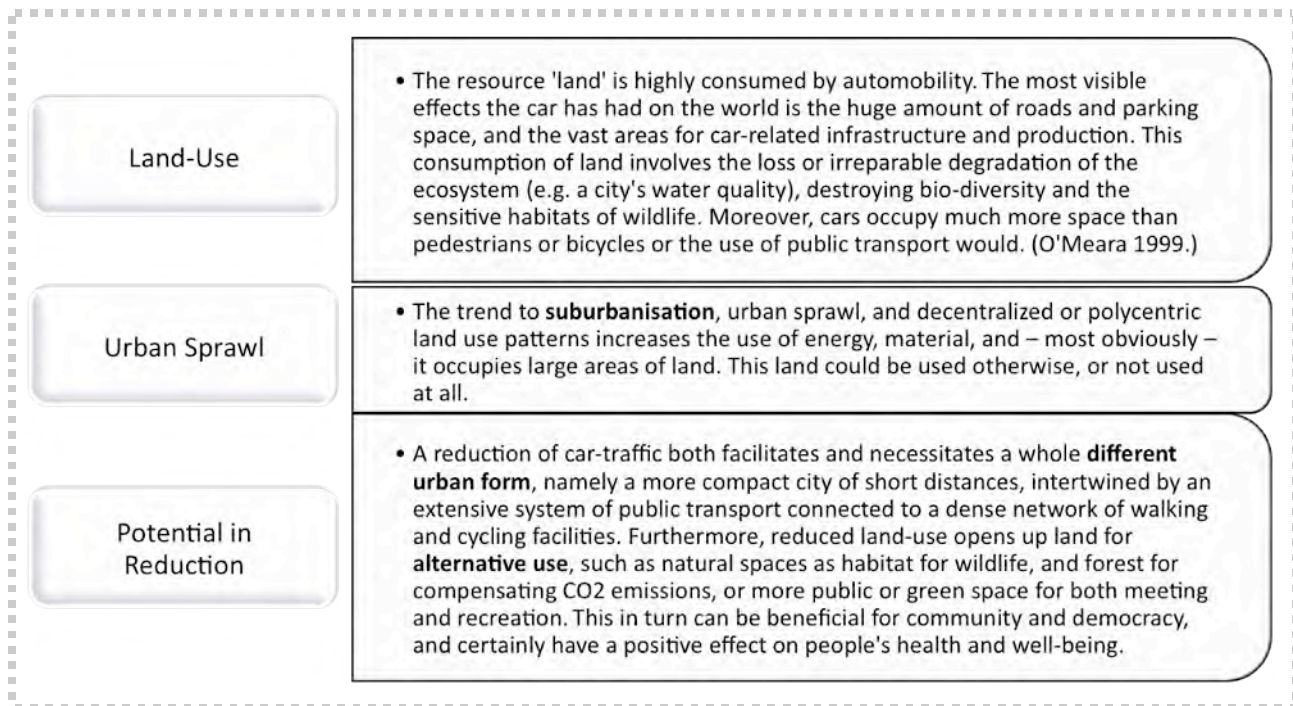


Figure 2. Automobility's land-use

¹ O'Meara 1999:45

Use of Financial Resources

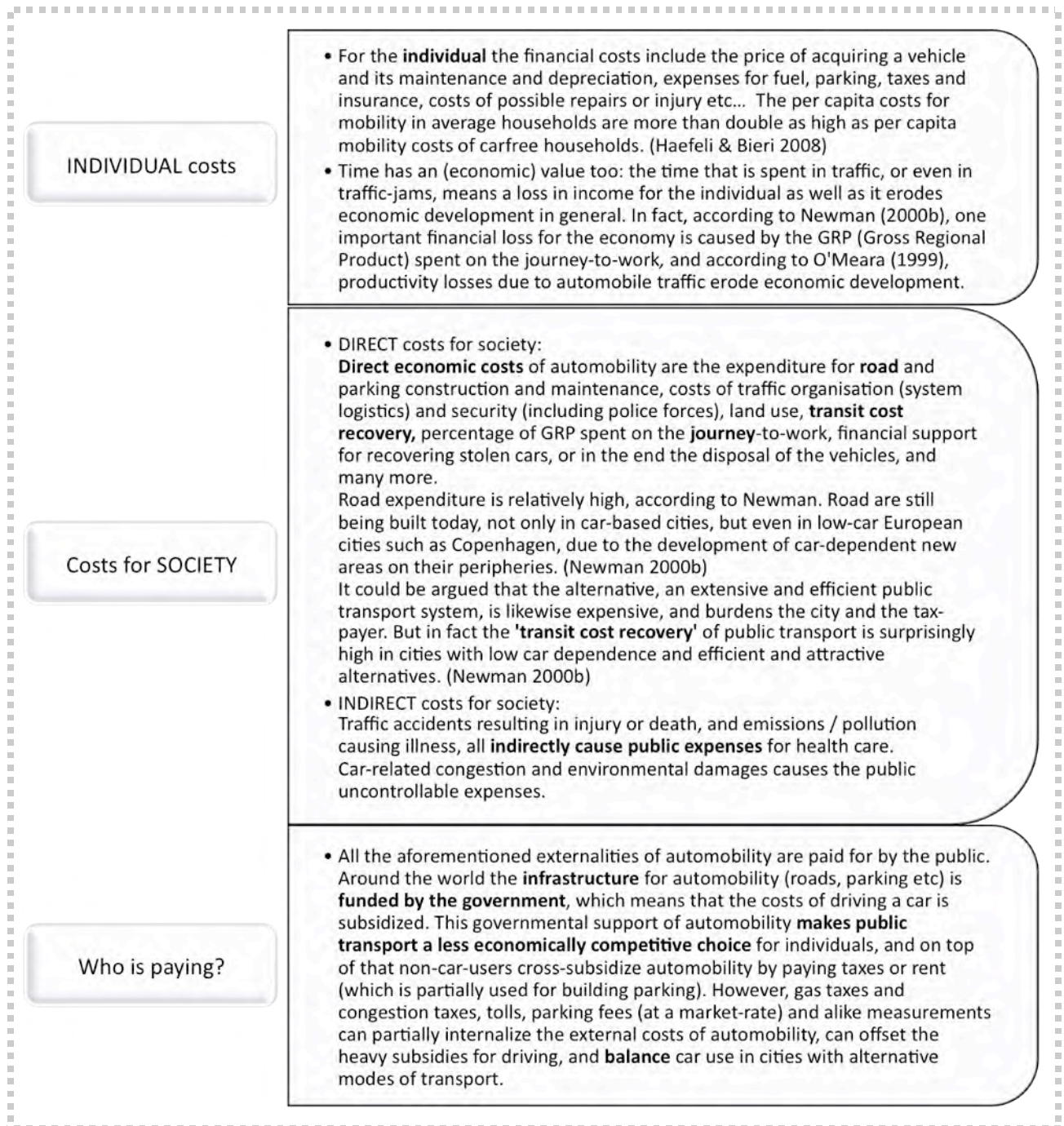


Figure 3. Automobility's use of financial resources

The financial costs of automobility are high, for the individual as well as for society. Most of automobility's externalities are paid for by the public. Car-related infrastructure is funded by the government, which means that the costs of driving a car is subsidized, and makes public transport less competitive. On the individual level non-car-users cross-subsidize automobility by paying taxes or rent (which is partially used for building parking). However, gas taxes and congestion taxes, tolls, parking fees (at a market-rate) and alike measures can partially internalize the external costs of automobility, can offset the heavy subsidies for driving, and balance car use in cities with alternative modes of transport.

>> For more arguments and a more detailed explanation of 'internalizing external costs', see Appx 4

Re-designating Resources

Surely, all the aforementioned costs (energy, material, land, money) have to be weighted against the value of the social benefits of automobility, and balanced against the cost (and the social benefits) of the alternatives. But it is certain that reducing automobility will significantly reduce the use of energy, material, land and money.

These resources can alternatively be used for other forms of mobility, for the development of a new urban form, for more green space or natural features, or can simply be invested in public and communal space and facilities, or for social and educational services and institutions. On a small scale, for a single housing-project or neighbourhood, the savings are smaller, but still substantial enough to be invested in sustainable features. Examples of this way of 're-designating resources' on a small scale can be found in the two case studies of this research paper.

This alternative use of resources, the changes that are both possible and necessary, and the potential social benefits resulting from them, are the content of the following parts of this research paper.

2.3 Reducing Automobility

That automobility is problematic has been widely recognized nowadays, and solutions are being proposed. The debate around automobility as an ecological problem is proposing two opposite directions: one is to reduce automobile traffic, and to change planning strategies in accordance; the other is to rely on technical fixes of the problem, such as alternative fuels, electrical cars etc.

But as Safdie pointed out: «At some point the answer will not be more roads and cleaner cars, but some radical change.»¹ In the long term, 'technical fixes' and increased efficiency cannot be the solution, for at least two reasons: Firstly, it would at best improve an individual car's direct environmental impact, but what about indirect impacts, land use, social equity...? Secondly, it would usually mean to replace non-renewable energies by electricity, which is an equally unreliable and insecure source of energy. Finally, doing a risk-analysis of this matter confirms, that it is too risky to rely on miracle solution, while we can only win, if we go for a radical change today.

>> For the discussion of 'technical fixes versus radical mobility reduction', see Appx 2

As much as technology alone is no acceptable solution, neither is the idea to just eliminate mobility at all. Because there are clear limits to reducing the need for mobility, and even highly complex information, communication and simulation systems will not overcome this limit. It has been recognized that «people do like to be physically mobile, to see the world, to meet others and to be bodily proximate, and to engage in 'locomotion'»² Mobility is still a human right!

>> For a more detailed discussion of 'the limits of telecommunication', see Appx 3

Concluding from such arguments, this research paper strongly advocates a radical reduction of automobility (= carlessness). The need / demand for automobility must be reduced both by reducing the need for mobility in general, and by offering alternatives.

The proposal in this paper is to substitute car-based automobility by a sustainable, 'smart', inter-modal and highly interconnected transportation system, in connection with a dense, mix-use urban form that encourages walking and cycling.

Sustainable Mobility

Intermodal transport systems are networks that combine efficient public transit with attractive pedestrian and bicycle systems. Collective public transport and non-motorized forms of

¹ Safdie 1997

² Sheller & Urry 2000: 753

transport are much more efficient than automobility in private vehicles, both in terms of fuel-efficiency and of vehicle loadings (occupancies).¹

As mobility without 'automobility' ('automobility' meaning 'being individually mobile') is wishful thinking, an intelligent intermodal mobility system might also include individual vehicles ². However, individual vehicles are to be well integrated into the overall mobility concept and street design 'shared space' concepts.

Pedestrians and cyclists need to have priority, because the advantages of non-motorized traffic are manifold. Jan Gehl is convinced that «Slow traffic means lively cities.»³ because «Life takes place on foot. Only 'on foot' does a situation function as a meaningful opportunity for contact and information in which the individual is at ease and able to take time to experience, pause, or become involved.» ⁴ Walking, in particular, is highly beneficial: Walking provides basic mobility, that is, many people rely on walking to access facilities for daily needs or activities with high social value. And, according to Gehl, walking provides the basic condition for social interaction.⁵ Moreover, walking is the basic form of exercise which contributes to people's health and well-being. Last but not least, as walking is the most accessible and the most inexpensive mode of transport, walkability is essential for social equity. ⁶

Decisive for the effectiveness of sustainable mobility is a proper 'Mobility Management'. ⁷ Intermodality must be organized and well-promoted (good instructions and information and instructions). For carfree living projects, an overall mobility management is particularly decisive, because in small enclaves within a larger system, residents are highly influenced and tempted by the outside mobility behaviour.

Up until now, sustainable modes of transportation – non-motorized modes in particular – have always been secondary on the economic and political front, for various reasons: Non-motorized traffic is inexpensive, has thus neither industry nor market, and consequently no strong lobby (in contrast to automobility or air transport).⁸ Moreover non-motorized traffic «tends to be stigmatized» ⁹, whereas motorized transport tends to be associated with success and progress and freedom.

Nonetheless, sustainable mobility (and non-motorized traffic) nowadays gets increasing support, and measures to promote it are manifold: They certainly include changes in infrastructure, changes in policies (pricing, incentives, taxes) as well as structural changes in processes of work, industry, as well as social processes. They can further include education and campaigns. But very essentially, measures include changes in urban planning.

>> A more detailed proposal for 'Sustainable Mobility' is made in Appx 5

Changing Urban Form

Mobility and the urban form have always determined one another¹⁰. From the 1940's onwards the automobile enabled massive suburbanisation resulting in urban sprawl. Likewise, today, the urban form needs to change again, as a result of a new form of mobility, and as a condition for this new form of mobility.

As to overcome car-obsessed modernist urbanism and suburban sprawl, Safdie pointed out how «Today the greatest task confronting us is to evolve, invent, and create a new urban

¹ Díaz 2000: 7; Giorgi 2004; Newman 2000b

² Sheller and Urry advocate a smart system, that would include the automobile into an intelligent inter-linked mobility system (Sheller & Urry 2000)

³ Gehl 1971

⁴ Gehl 1971

⁵ Gehl 1971

⁶ Litman 2003

⁷ An interesting online-source in this context: TDM Encyclopedia

⁸ Litman 2003

⁹ Litman 2003:4

¹⁰ See for example: O'Meara 1999: 40 and Yago 1983: 174, or see Appx 6

environment: a place of meeting and interaction; a place that is adaptable and pluralistic; a place of man-made and natural beauty.»¹

Examples like 'Transition Town', 'Smart Growth', 'New Urbanism', or the so-called 'Compact City' are possible concepts towards a new urban form², and they all clearly have a few characteristics in common: The focus is on mix-used density (or 'compactness'), on a traffic-reduced pedestrian-friendly environment with good access, on open public and green space, and on community life. And the focus is clearly on the 'urban', instead of 'suburban' or rural.

Re-urbanisation in compact centres has the strongest direct impact on mobility patterns and on the environment, as well as on local livability.³ Compact cities, if implemented correctly, are cities of short distances, which reduces transport energy use⁴, supports public transport⁵, and encourages walking and cycling⁶. Furthermore, compact cities strengthen the local economy.⁷

Apart from being dense, the new urban form must be mix-use and diverse. Carfree living MUST include facilities and job-opportunities on a small scale! Authors such as Jacobs 1961 or Gehl 1971 have pointed out the various social advantages of a human scale and walkable city, given that this city is based on a high diversity of people, activities, facilities, and buildings.

Moreover, through a reduction of road and parking space, more space becomes available for other uses. This space can be used for more green space and natural features, or for non-commercial public space. It can be made open for alternative uses, activities, or art forms, supporting citizen initiatives etc.

>> A more detailed proposal for a 'Changing Urban Form' is made in Appx 6

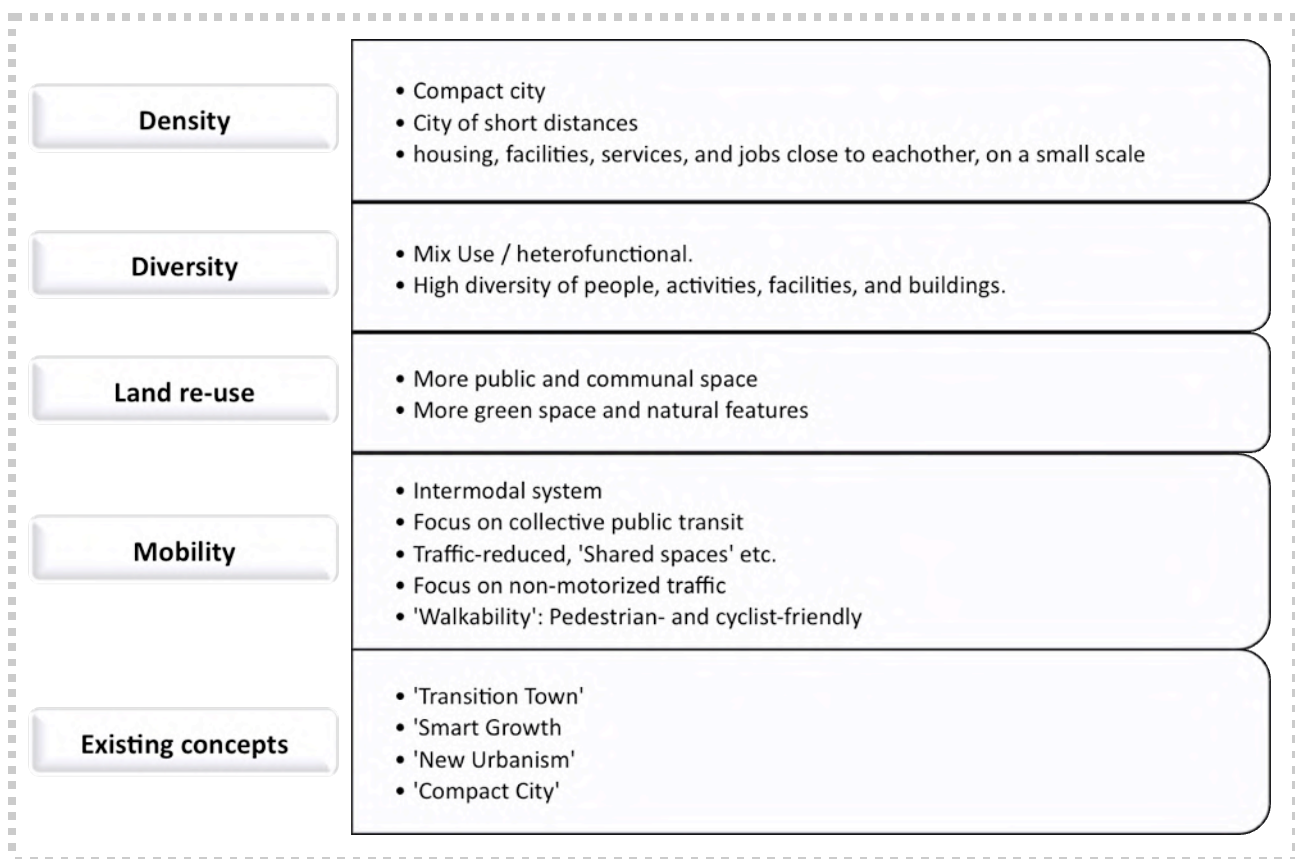


Figure 4. Necessary changes towards sustainable mobility and a new urban form

¹ Safdie 1997

² See Appx 6: 'Existing concepts'

³ O'Meara 1999: 44 & 45

⁴ Newman 2000a

⁵ Burton 2000: 1982

⁶ Litman 2003

⁷ Confirmed by Heller (n.d.) and Burton (2000: 1982).

3 Potential Benefits of Carfreeness

3.1 Introduction: Classification

Appropriate changes in behaviour, mobility, and in urban form have at least two conditions: On the one hand it is a matter of time, because cars will not disappear over night. And consequently, it is – at least preliminary – a matter of the degree of carfreeness, and of the scale and extent of carfree areas. On the other hand, the direction of a shift is strongly dependent on a society's intention (or will).

Most conveniently, benefits of carfreeness can be distinguished according to their source:

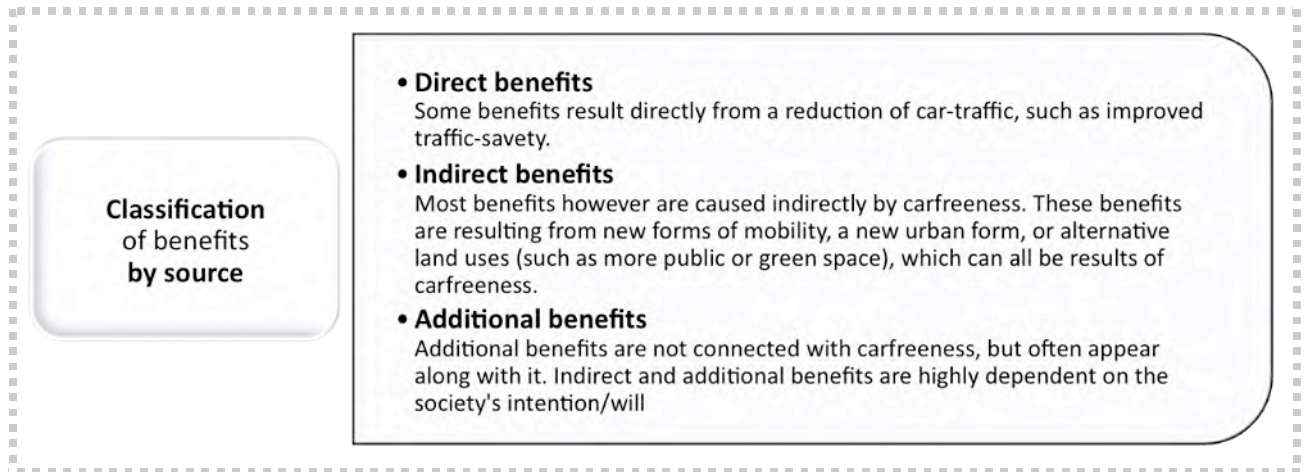


Figure 5. Classification of benefits by source.

The potential benefits of carfreeness that are mentioned in the following will be roughly sorted according to the proposed differentiations: 'by scale / degree of carfreeness', 'by time-factor', or 'according to the source of the benefit'.

>> For a more elaborate explanation of how to classify potential benefits, see Appx 7

3.2 Potential Benefits for the Environment

Environmental benefits of a reduction in car-traffic can be a 'direct' result from reduction in car-traffic, expected instantly, an indirect result from reduced resource-use and pollution in car-related production or infrastructure, or 'additional' benefits depending on the intention and motivation of developers and residents.

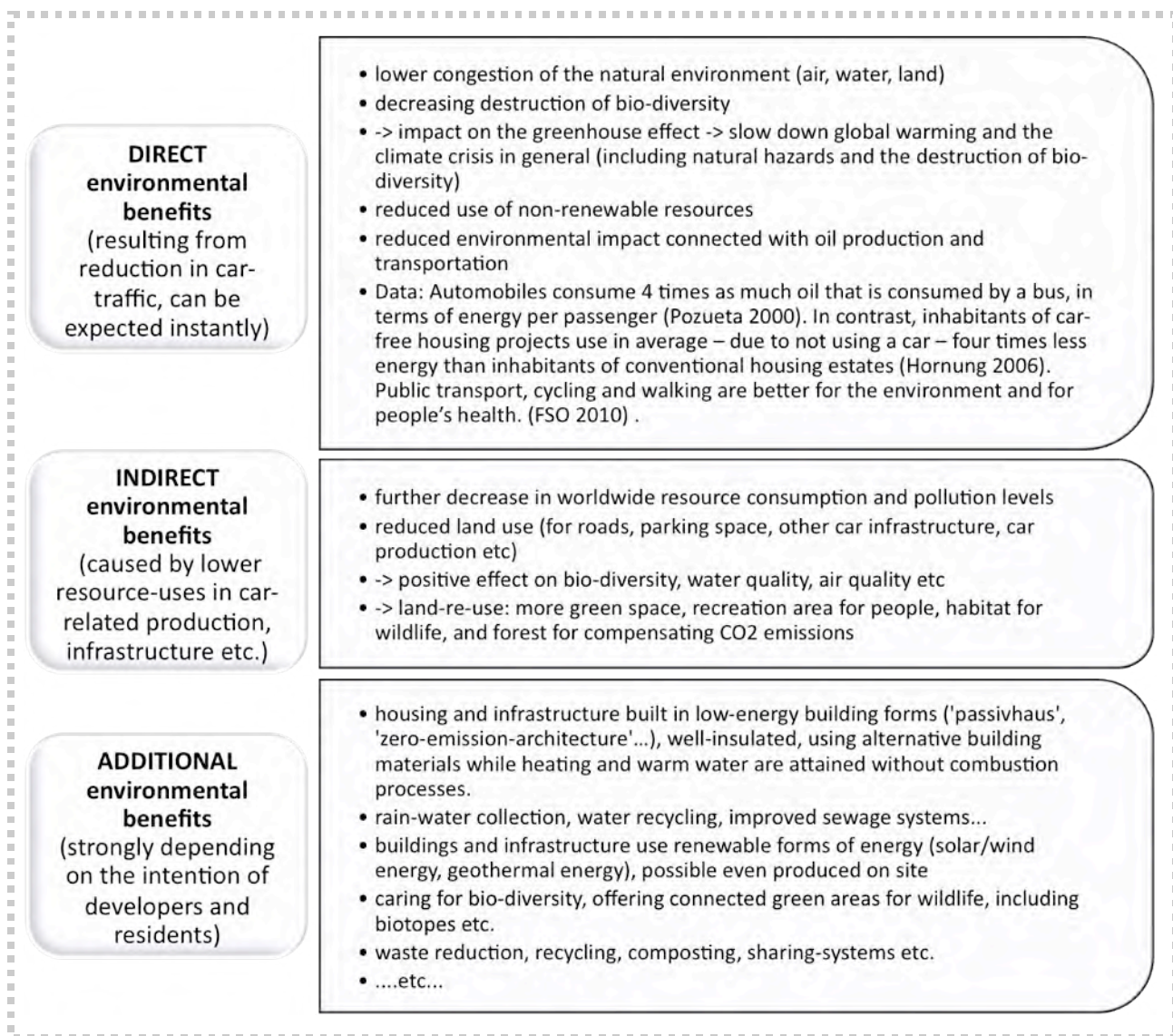


Figure 6. Potential environmental benefits of carlessness

3.3 Potential Economic Benefits

As already emphasised in the chapter 2.2 on resource-use, the financial costs of automobility are high. Individuals, not having a car, save all the costs that are involved with car ownership, for society, savings include the expenses for the total of car production and car infrastructure, and all the costs that are externalized from car traffic.

>> See chapter 2.2 or Appx 4

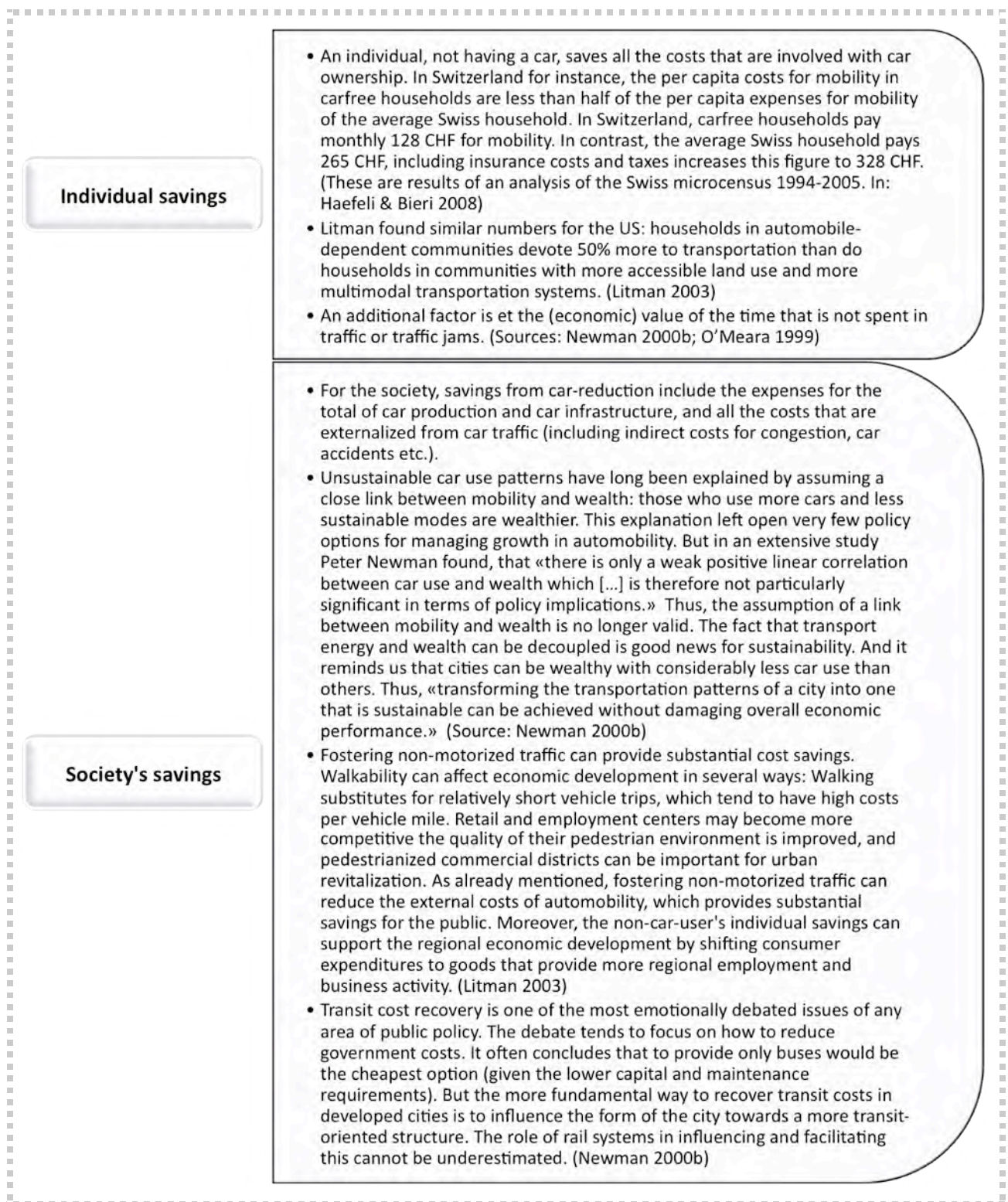


Figure 7. Potential economic benefits of carlessness

3.4 Potential Social Benefits

When considering the social benefits of automobility, people might think of economic benefits (such as job and wealth creation, of automobile production and maintenance), well-being derived from leisure and travel opportunities, and obviously transportation provision in general: namely

the ability for humans to move flexibly and individually from any place to any other place, at any time.¹

However, having mentioned this, the focus of this paper is clearly the opposite: What are the social benefits of reducing automobility? People might instantly think of ecological benefits, and maybe traffic safety comes to their mind too. But most people might not be aware of the broad variety of social benefits that can result from car-traffic reduction, and of their potential to increase not only health and safety, but the quality of life in general, or even the level of happiness. But what exactly are these ‘potential Social Benefits’?

‘Potential Social Benefits’ are namely those societal impacts of carfreeness that increase the quality of life by making people feel well or happy.

>> For an elaboration of quality of life and happiness, see Appx 1

The following list is an attempt to classify potential social benefits:

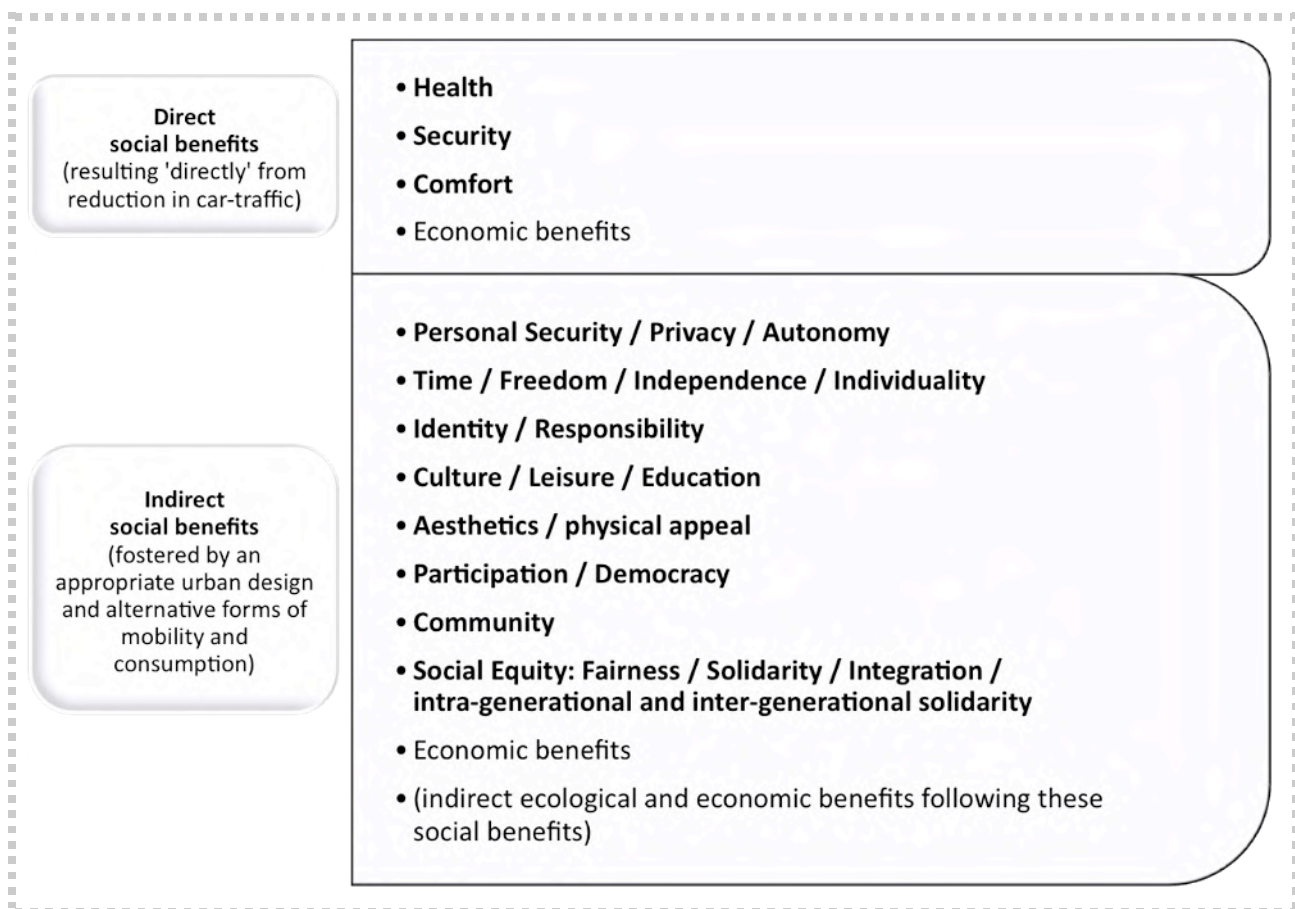


Figure 8. Potential social benefits of carlessness

In the following part of this paper, each of these social aspects will be discussed in detail. The leading question will be: Why and how much is this social benefit a potential result of carfreeness? And how relevant is this social benefit in fact?

As all these beneficial aspects are difficult concepts to quantify or to measure, their prevalence and their relevance can only be estimated by the results of qualitative research. Thus, subsequently, this potential will be tested and possibly confirmed in cases studies.

¹ Source: Online encyclopedia www.wikipedia.com. As the aim of this short summary is to give an idea of the mainstream opinion, the method to find out about it was to consult google, because nowadays google is the very first and most important mainstream media. Google's claimed main principle is to detect the mainstream interests and opinions of its user average, and to constantly adjust its result-mechanism in order to come up with the most popular internet content as its first result. The google search keywords in this case were 'benefits automobility', and the first result was a wikipedia item.

Physical Well-being: Health, Safety, Comfort

One leading aim of social sustainability is that health and safety of humans are to be comprehensively protected, maintained and promoted! The World Health Organisation (WHO) defines health as the complete physical, mental and social well-being of the individual.¹ Transportation affects health in many ways, including crash risk, physical activity, air and noise pollution impacts, transport related stress, mental health and community cohesion.²

One major concern to health is air pollution:

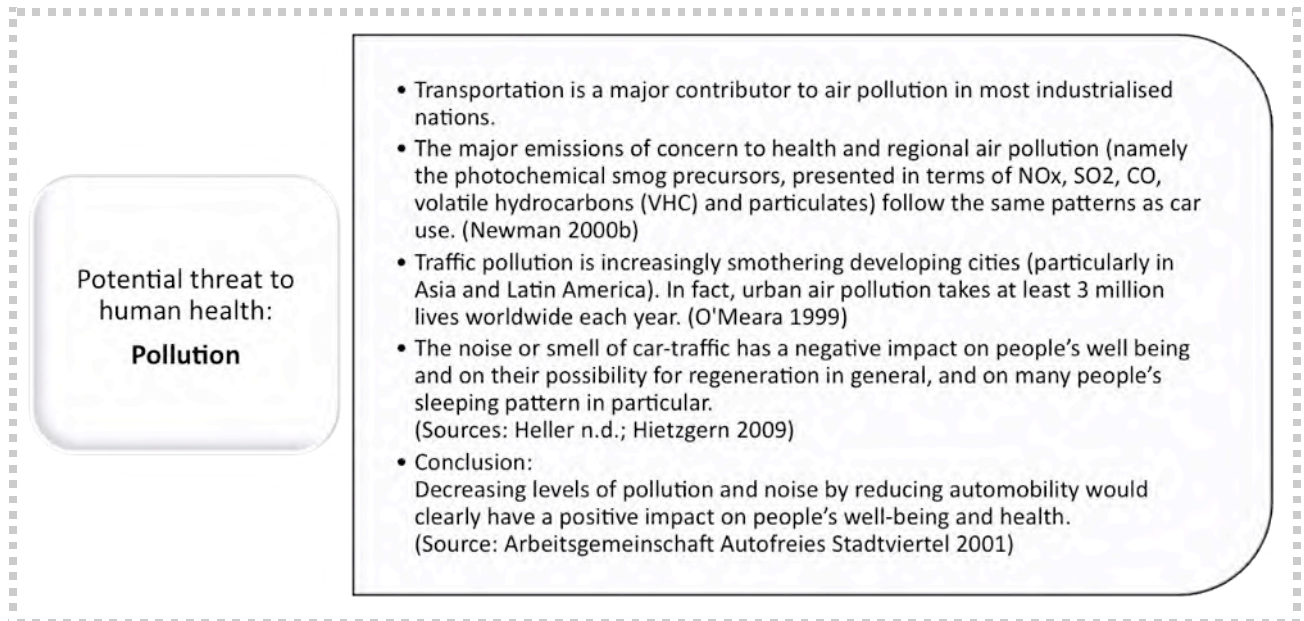
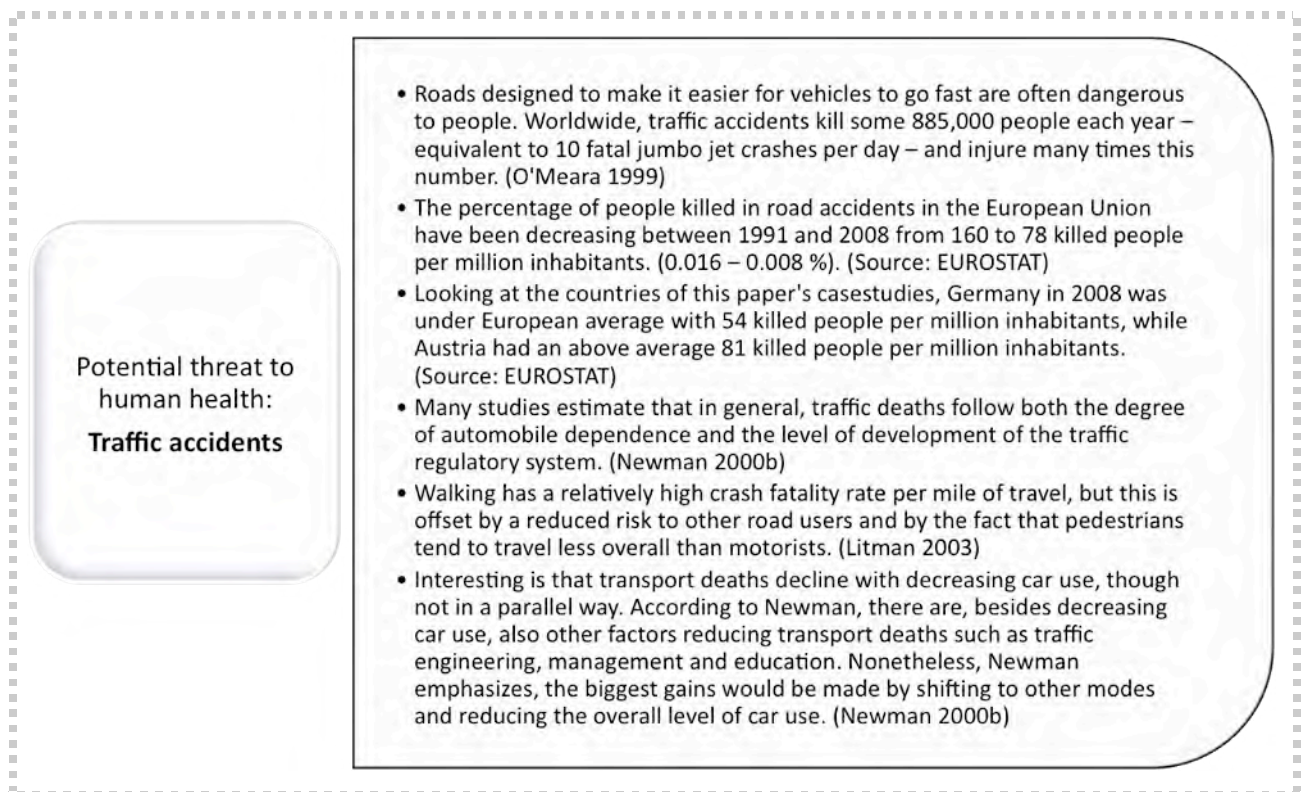


Figure 9. A threat to human health: pollution, noise and smell from automobility

Another direct threat to human health are traffic accidents:



¹ Swiss Federal Council 2008

² TDM Encyclopedia 2011

Figure 10. A threat to human health: traffic accidents

On top of these rather obvious health issues, automobility can have a range of impacts on the mental health of people. Only a few examples will be mentioned here: According to Yago, transportation-related stress-tension generated by declining transit service, increased traffic noise, highway traffic congestion, transit overcrowding, and increased travel time-may contribute to 'traffic-related frustration' or even a 'psychic overload'. Yago further quotes studies that show, how subjects exposed to transportation-related stress appear to adopt social behavior that is either undesirable (e.g. lack of helpfulness) or inappropriate (e.g. aggression), or even to develop stress-related physical disorders.¹ Sheller and Urry also warned of some kind of body repression: «The driver's body is itself fragmented and disciplined to the machine, with eyes, ears, hands and feet all trained to respond instantaneously, while the desire to stretch, to change position, or to look around must be suppressed. The car becomes an extension of the driver's body, creating new urban subjectivities.»² Moreover the car «is a room in which the senses are impoverished. The speed at which the car must be driven constrains the driver to always keep moving» However, according to Jan Gehl, an «important factor in experiencing others is that there must be a reasonable amount of time in which to see and process visual impressions.» At a fast speed, «the possibility of discerning details and processing meaningful social information drops sharply»³. Thus, as Freund pointed out, people dwelling at speed lose the ability to perceive local detail, to talk to strangers, to learn of local ways of life, to stop and sense each different place.⁴ «The sights, sounds, tastes, temperatures and smells of the city are reduced to the two-dimensional view through the car windscreen.»⁵

Apart from the direct impacts on health and mental health, a reduction of automobility indirectly, with time, can have a positive impact on the environment.

Apart from the above-mentioned direct impacts on health and mental health, a reduction of automobility indirectly and with time, by reduced land-use or by improving the environmental quality, can have a positive impact on the environment:

¹ Yago 1983

² Sheller & Urry 2000:747

³ Gehl 1971

⁴ Freund, 1993: 120-1. Cited in Sheller & Urry 2000

⁵ Sheller & Urry 2000:747

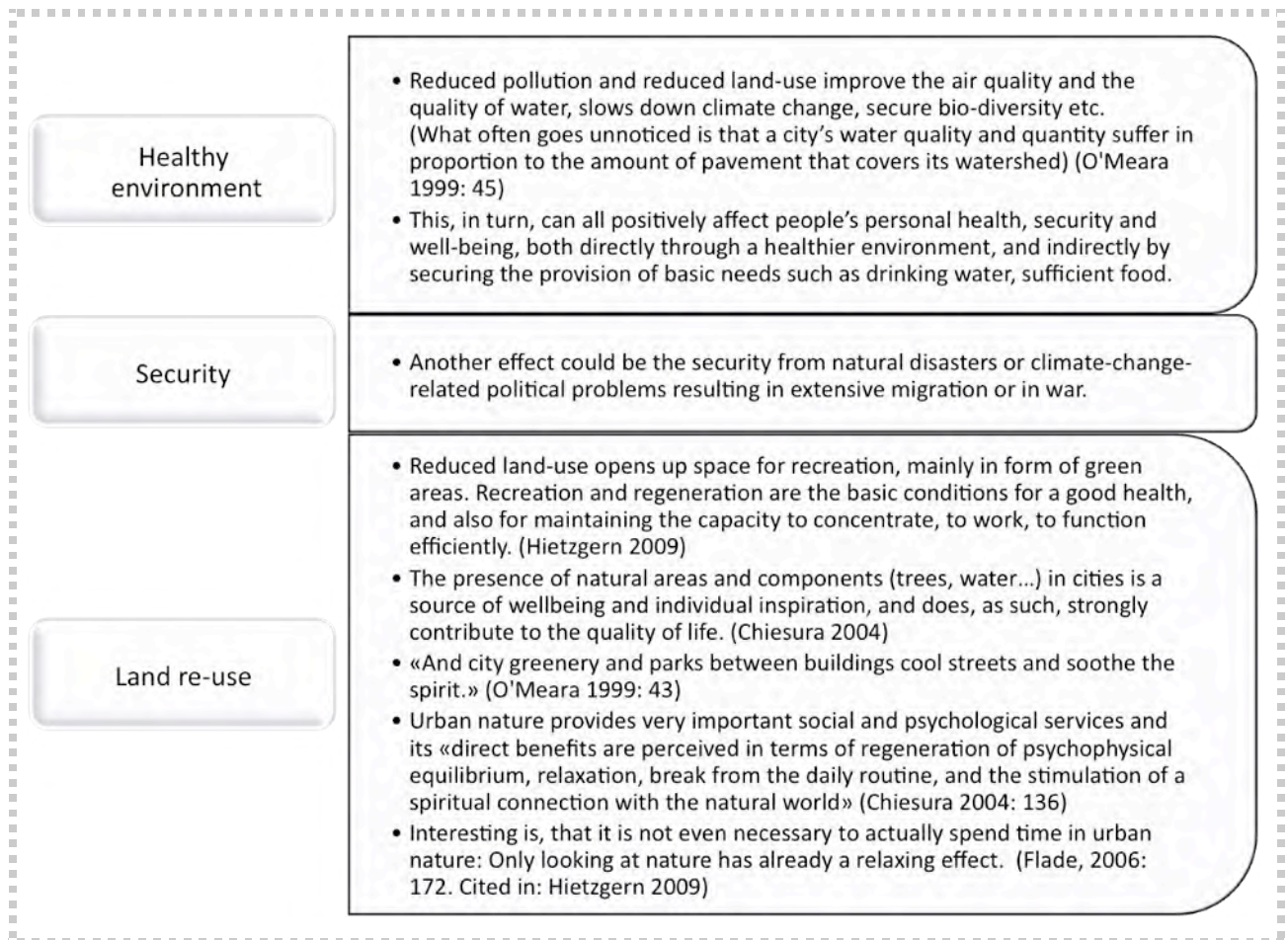


Figure 11. Indirect impacts on health

Aside from the environmental influences, what is important for recreation and regeneration is the possibility of physical interaction.¹ However, an increasing proportion of the population, including many children, lacks regular physical activity.² Inadequate physical activity is a major contributor to cardiovascular disease³, diabetes, hypertension, obesity, osteoporosis and some cancers, and even modest increases in physical activity tend to reduce mortality rates for both older and younger adults.⁴ In fact, the total negative effect (counted in illness and death rates) of inadequate physical activity is much greater than that resulting from traffic crashes.⁵

A comprehensive Swiss study confirms these risks and chances by analyzing dozens of national and international studies about how non-motorized traffic and health are connected. The study comes up with lots of data to prove, that non-motorized traffic clearly counteracts overweight and consequently all health issue that result from it.⁶ Although there are many ways to be physically active, many experts believe that more Non-motorized Transportation is the most effective way to improve public fitness.⁷ One major study concluded «Regular walking and cycling are the only realistic way that the population as a whole can get the daily half hour of moderate exercise which is the minimum level needed to keep reasonably fit».⁸ According to

¹ Hietzger 2009

² TDM Encyclopedia 2011

³ Wanner et al 2011

⁴ Litman 2003 & TDM Encyclopedia 2011

⁵ Litman 2005: 7

⁶ Wanner et al 2011

⁷ TDM Encyclopedia 2011

⁸ Physical Activity Task Force 1995. Cited in: TDM Encyclopedia 2011

Litman, walking tends to be particularly important for elderly, disabled, and lower-income people who have few opportunities to participate in sports or formal exercise programs.¹

A change in the urban form combined with changing mobility patterns, would strengthen all kinds of non-motorized traffic, such as walking and cycling. According to Sheller and Urry «There are many gaps between the various mechanized means of public transport [...]»² The TDM Encyclopedia names many researchers and according studies that all prove the association between health risks and urban sprawl, and emphasize the potential of density, land-use mix, using public and non-motorized transport, and the subsequent physical activity to improve health and increase life expectancy.³

The economic benefits of good health and increased safety are various. One very basic example is, that people who feel healthy are often more contented than those who are ill or disabled. Consequently they are also more productive, which is, at best, financially beneficial both for the individual as well as for the economy.⁴

Personal Security

Humans have a need for security in a wide range of different forms, going beyond traffic safety. Security further encompasses the avoidance of violence and other crimes of everyday life. And, as mentioned in Fig. 11, it also concerns security from political conflicts or natural disasters.⁵ Another vital necessity is to be protected from violence, crime, as well as being free of 'fear of crime'.

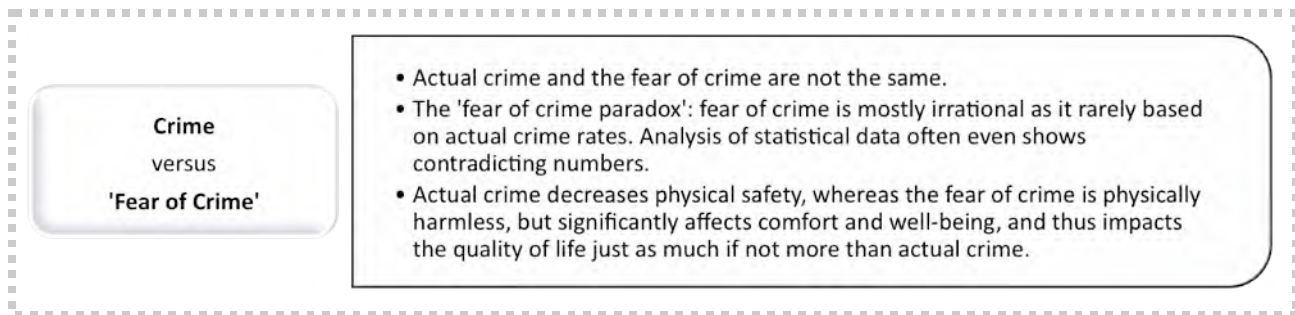


Figure 12. Crime versus 'Fear of Crime'

Since the 1960, a connection between fear of crime and urban planning has been acknowledged by researchers such as Jacobs, Newman, Gehl, or Kelling/Wilson, who are promoting a dense and mix-use urban form and vital street life:

¹ Litman 2003

² Sheller & Urry 2000:745

³ TDM Encyclopedia, Chapter 'Health and Fitness

⁴ FSO 2010

⁵ Swiss Federal Council 2008

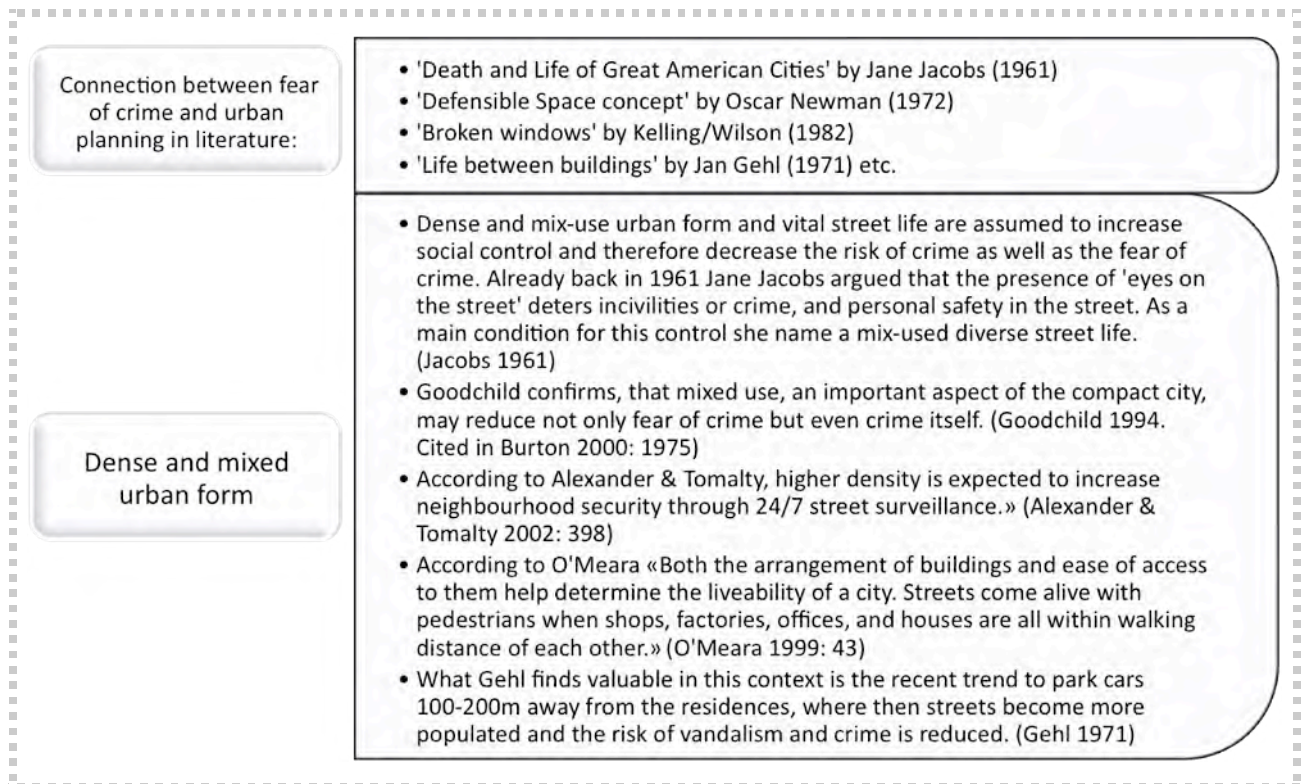


Figure 13. Urban form and crime

Time / Freedom / Independence

Time

Aside from consuming resources such as energy, material, land and money, automobility uses another resource: time! Cars are the most time-inefficient mode of transport:

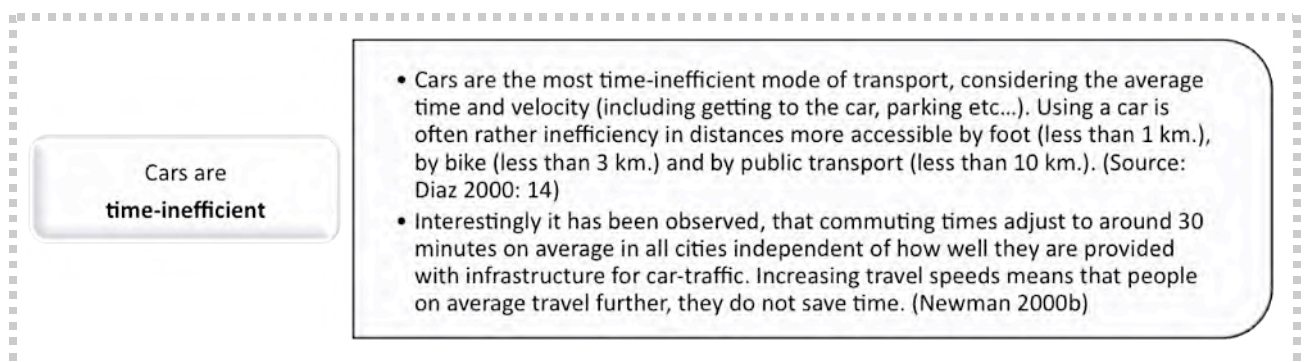


Figure 14. Time-inefficiency of cars

As already noted time spent in the car, in traffic, or even in traffic jams, has an economic value, or might be the source of tension, stress, or even aggression. And most importantly, it is time that could be spent otherwise, with family, for recreation, for pleasure etc.

Even if alternative mobility consumes the same amount of individual time as automobility, it could be argued that the time is spent more efficiently: It is a matter of how one can use travel-time:

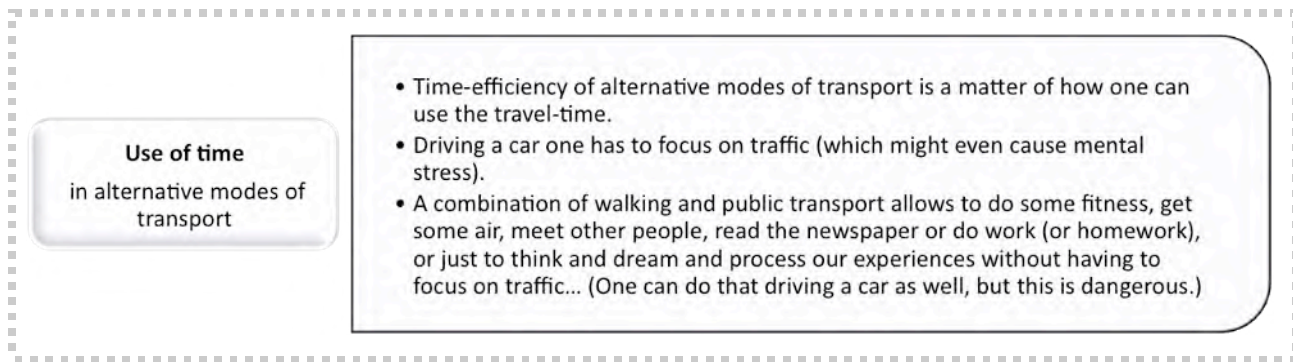


Figure 15. Use of time in alternative modes of transport

And even if non-motorized traffic is less time-efficient, because it is slower, a gain of this kind of traffic-time might be valuable for social interaction and community:

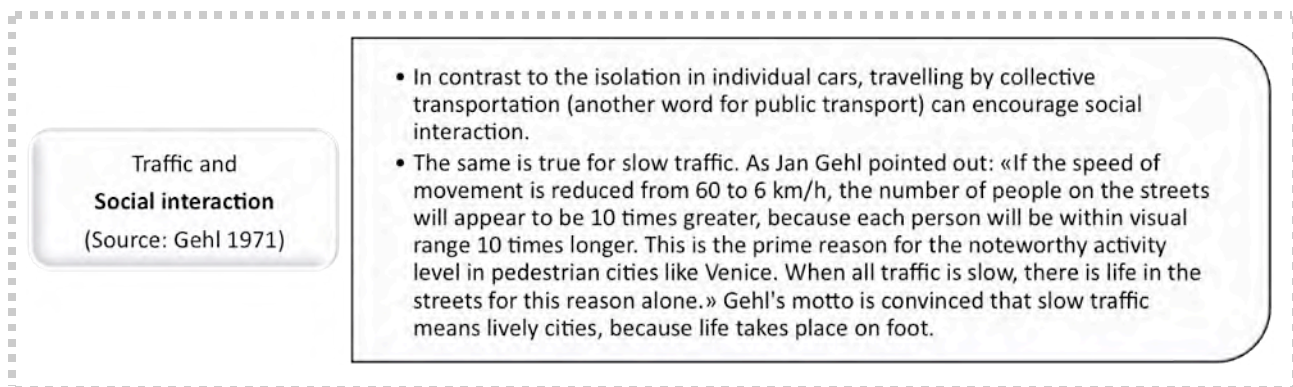


Figure 16. Traffic and social interaction

Freedom and Independence

The core argument for automobility is freedom and independence. This is even apparent in the word 'automobility' itself, which indicates a high degree of 'autonomy' in the individual's mobility pattern. Safdie explains the core motivation for automobility to be spatial freedom: «The extensive suburban migration that has created our dispersed cities is not only a response to the growth and congestion in the city center, but also a profound cultural and psychological desire for freedom, expansiveness, privacy, and flexibility. This core motivation represents a fundamental departure from the cultural and social mindset that has sustained traditional concentrated cities in other times and societies.» ¹ Sheller and Urry on the other hand mention the freedom concerning time: «Automobility involves an individualistic timetabling of many instants or fragments of time. The car-driver thus operates in instantaneous time that contrasts with the official timetabling of mobility that accompanied the railways.» ²

Such benefits cannot be denied. However, it can also be argued that alternative modes of transport are a bigger source of freedom. Illich and Robert shortly recount the story of automobility as restricting human beings and becoming a symbol of freedom simultaneously:

¹ Safdie 1997

² Sheller and Urry 2000: 744

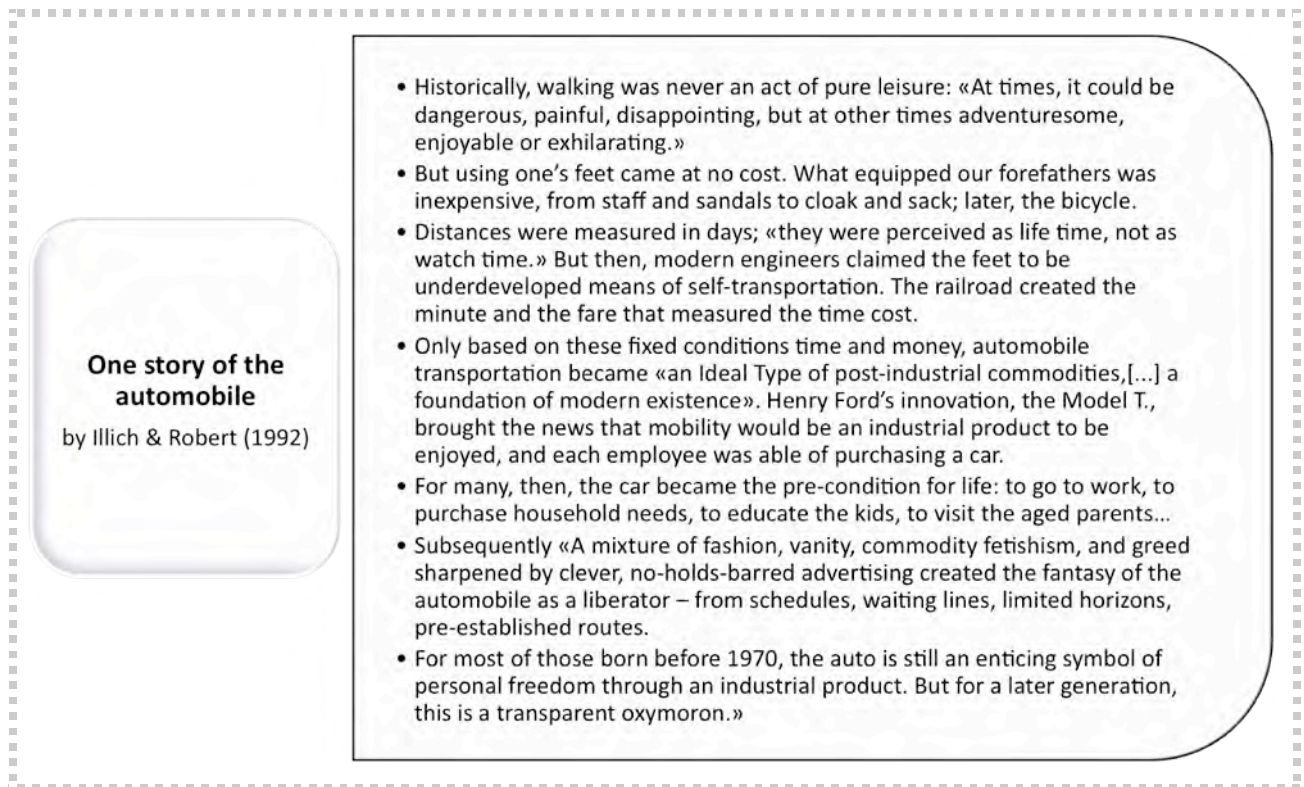


Figure 17. Story of the automobile

When it comes to freedom, one could as well mention the freedom that comes with not having a car:

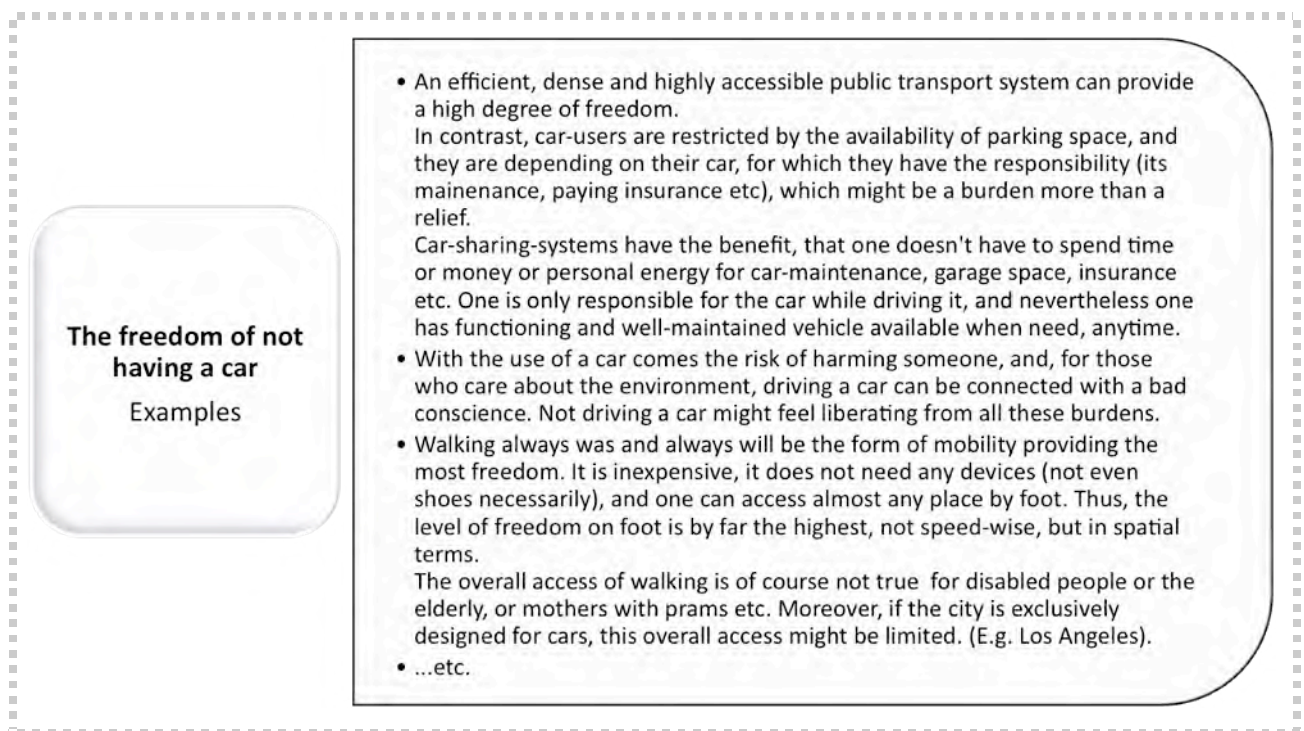


Figure 18. Examples of the freedom that results from not having a car

According to Sheller and Urry «Automobility (in some respects) is a source of freedom, the 'freedom of the road'. Its flexibility enables the car-driver to travel at speed, at any time, in any direction along the complex road systems of western societies that link together most houses,

workplaces and leisure sites.»¹ The emphasis, however, must be on the 'road'. It might be a freedom of time, but not of space, because this freedom is very much restricted to the road system and to the places which are accessible by car. By foot, on the other hand, one has the freedom of time AND space. One can walk whenever and wherever he wants, theoretically. The main spatial restriction to the pedestrians freedom is the road-system. And a hemming factor, obviously, is distance, because walking speed is slow. But appropriate planning can eliminate distances. The modern society compressed time and space through technology (claimed by Harvey 1989), because today distances often do not seem to exist. «Time and space are compressed and fused as a consequence of transnational economic and technological developments, which produce and are dependent on the speedy transfer of goods and information.»² Distances are eliminated by communication technology (phone, TV, and especially the internet), or by fast transport. This however had the effect, that the existence of distance has been more and more ignored, and spatial planning did not take it into account anymore. This excluded pedestrians or any people without access to new technologies (communication or transport). To them, the world is not a network yet, places are still far apart from each other, and important facilities are ever harder to reach.

Moreover, automobility provides both flexibility and coercion for the individuality of urban life, as Sheller and Urry elaborated on: «Automobility permits multiple socialities, of family life, community, leisure, the pleasures of movement and so on, which are interwoven through complex jugglings of time and space that car journeys both allow but also necessitate. These jugglings result from two interdependent features of automobility: that the car is immensely flexible and wholly coercive.»³

In short, «Cars, therefore, extend where people can go and hence what as humans they are literally able to do. Much of what many people now think of as 'social life' could not be undertaken without the flexibilities of the car and its availability 24 hours a day. It is possible to leave late by car, to miss connections, to travel in a relatively timeless fashion.»⁴ But this freedom can just as easily be achieved in a city, even without cars. A real city does not know day nor night, public transport is provided around the clock, shops are open 24 hours, and accessible to everybody, without car. This is the potential of the city, when it is designed in a dense mix-use form and supported by a fine mobility concept.

Individuality / Identity / Responsibility / Culture / Education / Aesthetics

Protection for the dignity of each and every individual is crucial to personal identity.⁵ Moreover, in order to feel secure, it helps to feel familiarity and identity with a place, as well as privacy in a place.⁶

Privacy

In an urban environment which is characterized by high living density combined with a high level of anonymity and low levels of communal responsibility and social control, a certain feeling of privacy and security become particularly relevant for the quality of life.⁷ According to Maderthaner, privacy fulfills several functions, such as protection of intimate sphere, personal autonomy, emotional recreation etc.⁸ Possible results of unfulfilled privacy needs can be annoyance, stress, crowding, decreased identity with a place etc.⁹ According to Flade, privacy requires control and autonomy, namely the control over one's individual space (apartment), which reflected in territorial behaviour through visual features such as fences, walls, doorlocks

¹ Sheller & Urry 2000: 743

² Kaufmann et al. 2004: 746

³ Sheller & Urry 2000: 743

⁴ ibid.

⁵ Swiss Federal Council 2008

⁶ Hietzger 2009

⁷ Maderthaner 1998

⁸ Maderthaner 1995. Cited in: Hietzger 2009

⁹ Hietzger 2009

etc. ¹ But in reverse, a feeling of security and identity might decrease the wish for isolation in protected privacy, and this would in turn decrease the need for much space (privacy, garden, distance etc. for protection) and encourage denser living, which facilitates car-reduction.

Individuality / Identity

The feeling of identifying with a space can be gained by (re)claiming or appropriating this certain space:

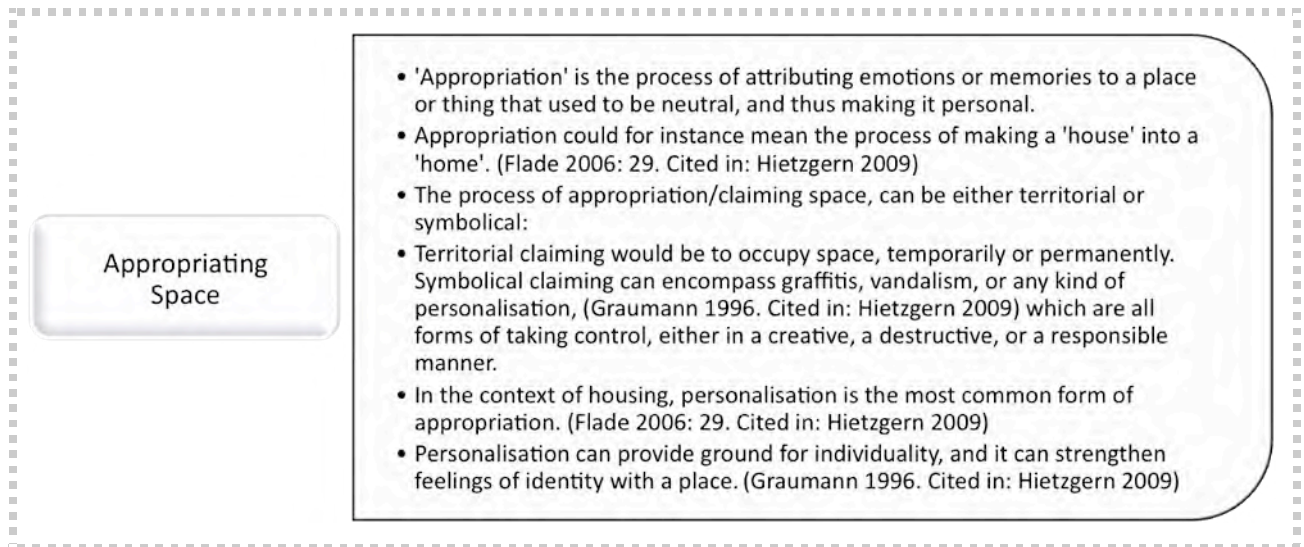


Figure 19. Appropriating space

Identification with a place, or so-called place-identity, can be an individual or a communal feeling:

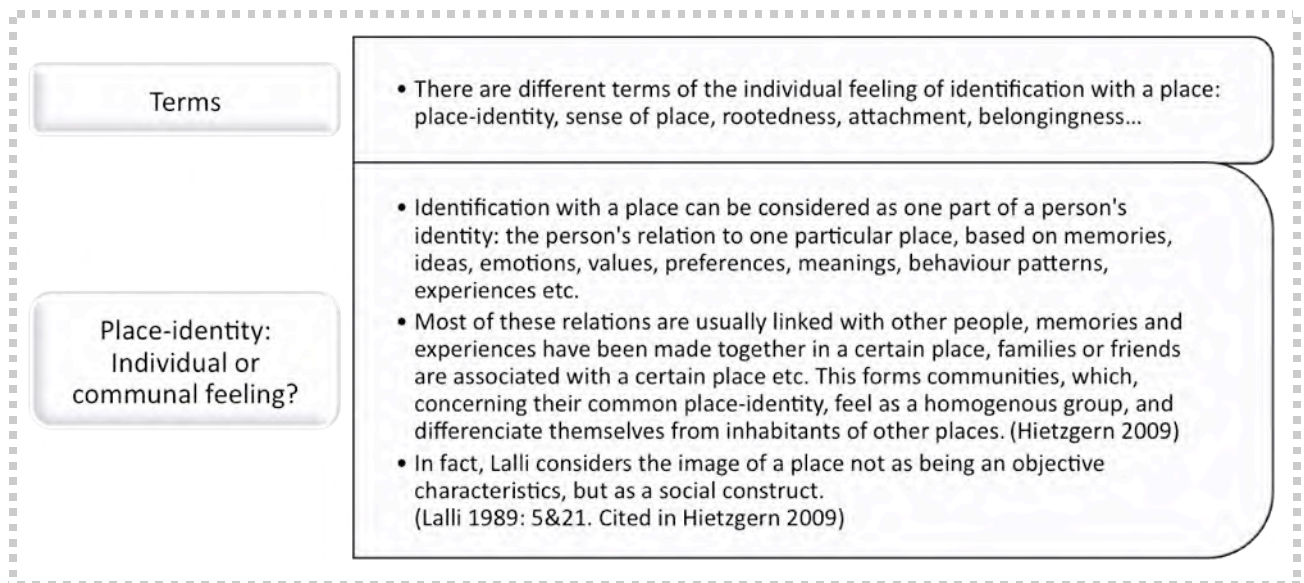


Figure 20. Place-identity

Place-identity can be encouraged by a high quality of life, which can be increased through car-reduction:

¹ Flade 2006. Cited in Hietzger 2009

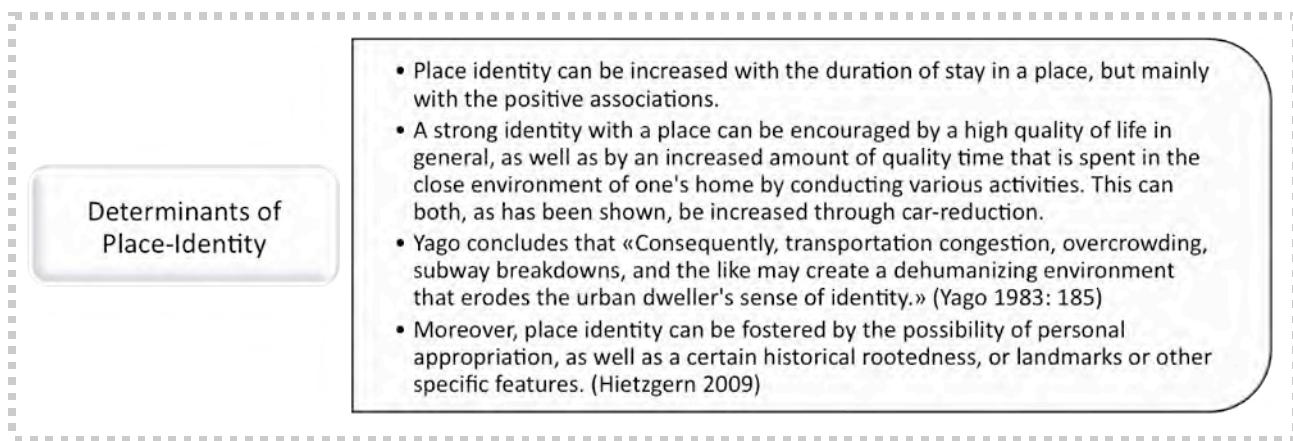


Figure 21. Determinants of place-identity

Strong identification with a place, in turn, can strengthen the level of active participation, as well as the feeling of responsibility. Also, a place with a strong identity can form groups of people with a common place-identity, which gives them, on top of the feeling of belonging to a place, a feeling of community and membership.¹

Culture

Finally, what strengthens place identity on a large scale, is local culture. For instance in Switzerland, Culture provides an important basis for coexistence. Common values such as tolerance, solidarity and the human rights ethos form part of the nation's cultural property.² Therefore, culture, including the maintenance and development of social values and resources, are to be encouraged in the interests of social capital in general. One strategy to encourage culture is to invest in cultural and educational facilities, and to allow, encourage and support all kinds of cultural activities. This can be combined with a strong 'cooperative' culture, and with alternative non-commercial forms of leisure opportunities. Carfreeness can open up money and land for such an undertaking. According to the NSF Report, locality must be reconceptualised. For instance «localities must be recognized as sites of contestation and struggle as well as of cooperation and co-optation»³, and the concept of governance they suggest includes grassroots groups, NGOs, community-based organizations, and the like.

Education

Education, meaning the capacity to learn, including the development and identity of the individual, are to be guaranteed, and research and innovation are to be encouraged. As already indicated, education can strengthen culture and identity, and it can further encourage responsibility and participation. Education supports personal development, socialisation and the ability of people to learn, thereby qualifying them for the labour market.⁴ And in general, high levels of education might potentially foster a sustainable development: On the one hand, for instance teenagers with poor reading comprehension skills often have a harder time adapting constructively to changes taking place in society.⁵ Moreover, schools have the potential to raise awareness for the climate crisis and teach appropriate forms of mobility and behaviour. And in fact, the tendency of people with an academic education or background to live without car is above average.⁶ On the other hand, education ensures that the economy is both innovative and competitive, which can at best lead towards more sustainable development. Thus, education can indirectly contribute to car-reduction.

In turn, carlessness can indirectly have educational benefits. This involves ideas such as Gehl's observation that 'the pedestrian city' is a stimulation of the intellect, hence effecting the

¹ Lalli 1989: 23. Cited in Hietzger 2009

² Swiss Federal Council 2008

³ NSF 2000: 11

⁴ Swiss Federal Council 2008

⁵ FSO 2010

⁶ Haefeli & Bieri 2008

intellectuality of the citizens! ¹ It also involves the assumption, that dense living allows for better educational systems. Schools might be better equipped and organized, have more qualified teachers, and most importantly, dense living provides equal opportunities to profit from such educational systems. Moreover, through a non-inspiring mode of travelling, or even an increase in travel time, «time spent in familial interaction, especially child-rearing activities, decreases. This may influence [...] learning behaviour among children»²

The education is even more important when considering, that its effect is reinforcing itself inter-generational: «A parent's perception is a dominant factor in molding a child's thinking [...] As a whole, the school's culture is changing from motor-powered to foot-powered transportation. [...] Students are inspired by the example set by the adults, and adults are encouraged by their children into choosing Car-Free Commute.» ³ This is a way of creating a new culture of daily carfree habits in a young generation.

Aesthetics

Richard Sennet describes how «classical urban architecture was designed from the point of view of the pedestrian, using visual perspective to guide the walker through arcades and squares defined by fountains, to open, wider vistas defined by the spatial vanishing points created by judiciously placed obelisks and domes.» ⁴ In contrast, according to Venturi, today's postmodern spatial perception is affected by the experience of driving one's car along the 'strip' with its billboards, and quickly-read neon signs and surface messages. ⁵ Jan Gehl elaborates on the pedestrian city's potential of stimulating the intellect, and he observes how «In pedestrian cities people move through their city; in automobile cities only cars are on the streets. [...] The movement of people has become automobile traffic. [...] the pleasure of watching cars is limited and is only observed in situations where there is no more worthwhile offer of experience around. [...] if there is no piazza and no city life, then street corners at traffic intersections become meeting places [...]. The opposite of this situation is again the old pedestrian cities, like Venice, where the offer of experiencing the movement of people and merchandise plays a crucial part in reading and interpreting how the city is put together and how it works.» ⁶ In general, cities would look radically different without cars, and also – which is obviously a matter of taste – much more beautiful.

What is considered as aesthetical is individual and culturally affected. Examples for aspects that influence aesthetical preferences are complexity versus simplicity, novelty versus habit, surprisal value versus monotony, harmony, particularity etc. ⁷ An example of contradicting taste is solar architecture or the design of other forms of sustainable buildings: Most people don't see it as a real beauty, but rather as a necessary evil. Some people – as an undesirable consequence – decide that it thus cannot be necessary. Others decide that it cannot be evil, and try to improve the physical appearance of sustainable urban form. This is a fine trend, with interesting or even spectacular results, reinforced by the fact that taste changes over time, and adapts to the circumstances. In general however, the visual design of buildings and the aesthetics of neighbourhoods, according to Maderthaner, mostly still play a secondary role, especially in commercial investment and development. However, the aesthetical perception strongly influences housing satisfaction, the status [image] of and the place-identity with the neighbourhood, real estate prices and communal matters.⁸ Moreover, visually unattractive objects are not considered as worth taken care of, and thus encourage vandalism.⁹ It can be concluded not to underestimate aesthetic aspects, as they could be crucial for developing

¹ Gehl 1971

² Lansing & Hendricks 1967. Cited in Yago 1983

³ Hilliard (n.d.)

⁴ Sennett 1990. Cited in: Sheller & Urry 2000: 740

⁵ Venturi et al 1972. Cited in: Sheller & Urry 2000: 740

⁶ Gehl 1971

⁷ Maderthaner 1995

⁸ ibid.

⁹ Flade 1996

feelings of identification and responsibility with a place, and thus effect levels of participation and community.

Participation / Democracy

Sheller and Urry argue, that «automobility has reshaped citizenship and the public sphere via the mobilization of modern civil societies.»¹ Consequently one could argue, that 'non-automobility' could have a similar effect.

According to Celma, the role of Civil Society has two aspects of importance: Firstly, its capacity to act as a vehicle to transmit the current situations and the possible solutions to the people-at-large; and, secondly, the influence it has to make citizens aware so that they are persuaded to improve their habits and practices.² Giorgi emphasizes «the close link between sustainability, on the one hand, and democracy, on the other – and, in turn, justice or equity [...]» as well as «the need to reconsider transport decision-making processes both in terms of planning and in terms of analytical inquiry [...]»³ The realisation of sustainable mobility is heavily dependent on the management, coordination and analysis of complex decision-making processes. Contemporary transport policy processes are characterised by more openness and participation.⁴

A similar trend towards participatory processes can be observed in urban planning and sustainable housing. In order to assure effective and sustainable urban interventions, it is crucial to include both the subjective needs of future residents (by involving individual interventions) as well as the latest standards of objective living requirements (by involving societal interventions).

⁵ Doing so can effectively increase the quality of life. ⁶ According to a study on 'Smart Growth' «Involving local residents in the design of higher-density projects is extremely important. When people are consulted and their design preferences are taken into account, initial reservations can be turned into acceptance and support for positive change in their community.»⁷

Benefits from participatory processes, according to Maderthaner, are manifold. They include the possibility to share information amongst participants and encourage the readiness to discuss, engage, and to compromise. Aside from social engagement, participatory processes also strengthen the social structure, the community, and finally have an impact on citizen's knowledge and belief in democracy. And another good argument is that involving citizens in a process strongly determines the cooperation and acceptance with the results of that process.⁸ Moreover, involving citizens in a development process. For instance letting future residents participate in the development process for a car-reduced living environment will encourage place-identity, strong identification with their living environment increases people's feeling for responsibility, which again increases levels of participation, which in the end strengthens democracy in general. It can become a positive cycle of participation.

Public Space, Mobility and Democracy

«The power of civil society crucially depends on the democratic 'social space' created by the temporal syncopation and movement between two separate 'spheres', the private and the public, through which individuals can develop their deliberative capacities as citizens.»⁹ In fact, the linguistic root of citizen, civil and civic can be found in city (civitas), and of politics and polity in polis. «In the idealized urban public spaces [...] an informed rational debate could supposedly take place»¹⁰ But while many theorists draw a sharp distinction between what is private and what is public, «there is an unexamined blurring between the 'public sphere' (of

¹ Sheller & Urry 2000:739

² Celma 2008

³ Giorgi 2004:181

⁴ Giorgi 2004

⁵ Maderthaner 1998: 498

⁶ Hietzger 2009

⁷ Alexander & Tomalty 2002: 405

⁸ Maderthaner 2003

⁹ Sheller & Urry 2000: 741

¹⁰ *ibid.*

citizenship) and the 'public space' (of the city). [...] Indeed, a crucial issue might be how people play with and upon that blurred boundary while moving through urban space.»¹ This mobility comes with an implicit underlying threat: «that the very freedom of mobility necessary to publicity somehow also holds the potential to disrupt public space, to interfere with the more stable associational life and to undermine proper politics. Mobility is the enemy of civility.»²

The important function of public space might be undermined in a city that is dominated by cars. There, the public space is different and smaller, and the blurred space in between public and private space might be almost inexistent. In a carfree environment, both public and private space can be enhanced, and the relationship between the two can be strengthened. By that, democratic participation of the citizens might be fostered.

Of course it must be remembered that mobility is necessary to access the places of democracy: «Remember that mobility is in some respects constitutive of democracy — it is a democratic 'right'»³ From the autonomous public emerged what Habermas describes as «a sphere of personal freedom, leisure, and freedom of movement»⁴ And Sennett argued that people «take unrestricted motion of the individual to be an absolute right [...] the private motorcar is the logical instrument for exercising that right »⁵, Mobility can be considered as a human need, in order to act as a citizen.

But it is particularly this, which is problematic. As mobility, and especially automobility, was introduced by the industry, and is linked with capitalism and the economy in so many different ways, that it is by far not an equally distributed good, and will never be. Democracy is thus dependent on a technology, which is not available to all, and this is unacceptable.

«Attention to the mobility of urban publics raises new questions about how such mobility is unequally available, gendered as masculine, or racialized as 'white'»⁶ These, and many more «inequalities among multiple publics are entrenched in urban spaces of unevenly distributed access and exclusion.»⁷

It can be concluded, that when it comes to participation in urban space and mobility, at least two things are equally important: On the one hand, in order to be efficient and accepted, both public space and alternative mobility concepts must be planned in a participatory process, by involving civil society. In turn, citizens identify with the projects, support the development, and moreover through the process learn about democracy. On the other hand, the possibility to act as a citizen, to be involved in politics, and to participate in democratic decision-making must be put as close (in immediate reach) as possible to the people, to their home and space.

Social Interaction / Community

Social interaction and communication are basic human needs, together with the feeling of belonging to a place and being part of a community.

In fact, a Swiss study has shown, that in contrast to common statements, carfree households are socially not less integrated than households with cars.⁸ In fact, car-reduction or carfreeness have the chance to increase social interaction and to enhance a community feeling. It is crucial that the various ways how this happens are understood, and as a basis for fostering social interaction and community even more.

In order to do so, some structural changes are possible. One possible example is the implementation of open facilities (public space, community centres etc.) or casual activities (such as street parties, markets, flea markets, sport events ect.)⁹ The positive effect of

¹ Sheller & Urry 2000: 741

² ibid.

³ ibid.

⁴ Habermas 1992: 129. Cited in Sheller & Urry 2000: 741

⁵ Sennett 1977: 14. Cited in: Sheller & Urry 2000: 742

⁶ Sheller & Urry 2000: 741

⁷ Sheller & Urry 2000: 745

⁸ Haefeli & Bieri 2008: 7

⁹ Maderthaner 1998

increasing activity levels was described by Gehl: «Life between buildings is potentially a self-reinforcing process. When someone begins to do something, there is a clear tendency for others to join in, either to participate themselves or just to experience what the others are doing. In this manner individuals and events can influence and stimulate one another.» ¹ This is valid for the family home as well as for the public domain. The Dutch architect F. van Klinger has observed that and summarized it in the formula «one plus one is three – at least.» ² Or in other words: «Something happens because something happens because something happens.» ³

Even better than the top-down approach of just implementing activities would be to encourage and support citizens to realize their own initiatives, and let them organize and build on their own communities. Supporting bottom-up initiatives or implementing participatory processes is both highly beneficial for the community feeling.

Another strategy is a change in the urban form. According to many social scientists, the loss of pedestrian-scale villages has disconnected communities. One example is Tönnies with his well-known essay 'Gemeinschaft und Gesellschaft'⁴, translated into 'community and society', who complains about the fact that people living in cities are not embedded in a tight social network anymore. And more recently, researchers such as Yago recount the community-destroying history of urban sprawl: «[...] evidence suggests that the way urban space is usually partitioned today may have resulted in the social isolation of the workplace from community life, the 'invisibility' of the elderly and the young, and the erosion of social cohesion in neighborhoods. Today, community interests appear to be perceived as separate from workplace concerns; the primacy of private over public life weakens political participation; and the socialization of children in isolation from diverse income, age, and social groups weakens the sense of belonging to a broad community.»⁵ For sure, urban environment can foster loneliness and exclusion. But just as much, the urban form can foster community, if this is the aim. Initiators of the US concept of 'New urbanism' actually believe that the whole community life can be shaped by the urban planning. This thinking is very deterministic and extreme. But obviously, building a door more accessible than a window, people will use the door to get in and out. Architectural and urban features and characteristics can certainly and easily influence people's behaviour.

Most important in this context are a dense urban form, provision and quality of public space, and the accessibility and walkability of streets and pedestrian routes.

¹ Gehl 1971

² *ibid.*

³ *ibid.*

⁴ Tönnies 1887

⁵ Yago 1983:185

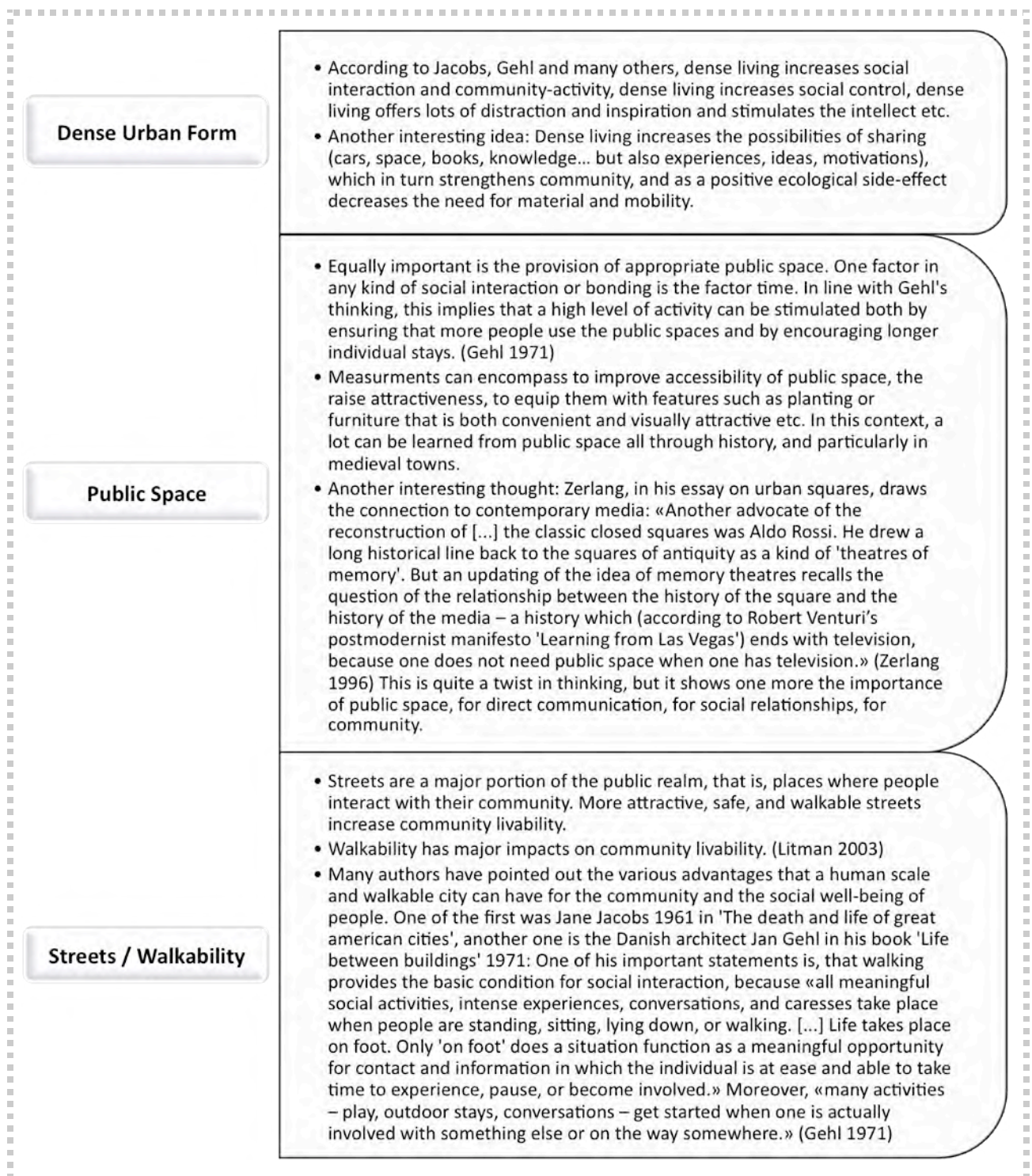


Figure 22. Ways of how urban planning impacts community

This range of ideas for how a carfree environment might foster social interaction and community, is complemented by a few hints on why community is actually relevant, what further social benefits are being fostered in a strong community, and finally the potential of communities to make an ecological contribution:

Community livability provides a variety of direct and indirect benefits: Social relations are developed on the basis of communication, they play an important role in mental health and stress release ¹, not to forget that basic social relations are clearly the ground for love and family life. However, the community-feeling can also decrease the wish for big families, which

¹ Maderthaner 1998

decreases the need for more space, which allows denser living. Furthermore social relations contribute to the identification with a place.¹ This increases the feeling for responsibility, encourages participation and strengthens democracy. Furthermore community is an important basis for bottom-up policies and grassroot initiatives. Moreover, to the degree that improved walkability increases community cohesion, it may help reduce crime and other social problems in an area.² This decreases the seek for security and isolation, which decreases the need for much space, which allows denser living. Community livability can affect property values and business activity in an area.³

A strong community can also have ecological benefits. For instance, community activities can involve alternative forms of consumption, and it counteracts current consumption patterns (counteracting the current neo-liberal capitalism aiming at 'growth'). As foreshadowed by Zerlang already⁴, communal activities can lower the need to watch TV, or at least encourage to watch TV together (possibly by offering the 'public' space for it as well). Another example is that a strong feeling of community in and identity with a place, will lower the need to go away, or the wish to escape, which will decrease. travel-mobility. But these are all rather vague assumptions, and there is no data to prove it. Another and much more concrete example is that dense living increases the possibilities of sharing (cars, space, books, knowledge... but also time, child-care... and even experiences, ideas, motivations...), which in turn strengthens community, and as a positive ecological side-effect decreases the need for material and energy.

3.5 Social Equity

Having elaborated on community as a social benefit, and as a potential result of carfreeness, what remains unclear is the question: Does community foster solidarity and imply a more socially equal society, or does community actually counteract social mixture and social equity?

Social equity, in the context of automobility versus carfreeness, is a broad and complex issue, that would be material for its own research paper. But as it would be irresponsible to ignore social inequality issues all together, there is an essay about this in the appendix, and this short chapter summarizes the main matters:

>> See Appx 8 for the essay on Social Equity

Automobility has its particular issues with social equity. As much as it is seen as a democratizing device, it is also hindering democratic process, excluding certain people from access to the services of democracy and from political participation. This chapter will divide the issue roughly in three main areas of inequality: The social issue, the spatial issue, and the financial issue.

¹ Hietzger 2009

² Litman 2003

³ *ibid.*

⁴ Zerlang 1996

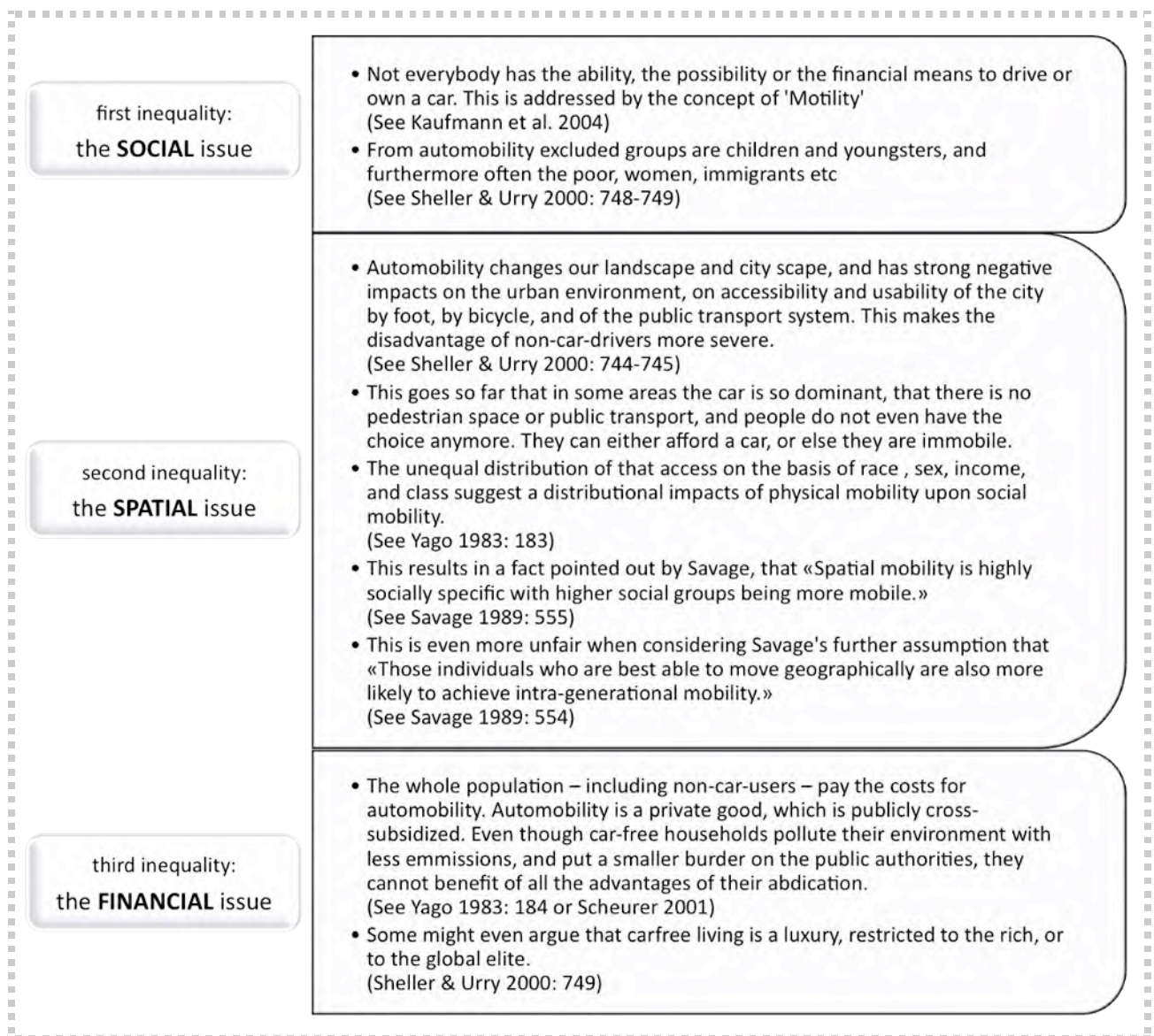


Figure 23. Social inequalities due to automobility

This very last point in Fig. 23 about carfreeness being a luxury indicates another main problem: Automobility causes two opposite extremes of inequality:

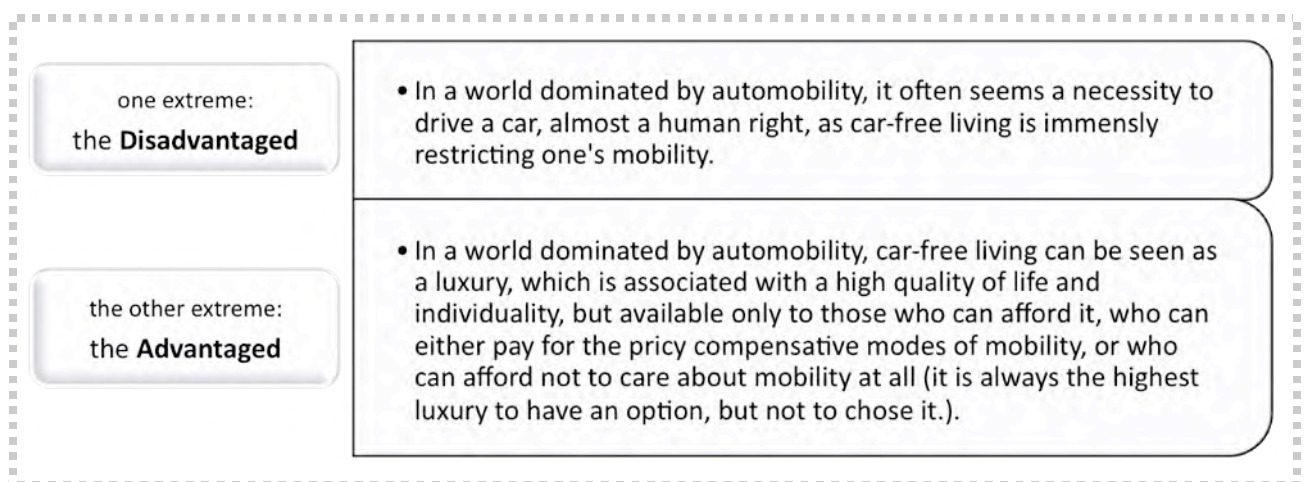


Figure 24. The two opposite extreme inequalities resulting from automobility

The good news is: A reduction in car-traffic has the potential to increase 'Social Equity' in various ways:

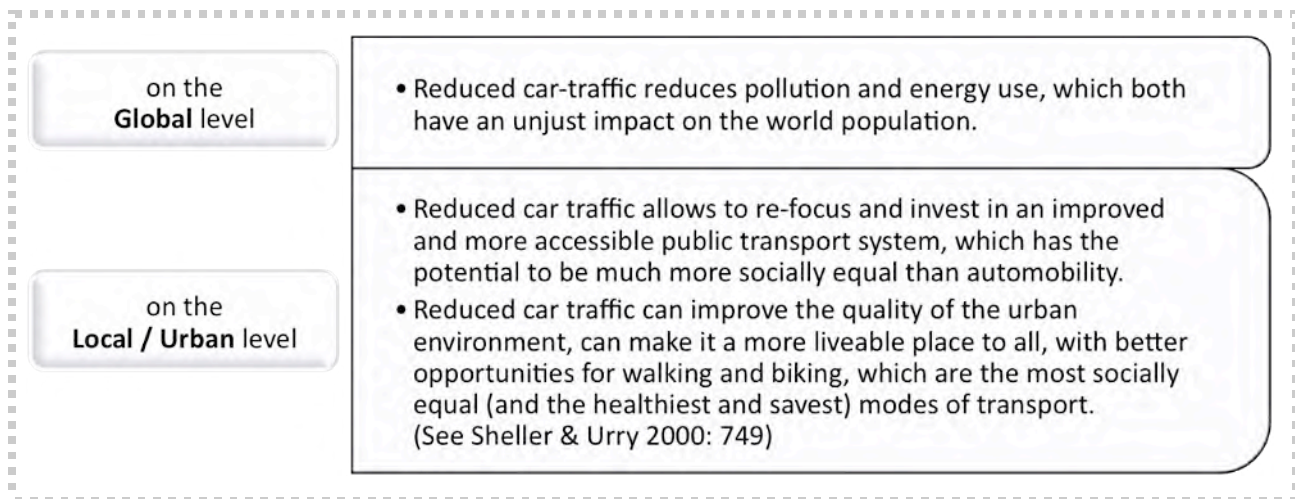


Figure 25. Car-reduction's potential benefits for 'Social Equity'

Part III

EMPIRICAL RESEARCH

[Casestudies]

4 Carfree living projects

The Emerge of a Concept

Carfree housing is not a new concept. After all, most residential development from the era before mass-motorisation (generally before 1945) was done without parking provision, and a substantial part of it is still remaining up to this day in European cities. Despite increasing motorization, or maybe all the more so, the idea of living in a carfree environment remained present. Many 'visually carfree' housing estates have been developed in the 1960ies and later.¹ Nonetheless, it is only recent that automobility is really being questioned per se, and that the idea of 'real' carfree living gains popularity.

Unfortunately, with the rise of motorization, parking provision became the law (mostly in the 1940's), and up until today building codes require parking provision with residential development.² Thus, when the first 'real' carfree housing scheme was proposed in Bremen (Germany) in 1992, what appeared radical about it was its «blunt defiance of an unspoken consensus that perceived principally every household in the country to aspire to car ownership [...]. Carfree living, it was believed, was the choice of fringe groups and had no place in the contemporary mainstream of society.»³ But new proposals that suddenly appeared made carfree living attractive to broad parts of the population. Carfree living, it showed, is not a specifically nonconformist demand and lifestyle.

Carfree Living

While the proportion of carfree households had declined markedly everywhere after 1945, carfree living is still far from being a minority phenomenon. In Switzerland today, every fifth household is carfree, and in the largest swiss cities ⁴, or else in Amsterdam, Copenhagen, Edinburgh, Vienna, or in East German urban centres, the share of carfree households is up to 50% ⁵.

The difference between urban and rural areas is substantial. Carfree living is a particularly urban phenomenon. In the core cities the share of carfree households lies far over average. Furthermore is it the size of the city that apparently makes a difference. The 5 largest swiss cities have the lowest motorization rates. Moreover, there is a clear trend towards women,

¹ Hornung 2006

² Scheurer 2001a

³ Scheurer 2001a:270

⁴ Haefeli & Bieri 2008.

⁵ Reutter and Reutter 1996a & 1996b, cited in Scheurer 2001a

academics, singles, small households, young adults and retired people living carfree. ¹ «There is, thus, clearly a market for carfree housing.»²

'Carfree living projects'

Carfree living projects offer housing specifically to households without a car, and try to offer a high quality of life. There are no binding definitions of 'carfree'. Projects follow different approaches and show great variations in reality:

Definitions	<ul style="list-style-type: none"> • Schweizer (2007) distinguishes four concepts: carfree / visually carfree / car-reduced / mixed forms • Scheurer (2001a) distinguishes physical approach / legal approach / demand-responsive approach
CARFREE -legal approach-	<ul style="list-style-type: none"> • cars are banned completely from the premises and from resident's lifestyles • car-ownership is legally prohibited (hence the term 'legal' approach) • the most radical and least flexible concept • Examples: Amsterdam Westerpark (GWL –Terrein), Bremen Neustadt Grünenstrasse, Edinburgh-Gorgie Slateford Green, Hamburg-Barmbek Saarlandstrasse, Kassel Unterneustadt / Messeplatz, München-Riem Caroine-Herschelstrasse, Münster Gartensiedlung Weissenburg, Wien Floridsdorf, Wien Penzing Sargfabrik & Miss Sargfabrik
VISUALLY CARFREE -physical approach-	<ul style="list-style-type: none"> • cars are banned from the premises, but only visually (parking is at the edge or underground) • a rather inconsequent and thus hypocritical approach (author's opinion) • Examples are manifold, as in the 1960ies / 70ies many 'visually carfree' neighbourhoods were developed.
CAR-REDUCED -demand-responsive approach-	<ul style="list-style-type: none"> • characterized by slow and low traffic and a minimum of parking space • incentives for carfree households, and no cross-subsidizing! • quite pragmatic approach: neither too strict or radical, nor inconsequent, but flexible and transparent (honest). • Examples: Berlin –Friedrichshain/Lichtenberg Stralauer Haininsel / Rummelsburger Bucht, Berlin Treptow (Lebens(t)raum Johannisthal, Ökosiedlungen), München-Haidhausen Kolumbusplatz, Freiburg Vauban, Zürich Kraftwerk1

Figure 26. Definition of carfreeness

Additional benefits

While conventional housing projects pre-assume car-ownership, and carfree households have to pay tenants for car-related infrastructure, carfree housing is specifically designed to roll back the disincentives to abstention from car ownership. ³ This is done, on the one hand, by ending the cross-subsidy enabling car owners to park. This contributes to more social justice along the 'user pays' principle and to better housing affordability within the carfree market. On the other hand, with the aim to compensate carfree living, in the projects «there is usually an intention - and clearly a viable opportunity - to provide additional benefits to the residents of carfree neighbourhoods.»⁴ These may range from extra public open space to better technical or ecological building standards, from discounts on mobility services like public transit passes or car sharing to advanced levels of participatory planning and extra community facilities. ⁵ Moreover, carfree areas often include basic shopping facilities and other services, or are located in walking distance from them. ⁶

¹ Haefeli & Bieri 2008; Scheurer 2001a

² Scheurer 2001a:271

³ ibid.

⁴ ibid.

⁵ Christ & Loose 2000

⁶ Scheurer 2001a

5 Case studies

The empirical research consists of two casestudies: Quartier Vauban in Freiburg (QV), Germany, and Autofreie Mustersiedlung Floridsdorf (AMF) in Vienna, Austria. The casestudies describe the projects on the basis of various external sources, and are supported by a research-own survey, that has been carried out amongst residents/users of both projects. (Throughout the casestudies, this survey is named 'research-own survey')

The leading question in the casestudies is:

What 'Social Benefits' are being perceived in the carfree living project?

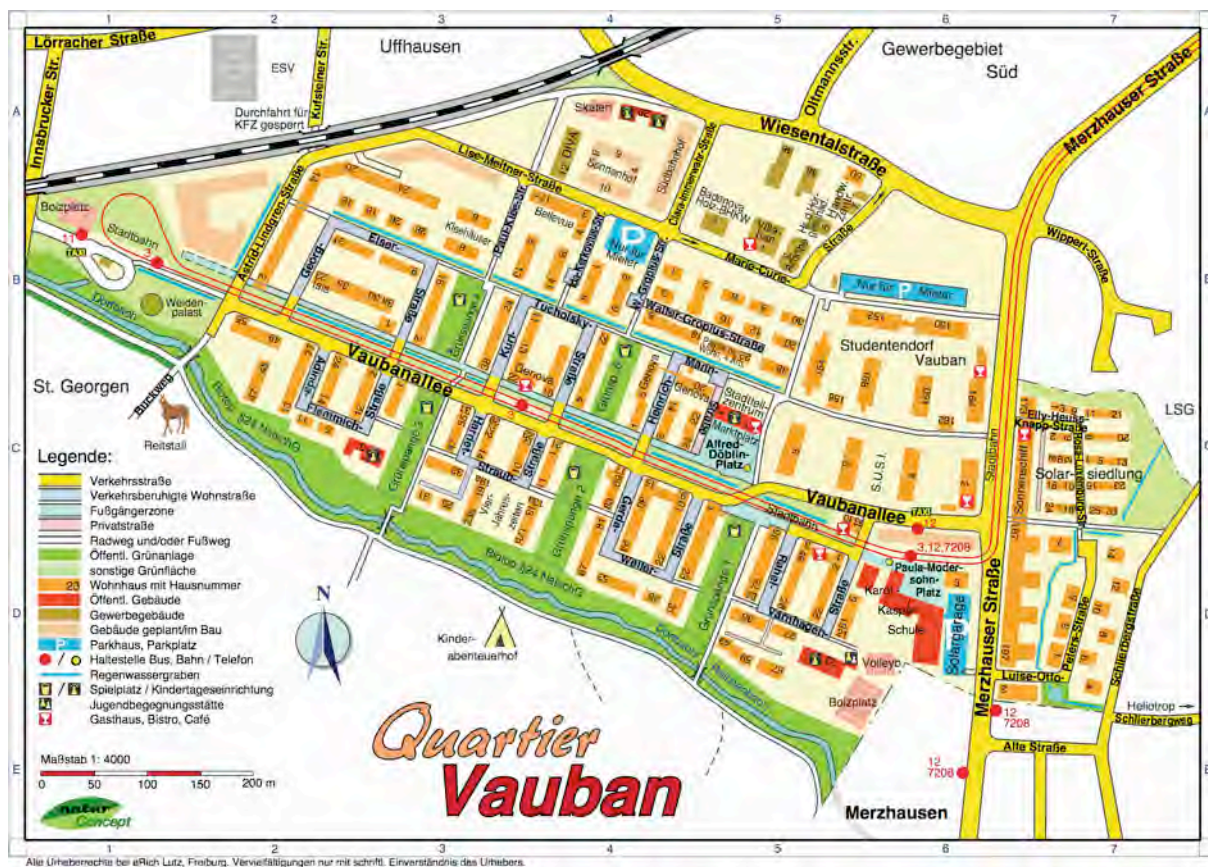
The methodology that was used for the casestudies is declared in the introduction of this research paper (chapter 1.2). A detailed description of the survey, how it was conducted, what was asked and what respondents replied, can be found in the appendix 22.

Choice

The choice of the casestudies was based on a pre-analysis of ten carfree living projects all around Europe, according to two main conditions: The project had to show obvious ecological efforts and features (aside from carfreeness), and the project had to declare to aim at social benefits (to be further tested!).

From the projects fulfilling these conditions, QV and AMF were chosen because they are very different, in fact representing two extremes: AMF is small, but strictly carfree (one of the most consequent projects in Europe), QV is only car-reduced and partially parking-free, but it is by far the largest European example.

6 Casestudy QV: Quartier Vauban, Freiburg



Picture 1. Plan of Quartier Vauban

6.1 Introduction

Quartier Vauban is the largest carfree development of recent years in Europe.¹ It is an entire political district of the city of Freiburg im Breisgau. This context is no coincidence, as Freiburg has a background of environmental struggle and innovation. Moreover, Freiburg is one of the few German cities that is still growing and in need for new residential development. Thus when the former French military base 'Quartier Vauban' became available in 1992, the city of Freiburg bought the area and decided to redevelop it as a model sustainable urban district.

>> For more information about QV's context, see Appx 12 and Appx 11

Throughout this case study 'QV' is being used as an abbreviation for the project name 'Quartier Vauban' ('Quartier' is the French word for quarter or neighbourhood).

¹ Melia 2006

Location / Access	<ul style="list-style-type: none"> • On a former military base. • On the southwestern edge of Freiburg im Breisgau, Germany. • 3-4 km from the city centre (10 minutes by bike).
Size	<ul style="list-style-type: none"> • 41 hectare
Use	<ul style="list-style-type: none"> • 20 ha housing , 6.2 ha mixed use, almost 6 ha public green space • plus private green space, traffic area • Housing units: 2000 (plus approx 800 student homes)
Density	<ul style="list-style-type: none"> • Floor space ratio: FAR approx 1.4. Net density: 90-100 units per hectare
Demography	<ul style="list-style-type: none"> • 5.340 inhabitants • Today 28% of the residents are under 18 years old, and only 2% are over 65 (which is by far the lowest rate of all Freiburg districts. Freiburg itself has 17% of residents over 65 years.). The average age is 28.7
Economy	<ul style="list-style-type: none"> • Jobs: 600 were planned , 170 were realized until 2002, 400 until 2008...
Carfree?	<ul style="list-style-type: none"> • Carlessness: 'car-reduced' and largely 'parking-free'
Infrastructure	<ul style="list-style-type: none"> • Shopping facilities, cultural facilities, elementary school, kindergartens, a community centre, a church, and many institutions and cooperations and work-groups for various purposes...
Timeline	<ul style="list-style-type: none"> • Official start of planning: December 1993 • Urban idea competition: 1994 • Start of participation process: 1995 • Start of construction: April 1998 • Completed (largely): 2006

Figure 27. Basic Project Data QV.

>> For a detailed chronology of QV's development, see Appx 14

Main Sources

The main sources for this casestudy are an evaluations of the mobility concept by Nobis in 2002/2003, an evaluation of the 'social space' (Sozialraumanalyse) im Auftrag der Quartiersarbeit in 2009 (Appx 20), the results of the research-own survey in 2011 (Appx 22), two casestudies by Jan Scheurer in 2001 and Steve Melia in 2006, the official information and guiding brochures, a guide-book by the initiators (Scheurer, Nobis and others), and many more articles and websites.

>> For more information about the main sources, see Appx 9

6.2 Project Description

Participatory Planning Process (Co-determination) ¹

The official start of planning QV was in December 1993. An urban ideas competition was held in 1994, won by the 'Büro Kohlhoff & Kohlhoff' from Stuttgart, who's design was the basis for the master plan (= development plan).

'Forum Vauban'

Soon after the old military base was vacated, a group of ecologically minded people became interested in the quarter. They founded the 'Forum Vauban' and lobbied the City with their vision to develop a sustainable city district in a participatory way. In 1995 the city council made the 'Forum Vauban' officially responsible for the coordination of the 'Expanded Public Participation' process. The idea of this broad citizen participation was to ensure that community desires were represented in the project, to give voice to the people's needs and supports their initiatives. The results of the participation process strongly influenced the district's master plan.

>> See detailed history and description of 'Forum Vauban' in Appx 15

The Forum Vauban's publicity campaign then mobilized future inhabitants to meet and contribute their ideas. (Eighty residents participated in the Forum's first public meeting in May 1995) ² During the years of 1995 and 1996, Forum Vauban organized many workshops, meetings, and social events (district festival, 'culture café' etc.), and brought together citizens, politicians, institutions, planners and other experts. Coordinated by the 'Forum Vauban' the civil society developed a vision for the 'Quartier Vauban' with a list of clear objectives:

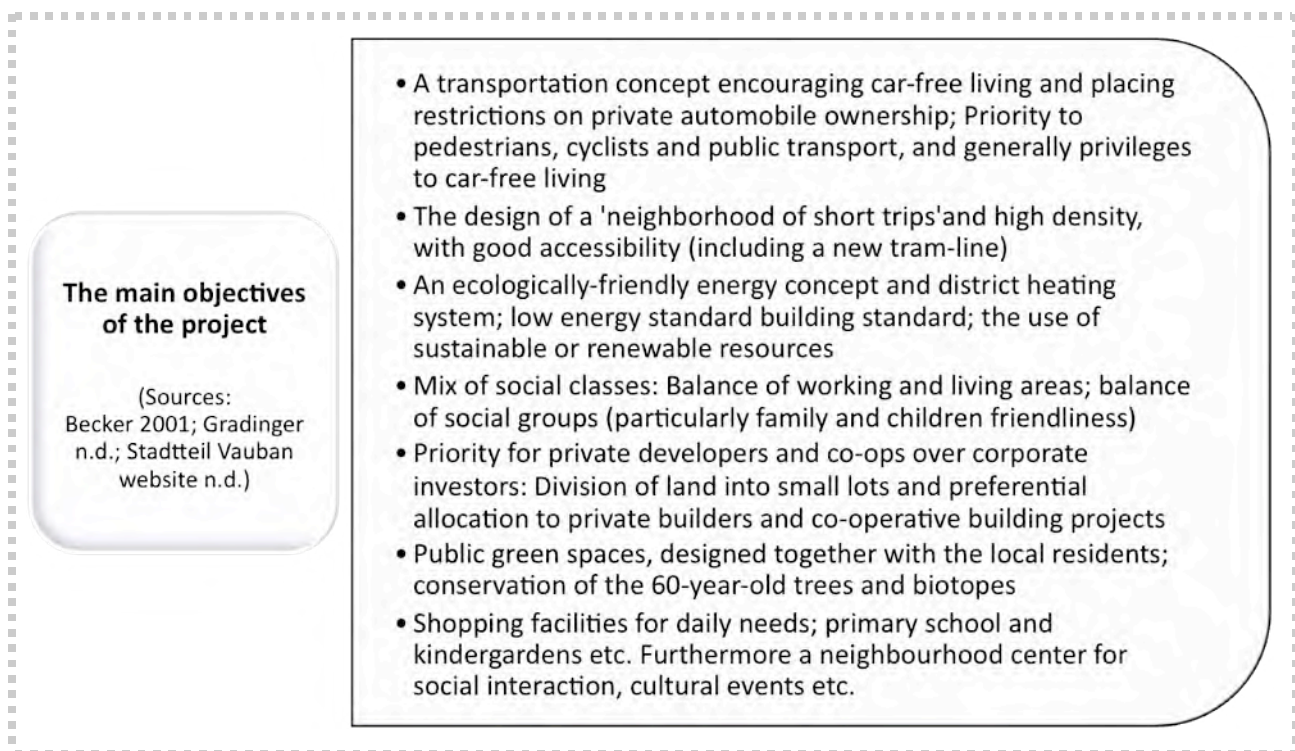


Figure 28. The main objectives of the project QV

The principle of 'Learning while Planning' adopted by the city allowed flexibility during the planning process, and was very open for inputs and ideas from all participants. The final master plan was still based on the original design by Kohlhoff & Kohlhoff, but it had been crucially influenced and altered through the goals defined by the broad citizen participation.

¹ Sources for this chapter: Becker 2001; Freiburg website 2011; Gradinger n.d.; Linck 2008a; Melia 2006; Paterson 2009; Scheurer 2001a: 328-330; Schröder-Klings 2011; Sperling 2002b & 2011; Stadtteil Vauban website n.d.; Veith 2005a

² Becker 2001

This master plan was officially approved in July 1997, when the city quickly started to sell the properties.

Co-operative Building and Housing

The large area was divided into small lots and sold separately, with a high priority for private developers and co-operative building groups (over commercial investors).¹ In fact about 70% of the individual plots were sold to private developers², who established a few cooperative initiatives (e.g. Genova or S.U.S.I.) and about 45 'Baugruppen' (co-building groups)³.

Goal of the city's selling strategy was to achieve a high mix of households in terms of different income levels, living forms (e.g. family structures), and housing forms (ownership/rental/cooperative).⁴ Co-housing and co-operatives allow people with similar ideas and ideologies to group together and to build their dream home. This results in a variety of projects with different but very specific focuses, such as particular ecological standards or highly social structures, favouring families, various age-groups, or including disadvantaged groups.

>> For examples of building projects, see Appx 16

Mobility Concept: Carlessness

As an outcome of the 'citizen participation', one of the main goals of the project was an ecological mobility concept encouraging carfree living and placing restrictions on private automobile ownership. Quartier Vauban is often claimed to be the largest 'carfree' housing project in Germany to date.⁵ But in fact, the concept in QV should be called 'carlessness': QV is only car-reduced, and largely parking-space-free.

Measures of car-traffic reduction are combined with policies to restrict or largely prohibit parking-spaces. Economic benefits rank high in the case of QV, mainly due to the high costs of parking.



Picture 2. Traffic sign for the street concept in favour for pedestrians and children, QV

¹ Gradinger n.d.

² Freiburg website 2011

³ Melia 2006

⁴ Arbeitsgemeinschaft Autofreies Stadtviertel 2001

⁵ Scheurer 2001a: 334 ff

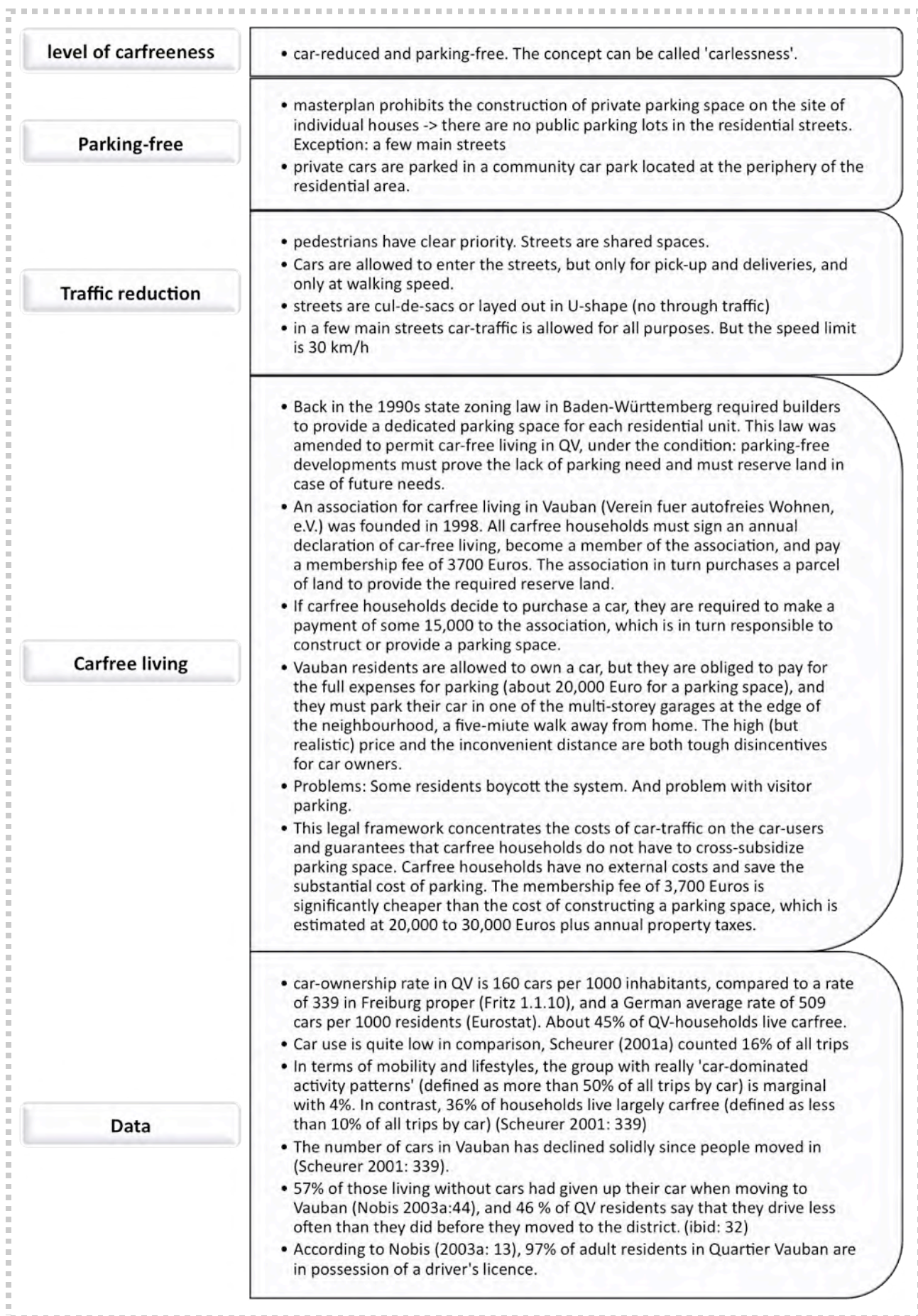


Figure 29. Concept of carlessness in QV

The strategy to support this car-reduced and parking-free concept includes efficient public transport, a good walking and cycling network, and a convenient car sharing system. Furthermore an urban design complements such strategies, with streets as places for social interaction and as playground for kids.

The main directly perceived social benefit of car-reduction is the increased quality of public space (more available space, plus less noise and less pollution), and the safety in the streets, which become playgrounds for kids and places for social interaction.¹ The use of public transport further facilitates social interaction.

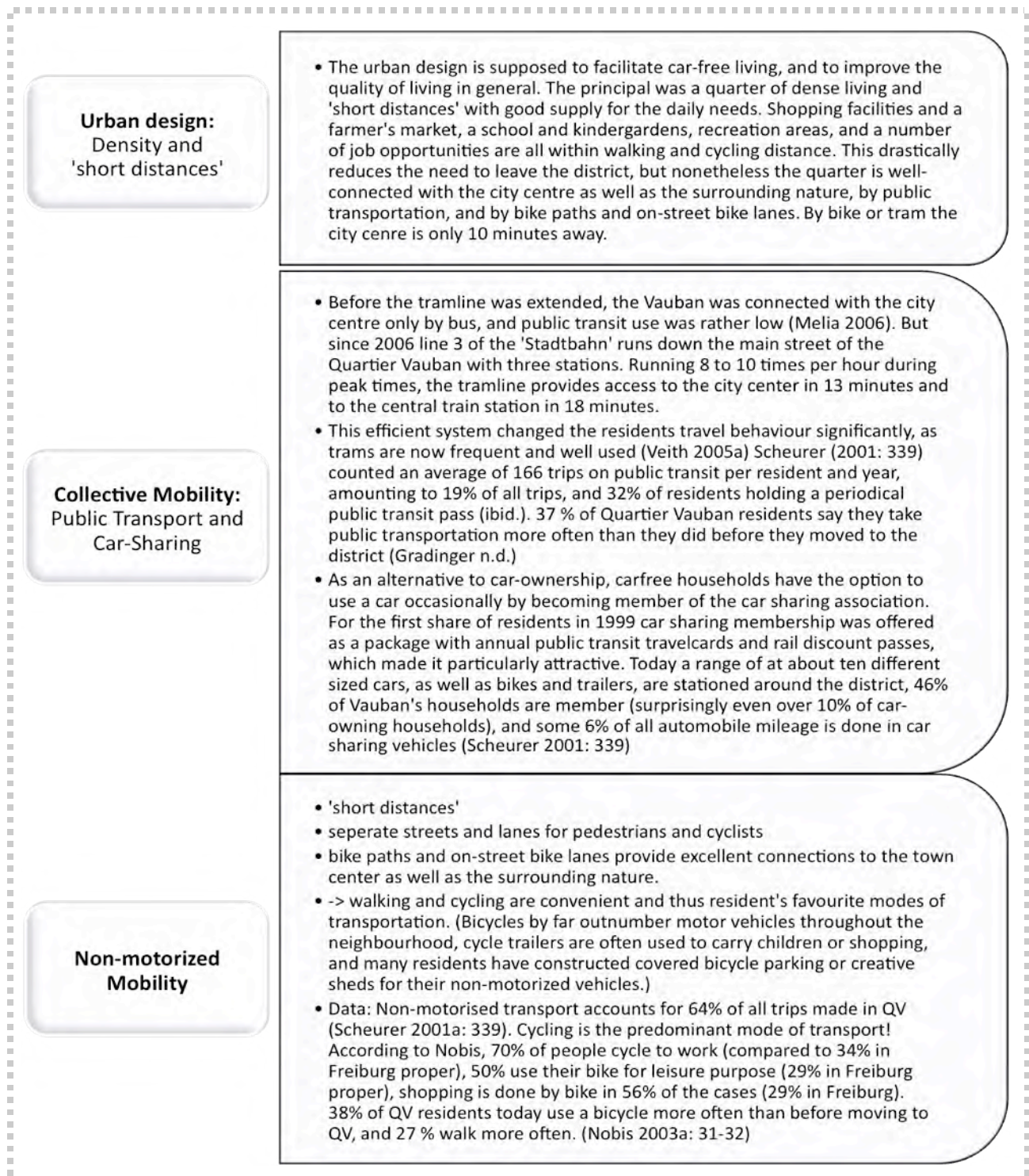


Figure 30. Mobility strategy in QV

¹ Sperling 2011

Architecture / Urban Design

The Quartier Vauban is a largely new-built district on a former military base. Most of the old Nazi-era barrack buildings were torn down to make room for a diverse 'urban' district at a surprisingly high density. The high architectural diversity is a combined result of two policies: The land-selling strategy with priority for co-building and co-operatives (broad variety of ideas), and the liberal zoning regulation (only few basic rules). In fact, over sixty architects were engaged to realize this architectural diversity.¹ The zoning regulation in combination with a broad variety of allotment-sizes assured high densities.

High density and diversity in form and use are the basic conditions for 'Urbanity'². An article in the renowned German newspaper 'die Welt' named the Vauban phenomenon a 'renaissances of urban living'³.

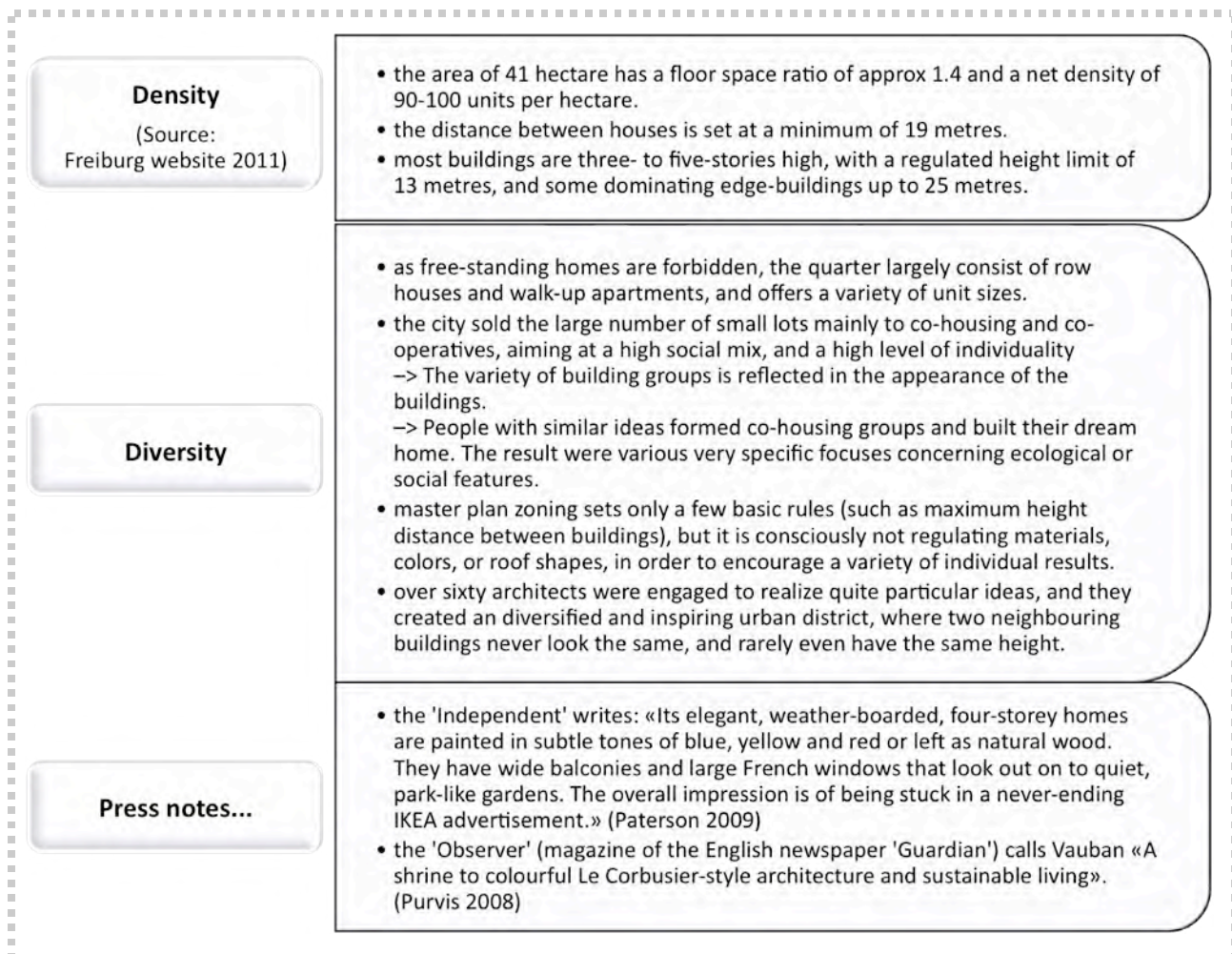


Figure 31. Urban district QV

¹ Melia 2006; Paterson 2009

² Freiburg website 2011

³ Guratzsch 2004



Picture 3. Diversity of architectural forms in QV

Urban Design

The principal strategy in Vauban was a mobility concept and an urban design that reinforce each other. The car-reduced and parking-free concept allows a dense urban design of 'short distances', which in turn facilitates and encourages walking and cycling. However, this causality conditions a certain amount and range of destinations (shopping and leisure facilities, jobs, schools, public spaces, nature...), and it conditions an attractive environment (streets and public space), which is both reality in QV.

- the 'Liveable Streets Design' strategy in QV includes traffic-calming measurements and 'shared space' concepts, as well as attractive materials, street furniture and lots of greenery.
- streets and squares in Quartier Vauban are a heterofunctional and very lively place, dominated by non-motorized traffic and children playing. Public spaces can easily be reclaimed by the residents, and are thus becoming one large meeting zone for residents, which is fostered by private and public spaces fading into one another.

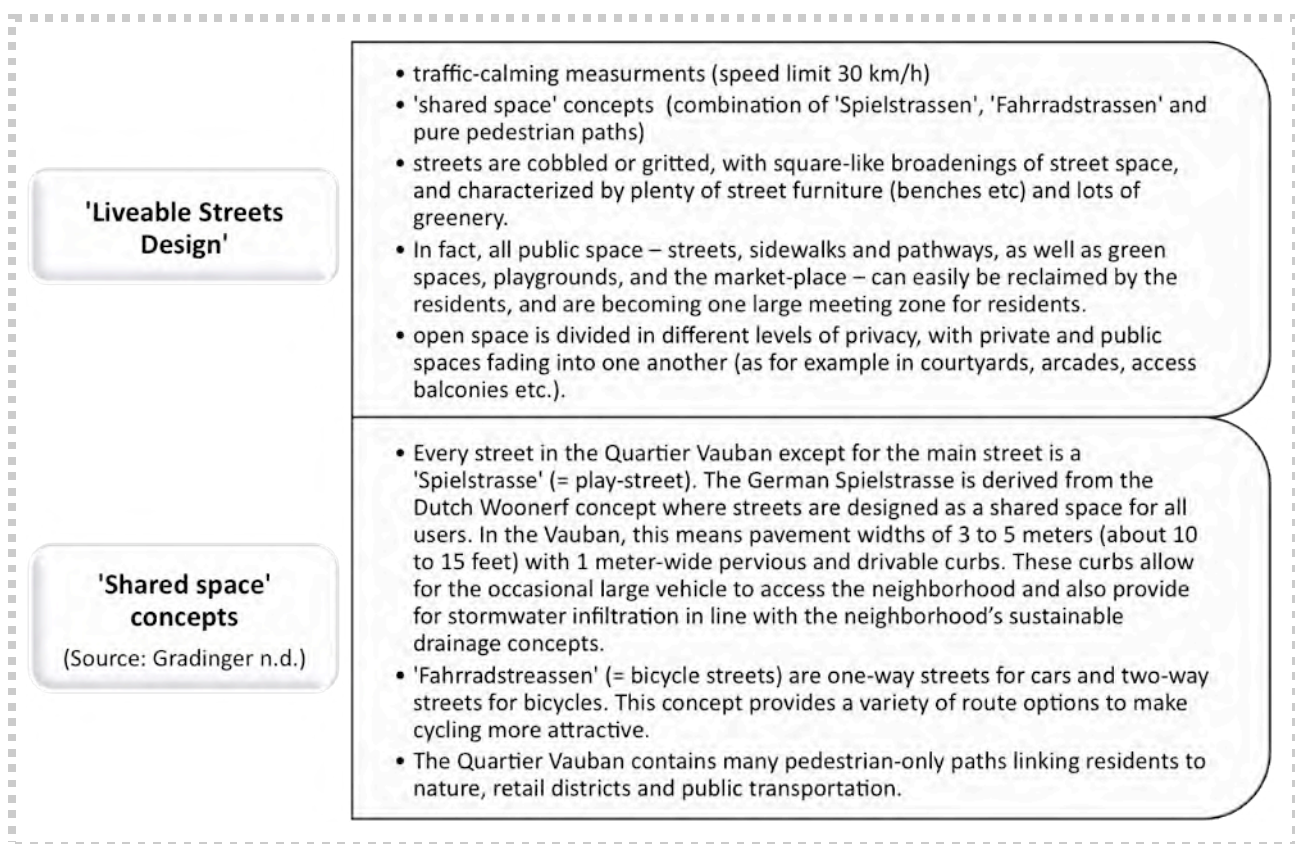


Figure 32. Street design in QV

Green Space

Green space is an essential characteristic and advantage in QV. Aside from many private gardens and greenery on balconies or rooftops, there is also a lot of public green space. Throughout the district most old trees have been conserved, and five large public green zones ('Grünklammern') offer space for recreation, leisure, and for kids to play. This is supplemented by protected biotopic areas at the edge of the district along the little natural stream, and the fields, vineyards and forest surrounding QV. ¹

The design and equipment of public green space was planned as part of the participatory process. Residents had the chance to contribute their ideas and wishes, and some areas are even built by the residents themselves.

¹ Forum Vauban e.V. 1999

In the research-own survey the aspect '*Nature and green space*' was rated as 'important' by 50%, as 'medium' by 42% of respondents, and is ranking on position 6 out of 11 aspects. This quite low relevance can be explained by the fact that QV is bordered by nature and forest anyhow. Because when elaborating on their well-being, respondents mainly mention the nature within the neighbourhood, and the nature surrounding it, and the distinct urban design of being a 'village in the city', of being green and calm but urban at the same time. (Appx 22 Q.11 + Q.3)

Ecological Sustainability

Aside from dictating a 'parking-free' area, the masterplan requires all buildings to meet 'low-energy standard'. Moreover the development plan includes regulations such as the greening of roofs, the conservation and planting of trees, rainwater infiltration, etc. More progressive standards, such as 'passive houses' or 'plus energy houses', were self-sufficiently implemented mainly by many of the Baugruppen and co-operative building projects (Genova, S.U.S.I., Kleehäuser, Solar district Schlierberg, and even the parking garage). ¹

>> For explanations on some ecological standards, see Appx 17

The following table shows the project's ecological features, distinguished by topic, followed by a table about the resource- and recycling concept:

Mobility	<ul style="list-style-type: none"> • Car-use-reduction > Reduction of fuel-use and pollution • Car-use-reduction > Reduction in land-use for streets and parking.
Buildings	<ul style="list-style-type: none"> • All houses are built at least with 'Low-Energy Standard' (max. 65 kWh/m2a). This is a requirement in the masterplan. • Additional (compulsory): over 250 units with 'passive house' (max. 15 kWh/m2a) or 'plus energy' standard (houses which produce more energy than they need). • Buildings with flat roofs are obliged to green them, as a measure to collect and store rainwater and keep it from flood the streets. • Most buildings feature solar collectors or photovoltaic panels on their roofs.
Building technique (heating, ventilation, hot water)	<ul style="list-style-type: none"> • Heating is provided by a district heating grid, which is connected to the co-generation plant (CHP). Most building heating systems are supported by passive and active solar energy, as well as intelligent ventilation with heat-recapture devices. Some buildings even rely entirely on solar energy. • Buildings are design in order to profit from passive solar gains. • There is a lot of new-generation timber-frame construction. • Windows of all the homes are triple-glazed. • Ecological materials with low grey energy are used. • An intricate ventilation system fitted with heat exchangers ensures that apartments are kept constantly topped-up with fresh air at room temperature, even when the windows are shut.
Green space / nature / biodiversity	<ul style="list-style-type: none"> • Most of the old trees (approx 70 years old) were saved, as the new residential area was built around these trees. This was already required in the project competition. • Throughout the district are five main public green zones ('Grünklammern'), which do not only offer space for recreation, leisure, and for kids to play, but they also improve the district's climate by supporting the ventilation of the entire district. • The green concept is supplemented by further green spaces and protected biotopic areas at the edge of the district along the little stream.

Figure 33. Ecological features by topic.

¹ Stadtteil Vauban website n.d.

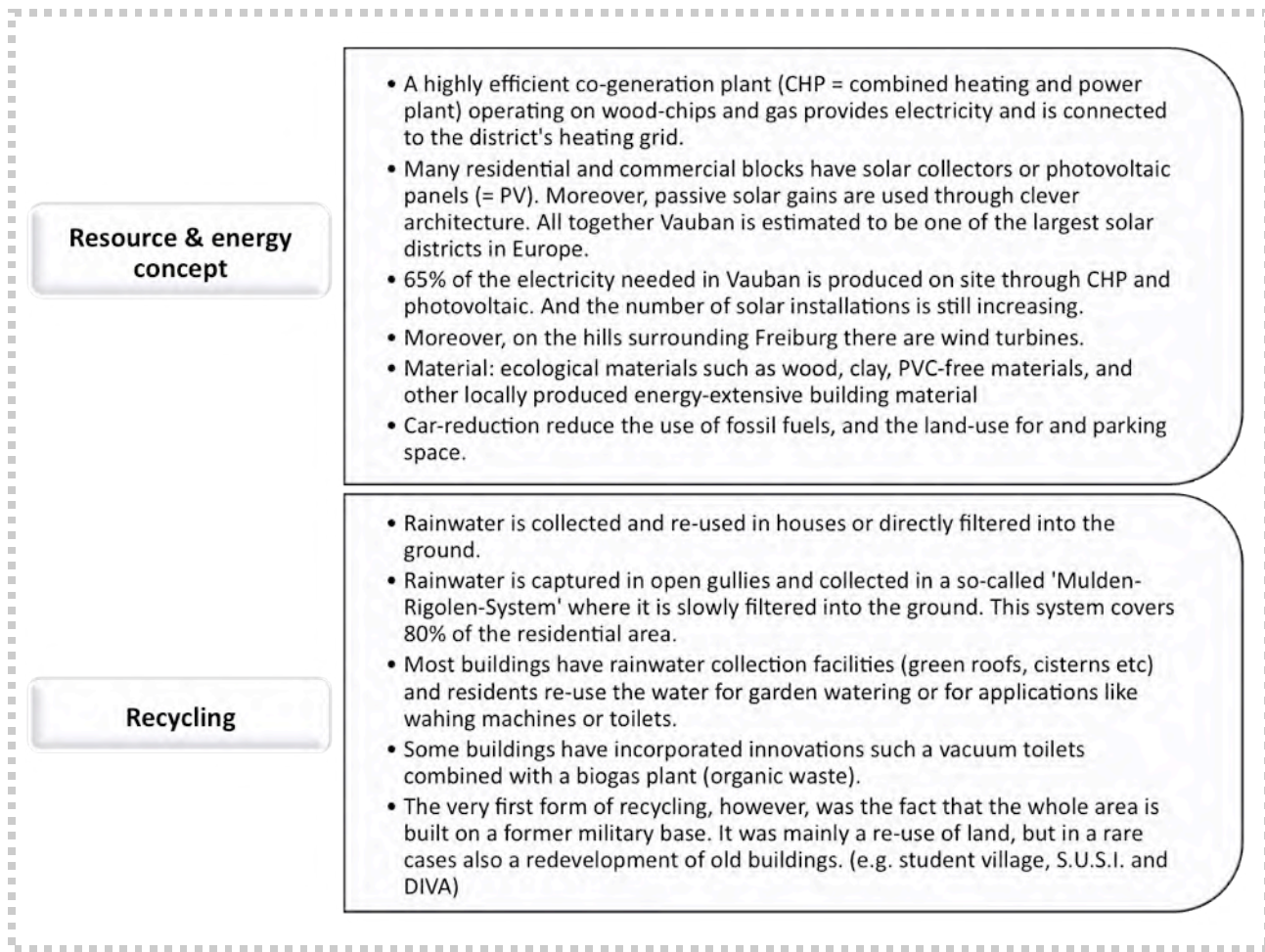


Figure 34. Resources, energy and recycling in QV.

Relevance of Ecological Measures

According to the research-own survey, the 'ecological sustainability in various aspects' was the strongest argument (34% of respondents naming it as the main motivation) for moving into QV. However, after having lived there for a while, only 10% still named it as QV's main argument, while most respondents now consider the high quality of living as being most important. (Appx 22 Q.6-8)

The main social benefits of ecological sustainability (car-reduction excluded) are the gains in energy and money (from either saving energy or even selling energy), impacts on people's health, an impact on the general well-being (due to more green spaces), and an increase in living-comfort (high comfort in eco-buildings).

Communal Infrastructure: Services, Facilities, Institutions...

QV provides a broad range of shopping facilities, and offers various leisure activities, cultural events, or social services. This is highly convenient for residents, as well as it's strengthening the local economy, facilitating social interaction, and thus contributing to a feeling of community amongst residents. And being able to do things locally (going to school, working, playing, shopping...) increases the residents' identification with their district.

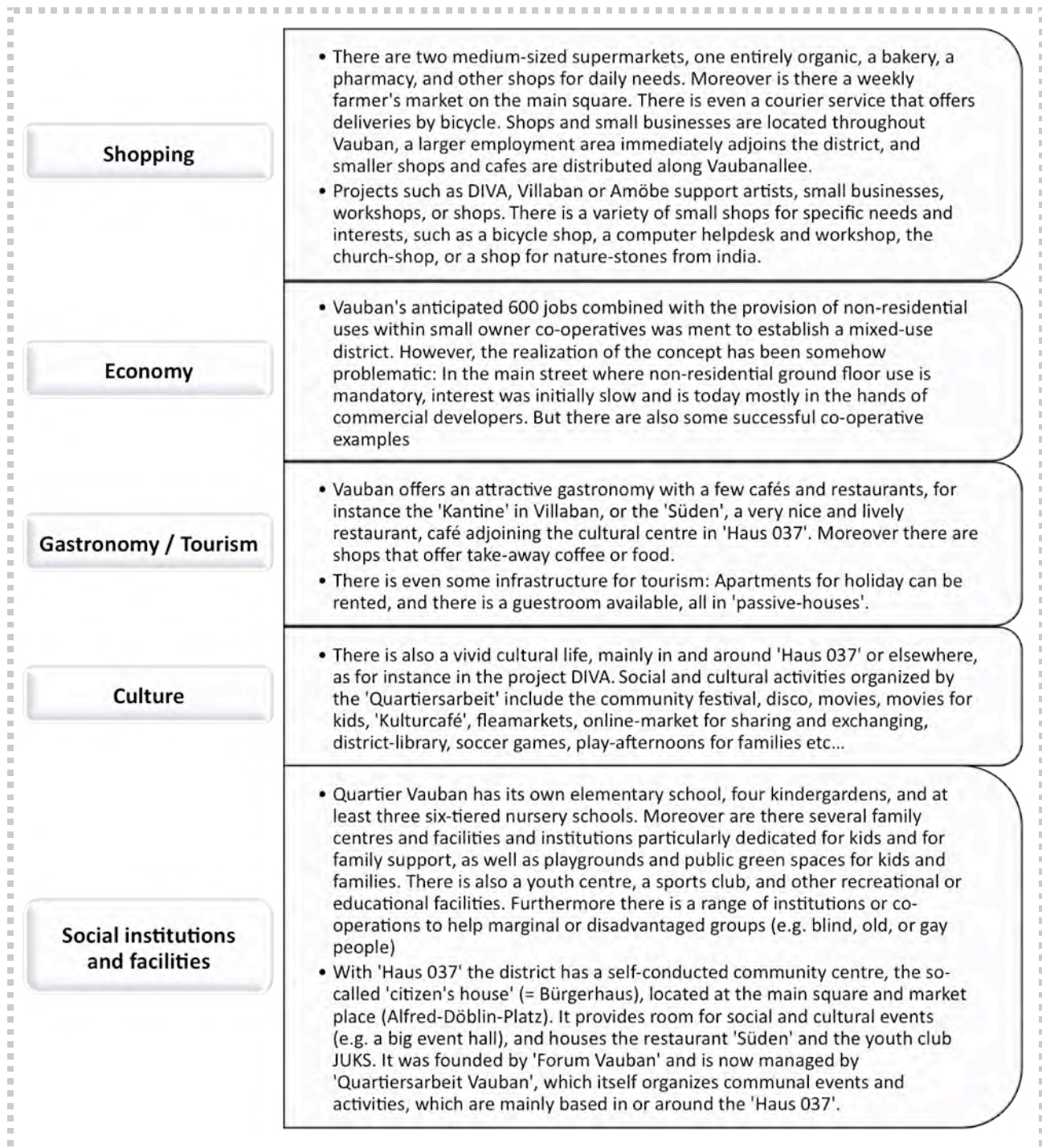


Figure 35. Facilities and services in QV

In fact, facilities are frequently used and in the research-own survey the aspect 'Shopping facilities' was rated as 'important' by 62% and as 'medium' by 35% of respondents, ranking on position 4 out of 11 potential social benefits, only topped by issues of community, participation, and solidarity. Surprisingly, in the same rating the aspect 'Leisure and culture (offer, facilities, events...)' ranks on position 11, thus being perceived as the least relevant of all. However it was still rated as 'medium important' by a high 74% of respondents. (Appx 22 Q.11)

Social Work and Participation

After the participative development process was largely over, the Forum Vauban's new responsibility from 1999 onwards was the social work within the district – the so-called 'Quartiersarbeit' (QA). This Quartiersarbeit aimed at a «communication with all new inhabitants

and the developing of neighbourhoods»¹. The following table summarizes its main purpose and activism:

Initial Aim	<ul style="list-style-type: none"> • communication with all new inhabitants and developing a neighbourhood • implementation a neighbourhood centre ('Haus 037').
Goals today	<ul style="list-style-type: none"> • fostering the district's living quality by specific projects • organizing of projects and events • informing all residents about about almost everything concerning life and activities in Quartier Vauban.
Activities (some examples)	<ul style="list-style-type: none"> • various activities in the community's district center 'Haus 037', such as discos, movies, 'Kulturcafé', district library...), • events at the market place, such as the farmer's market initiated by residents, or a flea market, play-afternoons for families, soccer games... • the neighbourhood festival
Information (examples)	<ul style="list-style-type: none"> • magazine 'Vauban actuel' • the internet discussion forum http://www.vauban.de/forum • recently published 'Vauban-guide' lists about 30 non-commercial initiatives or institutions active within Vauban.
Social Work	<ul style="list-style-type: none"> • offers for specific target groups (children, youth, families, and others) • conflict management • In general they try to foster the dialogue between different interest groups within the district.
Participation	<ul style="list-style-type: none"> • QA aims at a high cooperation with institutions and a high participation of residents • organizing workshop on current issues concerning the district (e.g. workshop 2010 on the social development of the district) • online ideas workshop: The website www.eingang-freiburg-vauban.de is an experimental first try-out of a new form of citizen participation in a concrete urban project. The website is an open and independent forum, working by the same principals than wikipedia, where residents can post their ideas, inputs, wishes etc... (Eingang Freiburg Vauban website n.d.) • people have always been able to use the 'Quartiersarbeit' as a platform to express their needs, or to receive support for their own grassroots initiatives (such as a farmer's market, bio-food-store etc.).

Figure 36. Social Work 'Quartiersarbeit' in QV

According to the evaluation in 'Sozialraumanalyse' 2009, out of 94% of the respondents know (more or less) about the work and services of the 'Quartiersarbeit', only 1% finds the QA useless. The engagement and services/activities of QA is clearly recognized and appreciated (82% satisfaction, only 4 % dissatisfaction). According to the respondents, the Quartiersarbeit largely contributes to the community-building and assures the social peace ('sozialer Frieden') in the district. ² (See Appx 20)

6.3 Social Benefits in QV

General Benefits – More than Carfree?

The satisfaction with and well-being in the project is very high:

¹ Sperling 2011

² Schings 2009

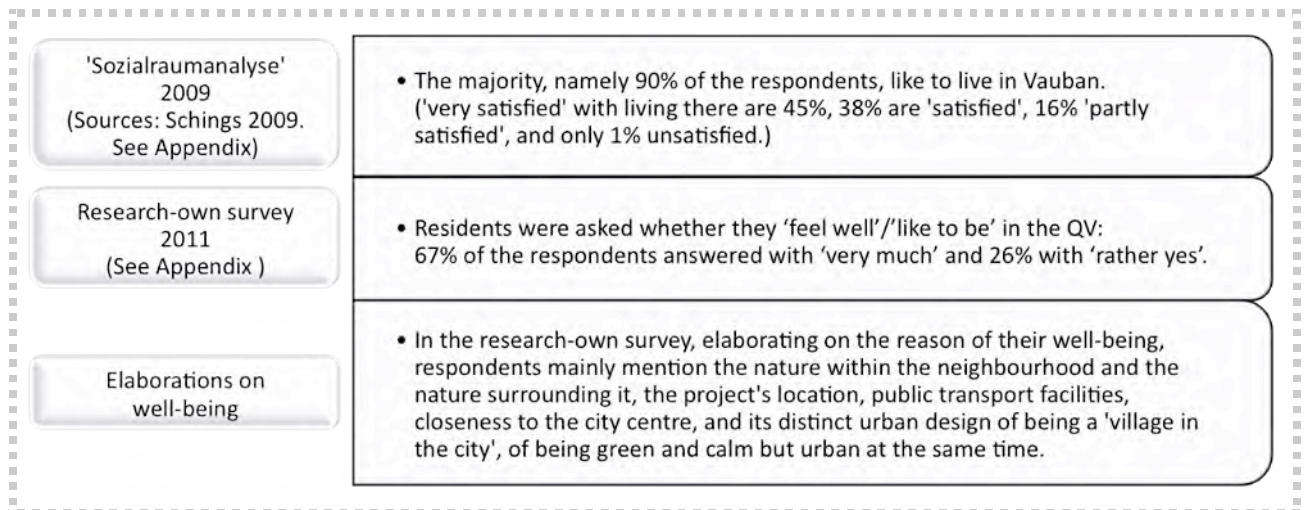


Figure 37. Satisfaction and well-being in QV

The research-own survey asked respondents, whether they think their well-being is connected to the carfree character of the project:

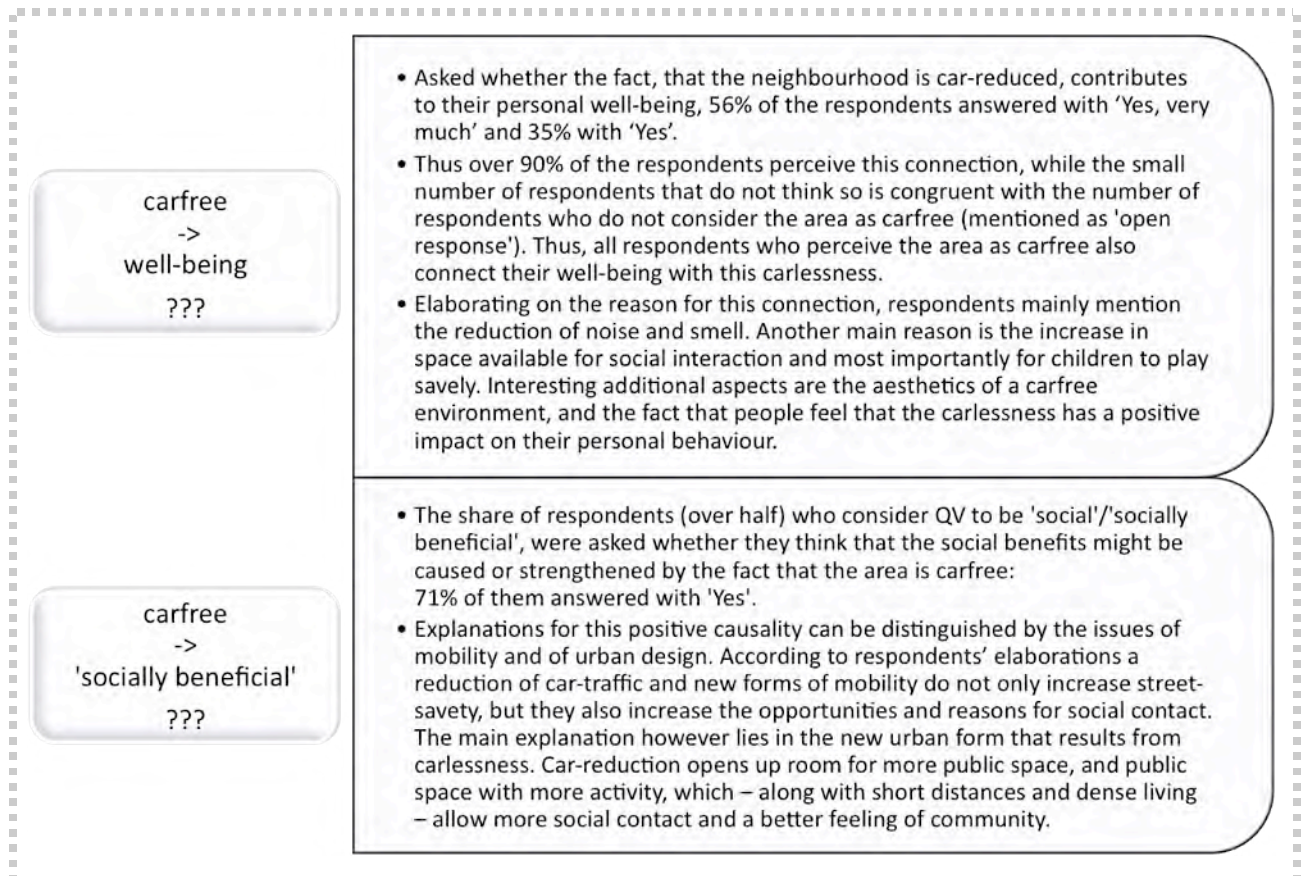


Figure 38. Connections with carfreeness (Appx 22 Q.4+5 + Q.13+14)

The following table shows the main reasons why residents decided to move into QV:

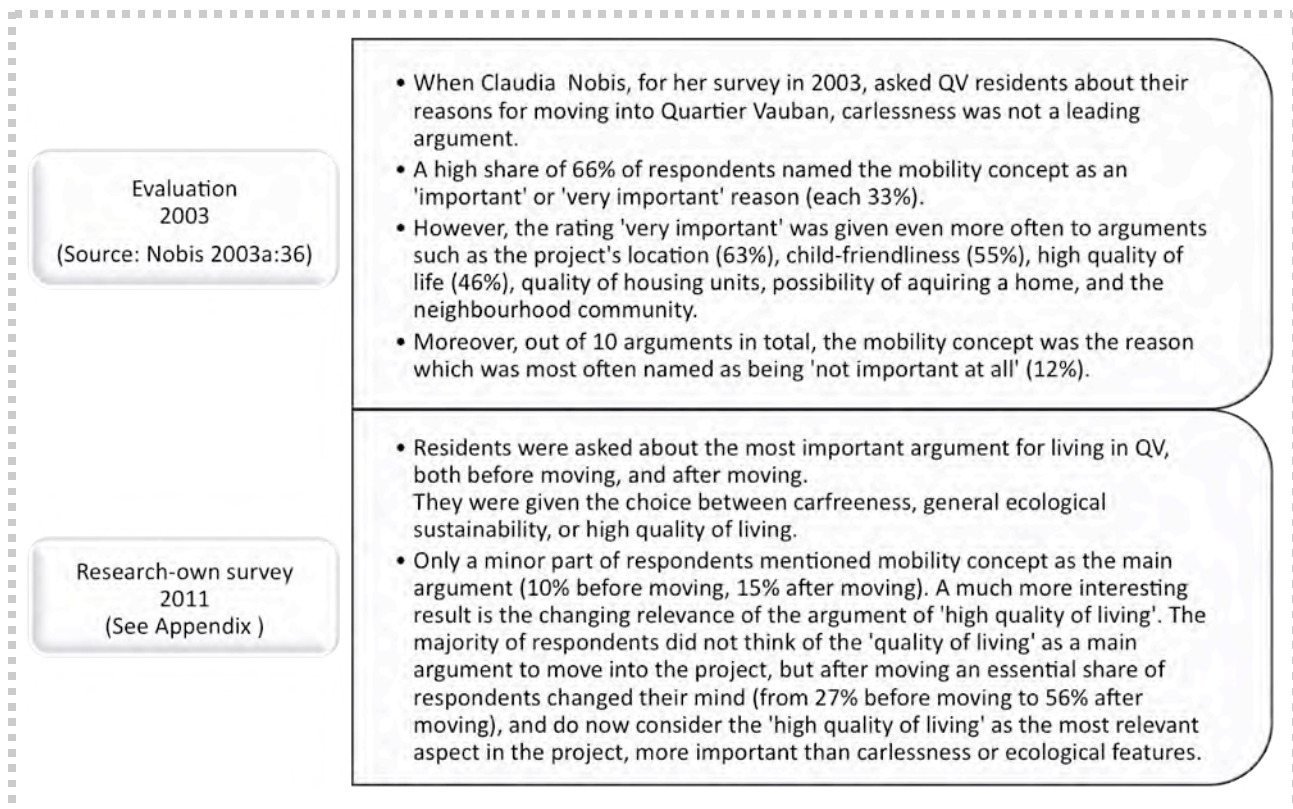


Figure 39. Motivations for moving into QV

These results show that the carfree character of the QV project was a deciding reason to move there, but not the only reason, and not necessarily the most important one either. The high quality of living is a considered just as important.

Conclusion: The project QV is more than just carfree!

Despite the high evaluation of carfreeness, leading guidelines for the project 'Quartier Vauban' were not only the unusual mobility concept, but also an all-embracing ecological concept, and an outstanding culture of resident involvement, both in planning and in organizing daily district life. And last but maybe most importantly: The break with the omnipresence of private cars is offset by a higher quality of living.¹

In fact, over half of respondents in the research-own survey consider QV to be a 'socially beneficial' place:

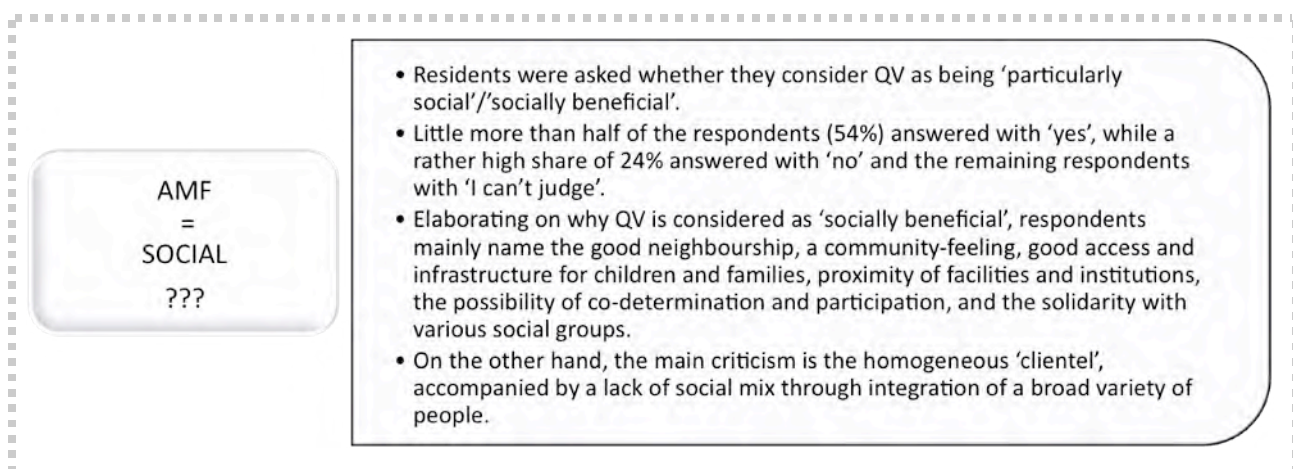


Figure 40. QV is 'socially beneficial' (Appx 22 Q.9+10)

¹ Stadtteil Vauban website n.d.

Invited to rate eleven different potential social benefits according to personal relevance to the respondents, by far the most relevant social benefit turned out to be 'community (e.g. neighbourhood, communal facilities etc.)', rated as being 'important' by 92% of the respondents. The second most 'important' social benefit is 'Participation / co-determination (participation in development process / in organisation)' (69%), closely followed by 'Solidarity (e.g. social equity, fairness etc.)' and 'Shopping facilities'.

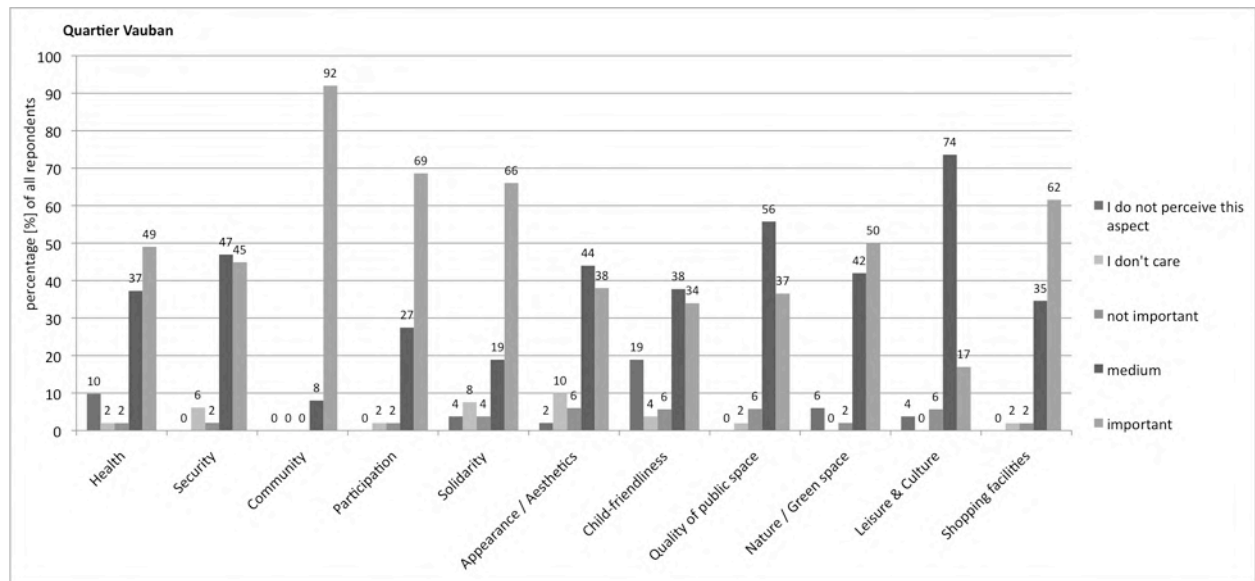


Figure 41. Rating of 'potential social benefits' according to personal relevance (Results of the research-own survey 2011. See Appendix 22 Q.11)

In the following, some of these 'potential social benefits' are discussed:

Economic Benefits

The main financial advantages result from the incentives for carfree households, financial gains from ecological buildings, from alternative resources, and the savings from building in housing groups:

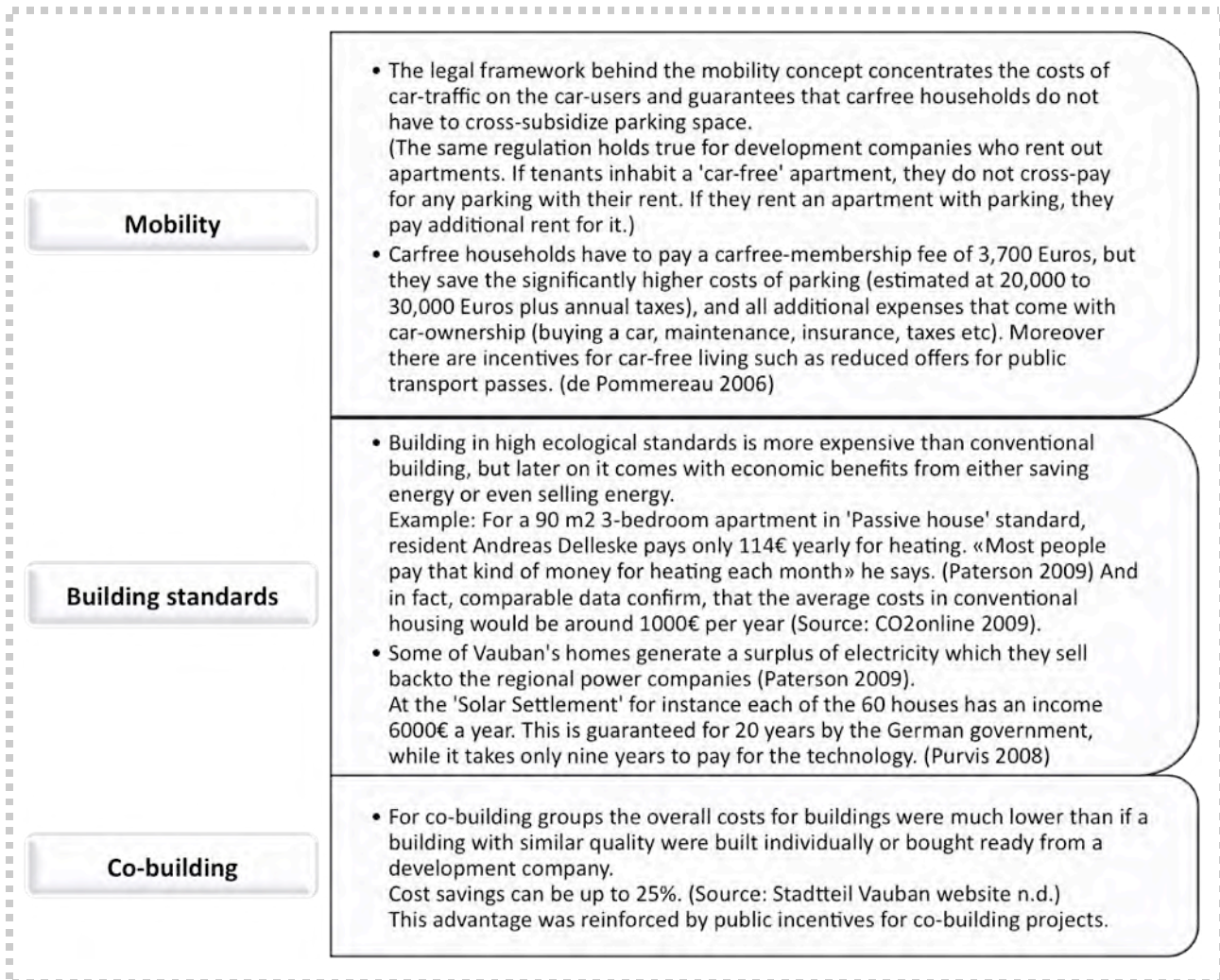


Figure 42. Economic benefits in QV

Economic sustainability is further an issue, as the QV project originally had anticipated 600 jobs in the district. This was meant to provide not only employment but also to establish a mixed-use district with services, facilities and shops, which in turn were expected to boost the district's economy. The realization of this economy has been somehow slow, but today the district shows already quite some successful economic activity.¹

Finally, another economic issue of such projects is the potential to counteract current neo-liberal capitalism aiming at economic growth by demonstrating alternative ideas, concepts, or lifestyles. QV has a quite distinct populace, willing to do things differently. An example is most residents' consumption patterns (shopping, leisure) that focuses on local products or activities. Other small examples are the concepts of sharing or exchanging (instead of 'individual buying') at the local flea market, or at the online-exchange-market which is set up by the 'Quartiersarbeit'.²

¹ Scheurer 2001a: 335

² Quartiersarbeit Vauban website n.d.

Health / Safety / Security / Comfort

Car-reduction and other ecological measures have a direct or indirect impact on people's health, safety, as well as well-being and comfort.

In the research-own survey the aspect '*Health*' was rated as 'important' by 49%, as 'medium' by 37%, and as 'not important' by 2% (and 10% simply do not perceive this aspect in QV). Comparing the average ratings of eleven potential social benefits, the aspect '*Health*' ranks on position 5. The aspect '*Security (e.g. street / traffic safety)*' got a similar rating (as 'important' by 45%, as 'medium' by 47% of respondents), ranking on position 7. Elaborating on the reasons why carlessness has a positive impact on their well-being, respondents mainly mention the reduction of noise, smell, and pollution. (Appx 22 Q.11 + Q.5)

In QV, the increase in save and clean public and green spaces contributes to people's well-being in general ¹, and is therefore an important factor for the quality of life. Furthermore, ecological buildings can increase living-comfort. Not to forget that all residents, even car-users (in lack of front-house parking), have a higher average level of exercise from walking or cycling.

Individuality

With the implementation of broad citizen participation in 1995 and social work in 1999, people have been able to express their personal ideas, and to receive support in order to start individual initiatives, up until today.

Building individually or in small co-housing groups, on a large number of small lots, and not being restrained by strict building regulations, encouraged residents to create an urban assemblage of differences and individuality. «The result: buildings follow a guiding line, yet they are very individual.» ² The district shows an outstanding variety of building types and forms. Neighbouring buildings rarely follow the same style, use the same colour or material, or have the same height.

Aesthetics / Appearance

In the research-own survey the aspect '*Physical appearance, aesthetics, architecture etc.*' got no significant rating and only ranks on position 9 out of 11 potential social benefits. However, when respondents elaborated the reasons why carlessness has a positive impact on their well-being, an interesting aspect they mention is the aesthetics of the carfree environment. (Appx 22 Q.11 + Q.5)

The high architectural diversity and individuality throughout the district, the cobbled streets, the many green spaces, plants and flowers in gardens and on balconies, the conserved old trees etc certainly all contribute to the 'beauty' of QV.

The fact that public and green spaces have been planned and designed in a participatory process increases the acceptance of and satisfaction with these places. And even if not everyone likes everything, thanks to the high diversity each person can find beautiful buildings, places or details according to his personal taste. Some people might even see beauty in plurality itself. And if the district is really not considered as beautiful, it is at least not boring for the eye, as it is still a manifold and inspiring urban experience.

Participation / Community / Space for Social Interaction

Participation

In general, the level of resident participation is high. From the beginning on, the principle 'Learning while Planning' and the extended citizen participation set new standards of communication, interaction and integration. ³ And the result was better than expected, reflected by the high number of people taking part in workshops about the project development and the high number of co-building and co-housing groups.

¹ Forum Vauban e.V. 1999

² Adler 2005

³ Stadtteil Vauban website n.d.

Participatory planning and co-building are both highly social processes. On the one hand, co-operative planning and building (and also subsequent communal living) demand from participants a high level of sociability and give-and-take. On the other hand, participation makes it quite easy to get in contact with future neighbours and to build on the community already in advance. Therefore «co-building group projects provide the fertile ground for a stable district community and rise ecological awareness». ¹

«The most consequent and the most productive way to let citizens participate in creating their neighbourhood is to offer them the possibility to plan and built their homes by themselves – either in individual projects or as part of a co-housing group.»² And collectively planned or built public and green spaces do not only provide meeting places, but more importantly, they already foster community during their development, because the building process is usually a social event itself, combined with collective fun and meals, and the feeling of achieving something.³

Moreover, participatory planning process gives residents the chance to make new experience, to learn about planning, building, about lobbying and publicity, about setting and achieving certain goals, and about democratic processes in general. This basic knowledge can later become very useful for the democratic community structure of the district's organization.

The high level of participation during the planning and building process is continuing today with a high number of people committed in local initiatives (district festivals, farmer's market, neighbourhood center, mother's center, private kindergarden, community gardens, the co-operative district's foodstore, ecumenical initiative for a church in Vauban and others) ⁴

In the research-own survey the aspect '*Participation / co-determination (participation in development process / in organisation)*' was rated as 'important' by 69% and as 'medium' by 27% of respondents. Comparing the average ratings of eleven potential social benefits, the aspect '*Participation*' ranks on position 3. (Appx 22 Q.11)

Space for Social Interaction

Car-reduction and a 'liveable Street Design' result in the fact that the main directly perceived social benefit is the increased quality of public space (more available space, plus less noise and less pollution), and the safety in the streets, which become playgrounds for kids and places for social interaction. ⁵

Streets, squares and green zones are not only collectively planned or built, they are also hetero-functional and lively places and are frequently claimed and reclaimed by the residents. In addition, the advantages of frequently used social and commercial facilities are mostly obvious. Aside from being a high convenience in the residents' daily routine, local facilities foster social interaction, and thus strengthen the community. The use of public transportation can further increase social interaction. Furthermore, going on holiday by train, bus, plane, hitchhiking or biking etc are all more sociable modes than travelling by car.

Community

Neighbourhood and community structures become visible by the spaces which are created through them. The semi-public spaces (such as access-galleries, community gardens and rooms) were created mainly by the Genova- and Baugruppen-projects. The design of the public green spaces, the resident's streets and the neighbourhood center are developed during several meetings and workshops together with the residents. ⁶

As ecological measurments – such as carlessness or low-energy use in buildings – are a contribution to environment protection, subsequently the social benefits can be a better conscience, and – when ecological measures are taken in groups – a shared good conscience and the feeling of belonging together.

¹ Sperling 2011

² Sperling 2002b: 9 (own translation)

³ Klötzer 2004

⁴ Stadtteil Vauban website n.d.

⁵ Kucharz 2007; Sperling 2011

⁶ Stadtteil Vauban website n.d.

In addition, the social work helps to set up stable community and neighbourhood structures. Very often, such structures already grew through the building process. Many 'Baugruppen' (groups of building owners) or for instance the Genova co-operative have developed a sensitively balanced community life. These structures are the fertile ground for further initiatives within the district (e.g. the co-operative food store, the farmer's market initiative, the mother's center, and many others).¹

In the research-own survey the aspect 'Community (e.g. neighbourhood, communal facilities etc.)' was rated as 'important' by a very high 92% and as 'medium' by the remaining 8% of the respondents. Comparing the average ratings of eleven aspects '*Community*' ranks on position 1, thus being perceived as the most relevant of all. (Appx 22 Q.11) Elaborating on their well-being in the project, respondents mainly mention issues of community and solidarity: namely the communal infrastructure (public green space and communal facilities) and communal activities (Appx 22 Q.3+4). When asked about social benefits in QV that come to mind spontaneously, respondents mention mainly the good neighbourhood and a community-feeling (Appx 22 Q.10). Being asked how carlessness might cause or strengthen social benefits, respondents explain this connection by how mobility, urban design and community are interrelated: a reduction of car-traffic and new forms of mobility increase the opportunities and reasons for social contact. Moreover car-reduction opens up room for more public space, and public space with more activity, which – along with short distances and dense living – allow more social contact and a stronger feeling of community (Appx 22 Q.14)

Identity / Responsibility

Given the possibility to influence their future living environment (as being involved in the citizen participation process), and to plan and build their homes by themselves (as part of a co-building group), residents maintain the responsibility for their immediate neighbourhood.² Feelings of responsibility for a place usually foster a feeling of identity with the place, and vice versa. Identification in turn positively influences the level of participation within the community, and vice versa.

People really identify with 'their' district. This can be seen through the high number of people committed in local activities and initiatives.³ In turn, being able to do things locally (going to school, working, playing, shopping...) increases the residents' identification with their district.

Finally, what can help to create an identity for the new community, is to preserve some of a district's history: Which signs of history can still be found? What is 'the district story'?⁴ In QV some of the old army barracks are re-used for housing, and the precious old trees, which have been conserved throughout the district, introduce the aspect of mature life into the young district.⁵

6.4 Social Mix and Social Equity

Good Intention: Social Mix

One of the most important goals of the project 'Quartier Vauban' was a well-balanced mix of social groups.⁶

Initiators were aware of the fact, that this kind of project «needs the support of a high share of well-educated, ecologically-oriented middle-class people who introduce the new lifestyle and give Vauban its specific shape. These people are absolutely crucial for the success of such a pilot

¹ Stadtteil Vauban website n.d.

² Sperling 2002b & 2011

³ Stadtteil Vauban website n.d.

⁴ Sperling 2002b & 2011

⁵ Sperling 2011

⁶ Gradinger n.d.; Sperling 2002b & 2011

project!»¹ Nonetheless, it was a claimed intention of the initiators, that QV shall also provide its benefits for low-income people.

The city's strategy to sell rather small allotments to preferably cooperative building groups aimed at a high mix of households in terms of different income levels, living forms (e.g. family structures), and housing forms (ownership/rental/cooperative).²

Building costs for co-housing group are much lower than building individually or buying ready from a development company. This allows even people with a lower income to become 'house owners'.³ This advantage was reinforced by public incentives for co-building projects. Furthermore there is a number of rental units, both with and without public subsidies⁴

This strategy was supported by cooperative initiatives such as S.U.S.I. or Genova, which have highly social goals and offer apartments and rooms for low-income households, families or students, or aim at an intergenerational or social mix of residents in general.⁵

Additionally, the inclusion of low-income people however requires federal support, by means of subsidies and direct supply of social housing. Unfortunately, apartments offered especially for low-income groups remained limited because federal and state subsidies for such projects were almost cancelled. And private initiatives alone lack the resources to fill this gap.⁶

Today, the city aims to build about 200 new apartments for social housing, sponsored by Federal and State programs. In addition to this and to the the few cooperative initiatives, more efforts should be made to increase the mix of social groups and ages.⁷

'Special Clientel' in Reality: Middle Class Families

Families and Children

Anyhow it is questionable in how far the claimed goal of a balanced mix of social groups really aims at all social groups. In fact it seems quite obvious, that the city's main objective was to develop an attractive neighborhood for young families.

And this objective was achieved. Data confirms the prevalence of families with children:

Quartier Vauban: Demographic data

- In 2001, almost half of the residents were under the age of 18, and less than one quarter of all households were adult-only. (Scheurer 2001: 337 ff)
By January 2002 more than 20% of inhabitants were children under age ten. (Sperling 2011)
- The average household size in 2001 was a staggering 3.34 persons, 76% of them with children, reflected by the average size of the housing units of 115 m².
Both household size and unit sizes are far above comparable averages. (Scheurer 2001: 337 ff)
- Since then the number of households with children and average household sizes have evidently fallen as Vauban has grown, but young children still seem to form a large proportion of the population. (Melia 2006)
- Data from 2009 confirms that nearly 30 % of inhabitants are aged under 18 (Data mentioned in various sources: Freiburg website 2011; Paterson 2009; Völzing 2011, in: Stadtteilverein Vauban 2011: p 8-9).
This is still rather high, compared to a Freiburg average of 16,2% under 18 years. (Völzing 2011, in: Stadtteilverein Vauban 2011: p 8-9)
- On the other hand, the share of old people has increased, but is still at a low 3.3%, in comparison to the Freiburg average of 21.3%. (Völzing 2011, in: Stadtteilverein Vauban 2011: p 8-9)

¹ Sperling 2002b & 2011

² Arbeitsgemeinschaft Autofreies Stadtviertel 2001

³ Stadtteil Vauban website n.d.

⁴ Scheurer 2001b

⁵ Sperling 2011

⁶ Sperling 2002b and Sperling 2011

⁷ Sperling 2011

Figure 43. Demographic data QV

Reasons the district attract mainly families with small children are manifold. «New districts are 'young districts'» emphasizes Sperling. To him this seems to be natural because usually it is young families looking for new homes.¹ However, the principal reason for the district's child-friendliness is the carlessness. Due to the traffic concept, streets and other public areas become save playgrounds for kids.²

The results of the research-own survey confirm the priority of children in QV: Elaborating on their general well-being in the project, several respondents mention the fact that the project is very child-friendly (Appx 22 Q.3) Elaborating on the main reasons why carlessness has a positive impact on their well-being, respondents name an increase in space available for children to play savely (Appx 22 Q.5). When asked about social benefits in QV that come to mind spontaneously, many respondents mention good access and infrastructure for children and families (Appx 22 Q.10). Surprisingly, comparing the average ratings of eleven potential social benefits, the aspect 'Child-friendliness' ranks only on position 8. (Appx 22 Q.11)

Problems with Demographic Balance

The prevalence of families and children friendliness leads to a problem with the demographic balance:

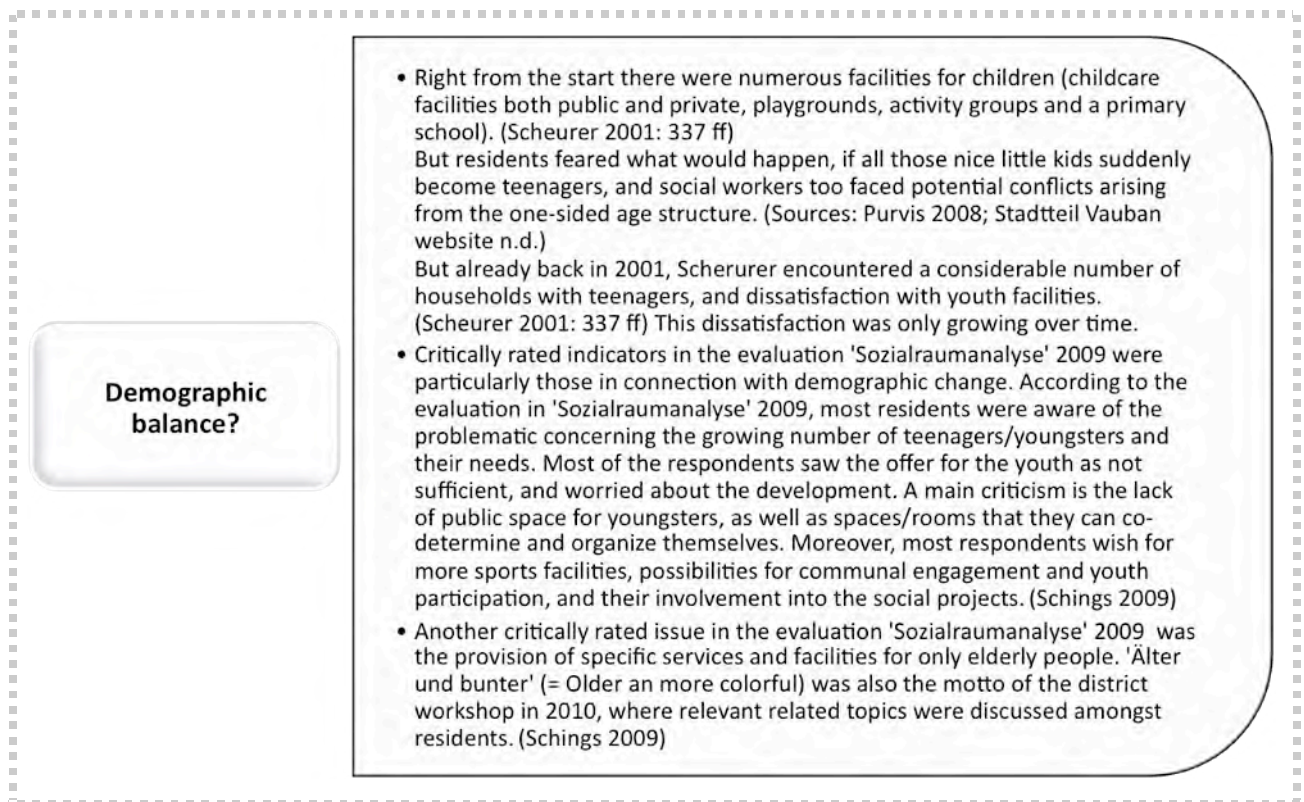


Figure 44. The issue of demographic balance in QV

Strong Middle Class

In the research-own survey the aspect 'Solidarity (e.g. social equity, fairness etc.)' was rated as 'important' by 66%, as 'medium' by 19% of respondents. Comparing the average ratings of all eleven potential social benefits, the aspect ranks on position 2, thus being perceived as the second most relevant of all (Appx 22 Q.11). Moreover, when asked about social benefits in QV that come to mind spontaneously, many respondents mention the solidarity with various social groups. On the other hand though, the main criticism in this 'open response' is the homogeneous clientel and the lack of a social mix (Appx 22 Q.10). According to the evaluation

¹ Sperling 2002b & 2011

² Sperling 2011

'Sozialraumanalyse' 2009¹, too, one reason for unsatisfaction is the problematic issue of a 'too' homogenous population.² (See Appx 20)

An article in the British newspaper 'Independent', brings it to the point: «If Vauban's brave new world suffers from anything, it is its own peculiar brand of middle-class monoculturalism. Sitting outside a former Nazi barrack building that now functions as an organic restaurant selling ricotta-filled ravioli and ostrich meat, its is difficult to spot anyone who is non-European, old or poor.»³

Available data clearly confirms the district's strong middle class:

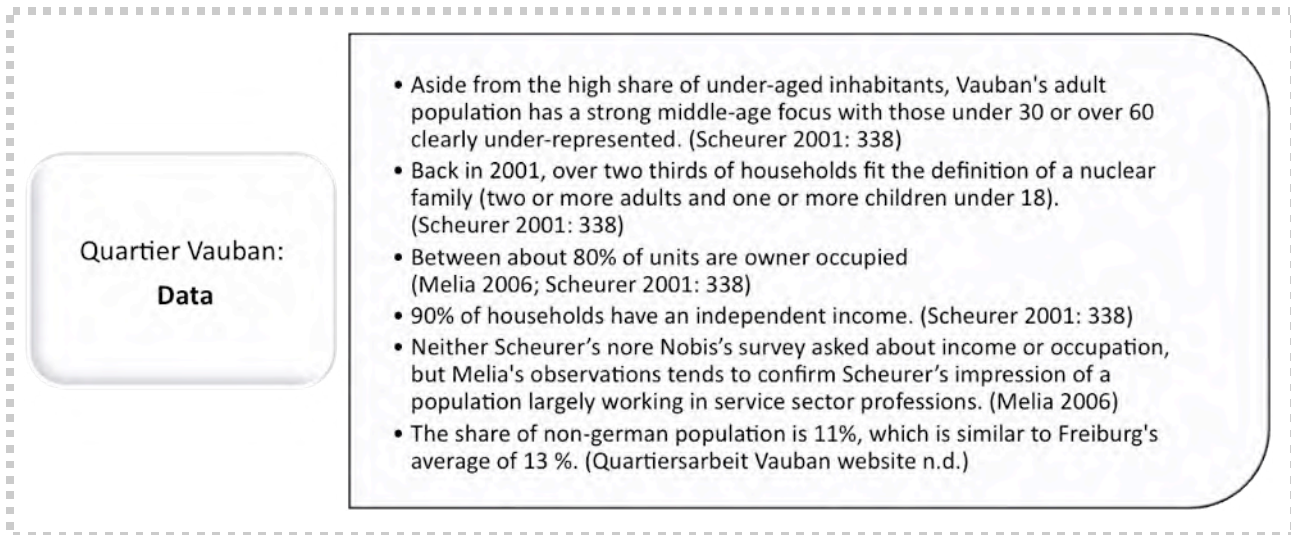


Figure 45. Households in QV

Reasons for the lack of a social mix have already been mentioned. One issue is the lack of social housing, another issue is the particularly children-friendly environment that results from carelessness. Furthermore, results of Scheurer's survey suggest that this very mobility concept might even be socially problematic, discriminating lower-income households, working parents, single parents or women⁴.

Another example of a socially excluded group is 'Kommando Rhino', a wagon squat on an empty lot, prominently situated at the entrance of QV, where people tried to live an alternative life. After many years of struggle, the squat has been evicted from QV this summer (July 2011).

>> For more information about 'Kommando Rhino', see Appx 18

'Special Clientel'

«But if the district's surface texture is eminently middle class, an eco-revolution is bubbling beneath the surface.» suggested the article in the 'Independent'.⁵ And in fact, about two third of Quartier Vauban's population votes for the Green Party⁶, recently even more.

Freiburg's mayor Dieter Salomon (member of the Green party himself) explains the advantage of such results: «[...] the population in Freiburg is a lot more ecologically orientated and a lot more willing to dare to try.»⁷ It is actually essential to sustain a high share of ecologically aware residents in order to develop a model district like Quartier Vauban. They are the ones supporting the concept, and fighting for it, and making it what it is. And they are proud of it, too. And it gives them a strong feeling of community and belonging. Accordingly, in the research-own survey, respondents mention the 'special clientel' in the neighbourhood as an advantage: having like-minded neighbours is appreciated. But in the same context this very 'clientel' is also

¹ Schings 2009

² Schings 2009

³ Paterson 2009

⁴ Scheurer 2001a: 340

⁵ Paterson 2009

⁶ Adler 2005; Amtsblatt 2007

⁷ Youtube movie by Europagruppe Grüne 2009

mentioned as a negative factor (Appx 22 Q.3). For instance because it's restricting individual freedom, as mentioned in an article for 'the Observer': «In Vauban [...] green living is compulsory.»¹

The fact that quite some residents have moved to Quartier Vauban for ecological and ideological reasons ² is confirmed by the research-own survey. They came to QV to contribute to environmental protection, to lead sustainable or even 'avantgardistic' lifestyles ³,

But finally, no matter for what ideological reasons people move into Quartier Vauban, they stay because they feel well. As Paterson, again, points out: «By nature, people who buy homes in Vauban are inclined to be green guinea pigs — indeed, more than half vote for the German Green Party. Still, many say it is the quality of life that keeps them here.»⁴



Picture 4. S.U.S.I. Café, QV

¹ Purvis 2008

² Adler 2005

³ Guratzsch 2004

⁴ Rosenthal 2009

7 Casestudy AMF: Autofreie Mustersiedlung Floridsdorf, Vienna



Picture 5. Courtyard and building type with balconies, AMF

7.1 Introduction

The project 'Autofreie Mustersiedlung Floridsdorf' is the first carfree model housing project in Austria, and the most radical one. As one central condition, car-ownership is strictly prohibited. Instead of building parking spaces for each household, the project invested in generous communal facilities and public space.

AMF is located in the Floridsdorf, which is the 21. district of Vienna. Floridsdorf is a rather heterogeneous residential suburban district in the North-East of Vienna. The project is well-connected to public transportation (100m to the tram stop) and only in 1km distance (a short bike ride, or 3 tram-stops) from the district centre, which connects Floridsdorf with the Viennese metro network. However, shopping facilities or schools can be found in the immediate surrounding.¹²

Vienna has a long tradition of social housing, thanks to the decades of social-democratic ('Red Vienna') housing policy. Implementing social benefits in form of communal facilities in AMF were thus not a new phenomenon.

>> For more information about AMF's context, see Appx 13 and Appx 11

¹ Arbeitsgemeinschaft Autofreies Stadtviertel 2001

² Dittrich & Klewe 1996: 35

Throughout this case study 'AMF' is being used as an abbreviation for the project name 'Autofreie Mustersiedlung Floridsdorf' (translation: carfree model settlement Floridsdorf).

Location / Access	<ul style="list-style-type: none"> • Floridsdorf, the 21. District of Vienna, the capital of Austria • 'Autofreie Mustersiedlung 21', Nordmanngasse 25 - 27, 1210 Wien, Austria • Accessible by tram. 1 km or 3 tram-stops to Floridsdorf centre, from there by metro to Vienna centre.
Size	<ul style="list-style-type: none"> • 11 382 m² (ca 1.8 hectare)
Use	<ul style="list-style-type: none"> • Housing units: 244 (average unit size: 83.5 m²) • Parking lots: only 25 (instead of 244) • (A new parking provision law allows in exceptional cases to build 90% less parking lots)
Density	<ul style="list-style-type: none"> • Floor space ratio: FAR = 2.44. Net density: approx 200 units per hectare
Demography	<ul style="list-style-type: none"> • - no precise data
Economy	<ul style="list-style-type: none"> • Jobs: 600 were planned , 170 were realized until 2002, 400 until 2008...
Carfree?	<ul style="list-style-type: none"> • Carfreeness: Completely 'carfree'
Infrastructure	<ul style="list-style-type: none"> • Communal sauna, communal laundry room, event- and party room, communal bike and wood workshops, child-care centre, indoor playground, youth centre...
Timeline	<ul style="list-style-type: none"> • Initiative: 1992 • Competition: September 1996 • Planning: 1996 – 2008 • Construction: January 2008 – December 1999 • Completed: December 1999 • Inhabited: Beginning 2000

Figure 46. Basic Project Data AMF

>> For a detailed chronology of AMF's development, see Appx 14

Main Sources

The main sources for this casestudy are two evaluations, one by the Austrian 'Wohnbund' in 2000 and one by SRZ in 2008, the results of the research-own survey in 2011 (Appx 22), a casestudy by Jan Scheurer from 2001, the official project description brochure by the developers, and many more articles and websites.

>> For a more detailed list of the main sources, see Appx 10

7.2 Project Description

Participatory Planning Process (Co-determination)

One main accomplishment of the AMF project was the co-determination in the development phase and the participation and self-management of communal facilities by the residents today.

As soon as the Viennese government had decided to allow the realization of a carfree housing project, a steering group was set up to plan this project, involving all relevant government departments (See Appx 14). Later on, this culture of communication was handed down to the

later residents.¹ The involvement of potential future residents started in 1998, when they were given the opportunity to co-determine the planning process and much of the character and layout of their new living environment. Assisted by a flexible design pattern, the future residents co-planned the project's public and green spaces, they decided for the types of communal facilities and their equipment, and they strongly influenced the layout and design of the individual apartments.² «Of course it is much more exhausting, when all residents participate in the planning process»³, said architect Cornelia Schindler. In fact, the outer wrapping of the buildings was all the architects designed by themselves – everything else was influenced by the future resident.⁴ According to the Wohnbund evaluation in 2000, 90% of the survey's respondents had been at meetings with the architects and thus involved in the project's development process⁵.

During that time, a special 'Mietermitbestimmungsstatut' (charter for resident participation/codetermination) has been developed, that regulates the participation process, defines responsibilities for designated tasks or issues, and functions as a basis for the relation between developers, property management (GEWOG) and the resident community. According to this charter, all community facilities were expected to be managed by groups of users themselves.

Mobility Concept: Carfreeness

AMF is one of the very few strictly carfree housing projects in Europe. That means, not only is motorised traffic completely excluded from the premises, but also are none of the resident allowed to own a car. In fact, all tenants are obliged to abstain from vehicle ownership by an article in their lease. Does the carfree concept indeed translate into absolute carfreeness? The answer is - yes, mostly. Secret car-ownership varies by data between 3 and 10% of households.

¹ Scheurer 2001a

² Sources: Arbeitsgemeinschaft Autofreies Stadtviertel 2001; Chorherr 1999; domizil/GEWOG 2000: 12, 23-30; Scheurer 2001a

³ Statement of architect Cornelia Schindler. (Rottenberg 1998) Own translation.

⁴ Rottenberg 1998

⁵ Domizil/GEWOG 2000: 32

level of carfreeness	<ul style="list-style-type: none"> strictly carfree (car-ownership prohibited for all residents)
Carfree living	<ul style="list-style-type: none"> In Vienna, the number of parking lots required for buildings is regulated by law. Since the 1930s, developers had to stick to the 1:1 rule, which obligates them to build one parking space for each new housing unit. In the beginning of the 1990s, the first carfree housing proposal had to overcome this legal and political obstacle, in order to get an exemption from this 1:1 rule. Only after lengthy negotiations and a change in legislation, the law was finally amended in 1996 in order to allow less parking space per unit. The new law allows to build only 10% of what would have been obligatory, in exceptional cases, and at the city's discretion where public transit access is superior. in AMF the number of car parking spaces was reduced from obligatory 244 (= number of housing units) down to 25 (= 10%), under the precondition that they substitute the need for accessibility by alternative modes such as public transport access, bicycle facilities and Car-Sharing. Car ownership is strictly prohibited. In case a tenant insist to stick to car ownership, there are instruments to force an apartment swap or to withdraw housing subsidies, hence the rent would suddenly be two or even three times as high (Rottenberg 1998). However, should an individual tenant feel compelled to buy a car as a result of professional or personal changes, property developers might help them to acquire a car and find parking space. And in case a substantial number of residents undermine the carfree character of the project, the city can resort to an undeveloped site in the vicinity to build a car park - at the cost of the vehicle owners, of course.
Data	<ul style="list-style-type: none"> There is not one household whose travel patterns are car-dominated (more than 50% of all trips by car), but nine out of ten households, in turn, lead a virtually carfree lifestyle (less than 10% of all trips by car). (Scheurer 2001a) 24% of the residents had owned a car before, and gave it up in order to move in to AMF. The remaining residents (73% of the respondents) never had a car and still don't (SRZ 2008:20). Clearly, even though ownership has dramatically decreased since before residents moved in, the project attracted households that were already carfree (Scheurer 2001a). The Wohnbund evaluation further found, that every fourth of the respondents do not even have a drivers licence. (Domizil/GEWOG 2000: 33) A remainder of 8% of households still owns a cars (own estimation)

Figure 47. Carfreeness in AMF

In order to compensate for carfreeness, several alternative means of transport were implemented or encouraged. Good connection to public transport was even a condition for the project's exceptional permission to cut down parking space. Public transport, in fact, is exceptionally important. The dominating mode of transport, however, is the bicycle.

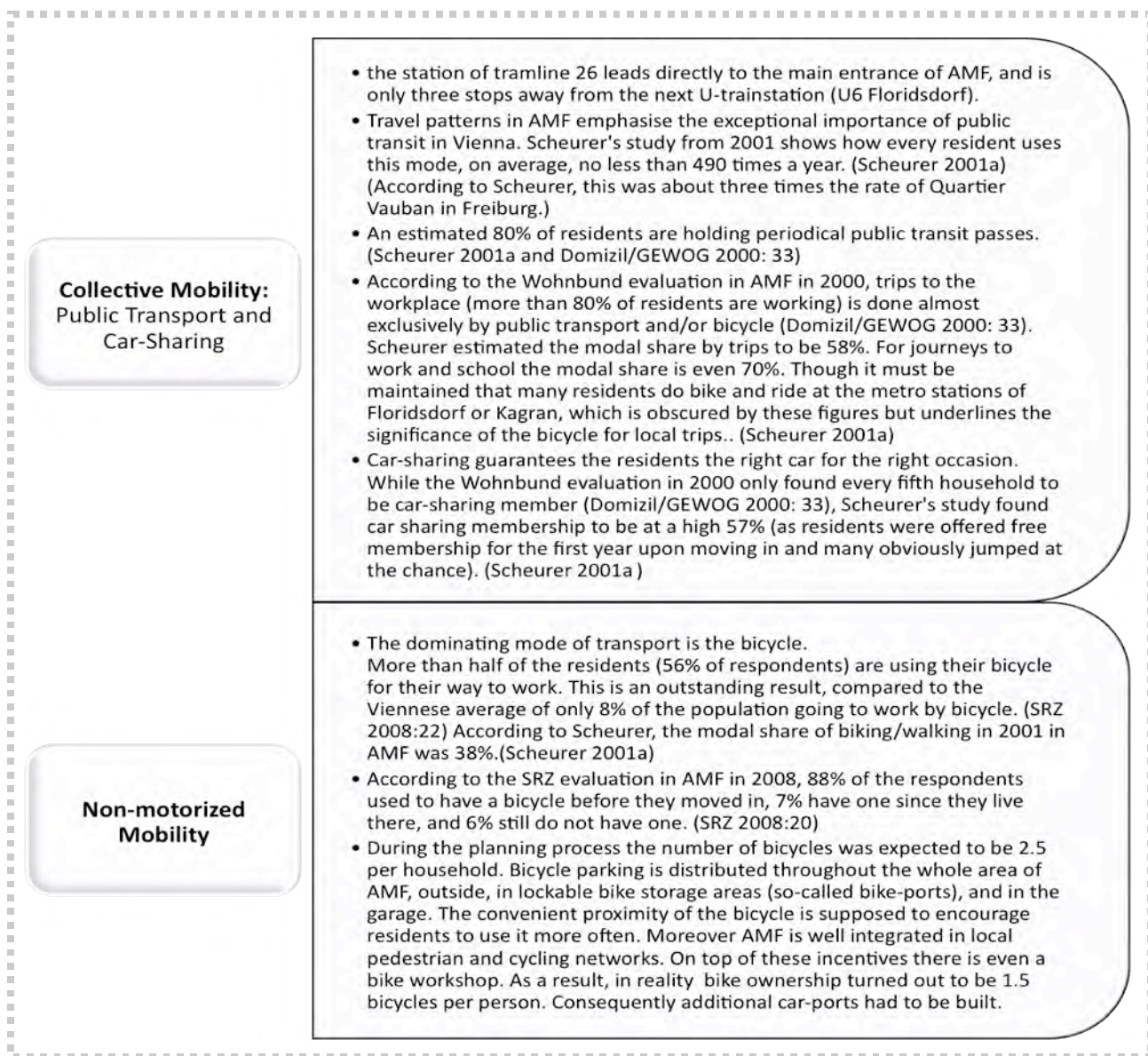


Figure 48. Alternative mobility in AMF

Architecture / Urban Design ¹

The project's building complex contains 244 housing units in two typologically different 6-storey buildings: A South-facing type with open porch and an East-west oriented type with internal access. The building complex forms two courtyards, both opening to a 'lowered' square in between them.

In the research-own survey the aspect '*Physical appearance, aesthetics, architecture etc.*' was rated as 'important' by only 55%, and ranks on position 8 out of 11 aspects (Appx 22 Q.11). When the SRZ survey in 2008 asked the residents for their reasons to have moved into AMF, only 24% named the architecture as 'very important'. The layout/floor-plan of their apartment however was a very important motive for 46% of the respondents ². The architects have realized from the beginning, that the 'ideal floor plan' does not exist. Thus, they have planned an open structure, which allows tenants to co-determine the detailed floor plan and design, or to transform it at a later stage.³

¹ Main sources for this chapter: domizil/GEWOG 2000: 15-18; Scheurer 2001a: 311

² SRZ 2008: 29

³ domizil/GEWOG 2000: 12



Figure 49. AMF: private space

One declared condition in the architectural competition was that «The consequences of carfreeness and the subsequent lifestyle shall be supported by the architectural and urban concept. The carfreeness results in a different level of mobility of the residents, and this results in them spending more of their free time within the projects' premises.»¹ According to the architect Szedenik, the «carfreeness had defined the user. [...] Carfreeness was the cristallization of a behaviour.»² In order to overcome anonymity amongst residents, the architects have planned communal and public spaces in form of 'micro-centres' connected by a network of external and internal paths and porches, all supposed to encourage social interaction.³

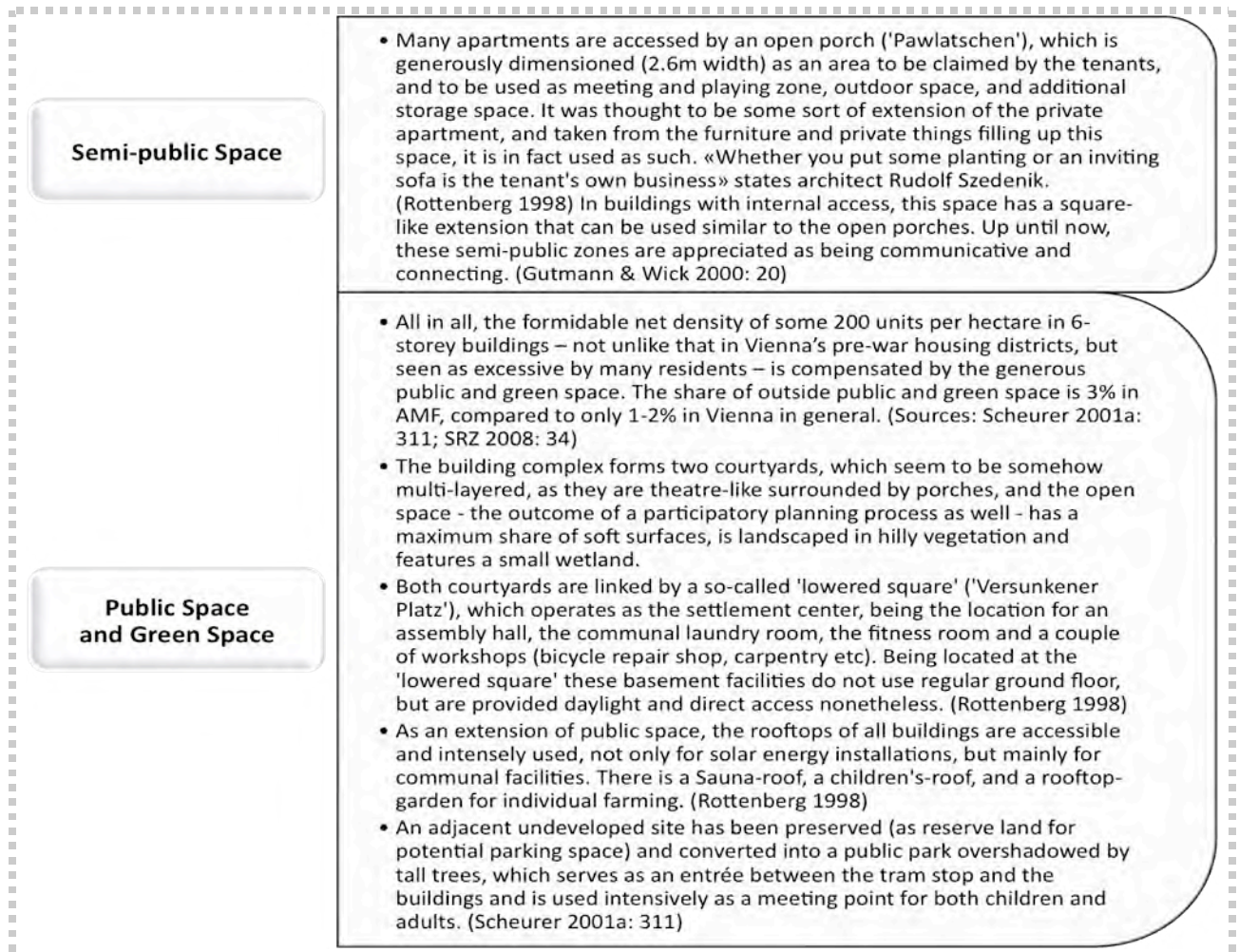


Figure 50. AMF: public and semi-public spaces

¹ SRZ 2008: 17. Own translation

² ibid.

³ domizil/GEWOG 2000: 12



Picture 6. Open porches are connecting AMF buildings on each floor

In research-own survey the aspect '*Nature and green space*' was rated as 'important' by 63%, as 'medium' by the remaining 37% of the respondents. Comparing the average ratings of eleven aspects '*Nature and green space*' ranks on position 4. In the same rating, the aspect '*The quality of public space*' ranks on position 11, thus being perceived as the least relevant of all. (Appx 22 Q.11)



Picture 7. Plan of AMF, showing the public and green space.

Ecological Sustainability

Carfreeness and ecological building were the basic principles of the project. The following two tables show the project's main ecological features and concepts:

Mobility	<ul style="list-style-type: none"> • Car-use-reduction > Reduction of fuel-use and pollution • Carfreeness > Reduction in land-use for parking.
Buildings	<ul style="list-style-type: none"> • Buildings follow a passive solar design: Despite its formidable net density the 6-storey buildings have been orientated to enable direct insolation. • Good insulation drastically reduces the need for heating. • All building materials have been selected on the basis of environmental auditing, and are as environmental-friendly as possible. • Roofs are either used for gardens, for communal facilities (Sauna, playground...) or for solar energy installations.
Building technique	<ul style="list-style-type: none"> • Heating: Solar energy and district heating • Hot water: solar collectors and geothermal energy
Green space / nature / biodiversity	<ul style="list-style-type: none"> • The open space has a maximum share of soft surfaces (avoiding ground sealing), is landscaped in native vegetation, features a small wetland (biotope) in the courtyard, and on-site composting facilities. • The roofs partially provide green space for gardening.

Figure 51. AMF's ecological features, distinguished by topic

There is a clear focus on low use of resource, renewable energy sources, and recycling and re-use of energy, water, and waste:

Resource & energy concept	<ul style="list-style-type: none"> • Solar collectors on roofs support the heating system and provide for 60% of the hot water. • District heating ('Fernwärme') supports the solar-supported systems when needed in peak times. • Less use of fossil fuels, by radically reduced car-use, and no land-use for parking space.
Recycling	<ul style="list-style-type: none"> • Land-re-use: Revitalisation of previously developed site. • Heat-re-use: A heat recycling unit makes use of wastewater heat for the heating system, and can also switch to a cooling system in summer. • Water-re-use: Greywater is treated on-site to be re-used in the toilets. • On-site recycling facilities (paper, glass) and on-site composting facilities

Figure 52. Ecological features in AMF

When the residents were asked why they have moved into AMF, in the Wohnbund survey 2000 the ecological concept of AMF was the second most important motive (important for 53% of the respondents) ¹, in the SRZ survey 2008 half of the respondents named the ecological concept as a 'very important' reason ². In the research-own survey, 15% of respondents gave 'ecological sustainability in various aspects' as the main reason for moving into AMF. (Appx 22 Q.6)

¹ Domizil/GEWOG 2000: 32

² SRZ 2008: 29

Social benefits of ecological sustainability in AMF are mainly an impact on the general well-being (due to more green spaces), an increase in living-comfort (high comfort in eco-buildings), and the very subjective benefit of having a better conscience.

Communal Facilities and Participation

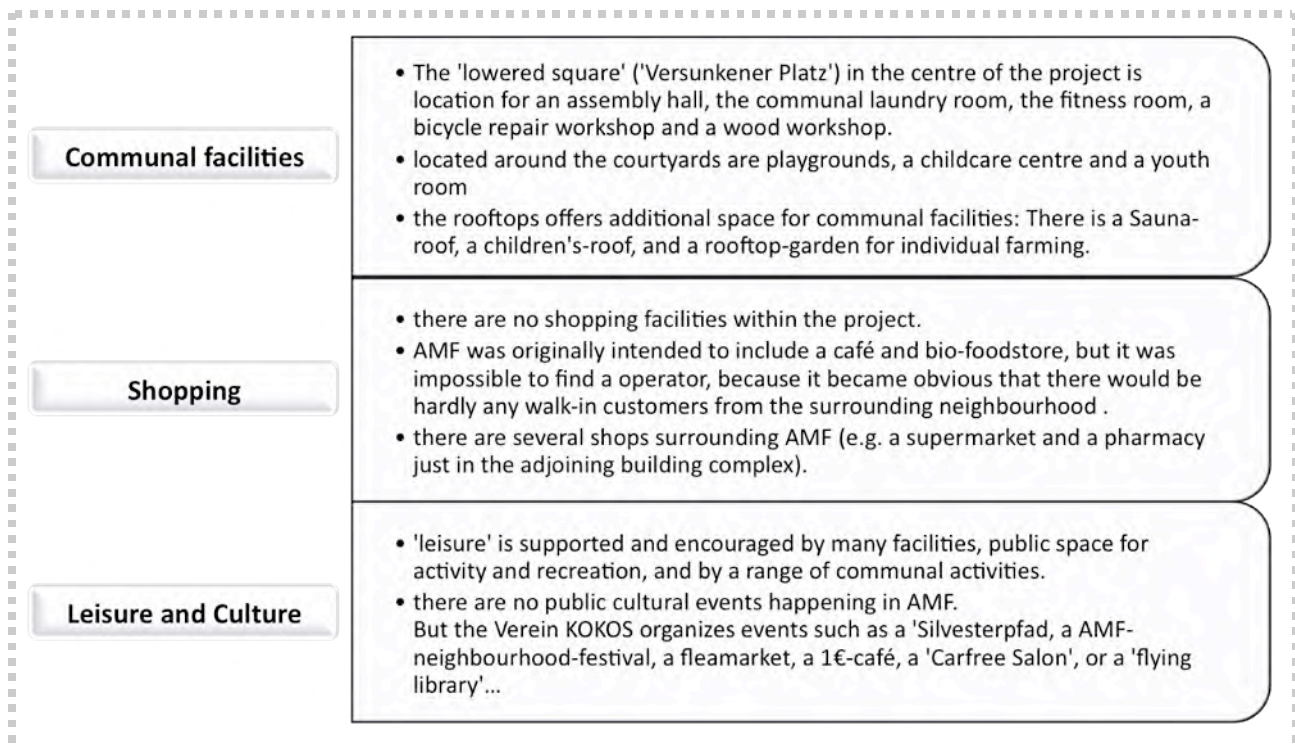


Figure 53. Communal facilities in AMF

The selection and development of the communal facilities were part of the participatory planning process. ¹ Today the communal facilities are highly appreciated, and there is a wish/demand for even more and for better equipment.² When residents why they have moved into AMF, in the Wohnbund survey 2000 the generous communal and green space was the most important motive (56% of respondents)³, in the SRZ survey 2008 half of the respondents named the communal facilities as a 'very important' reason⁴. However, there is also a surprisingly high share of residents who never use any communal facilities, and some do not even know that such facilities exist. ⁵

One possible obstacle for a carfree life concerns shopping. In the research-own survey the aspect '*Shopping facilities*' was rated as 'important' by only 12% of respondents, ranking on position 10 out of 11 aspects, thus being perceived as the second least relevant of all. When it comes to '*Leisure and culture (offer, facilities, events...)*', the results are similar: The aspect ranks on position 9 (Appx 22 Q.11). This low relevance of shopping, leisure and culture in AMF must be explained by the fact, that there simply are no shopping facilities nor cultural offers within the project. However, 'leisure' is supported and encouraged by many facilities, public space for activity and recreation, and by a range of communal activities.

¹ Chorherr 1999

² Gutmann & Wick 2008: 20

³ Domizil/GEWOG 2000: 32

⁴ SRZ 2008: 29, 32

⁵ SRZ 2008: 53

7.3 Social Benefits in AMF

General Benefits – More than Carfree?

The satisfaction with and well-being in the project is high:

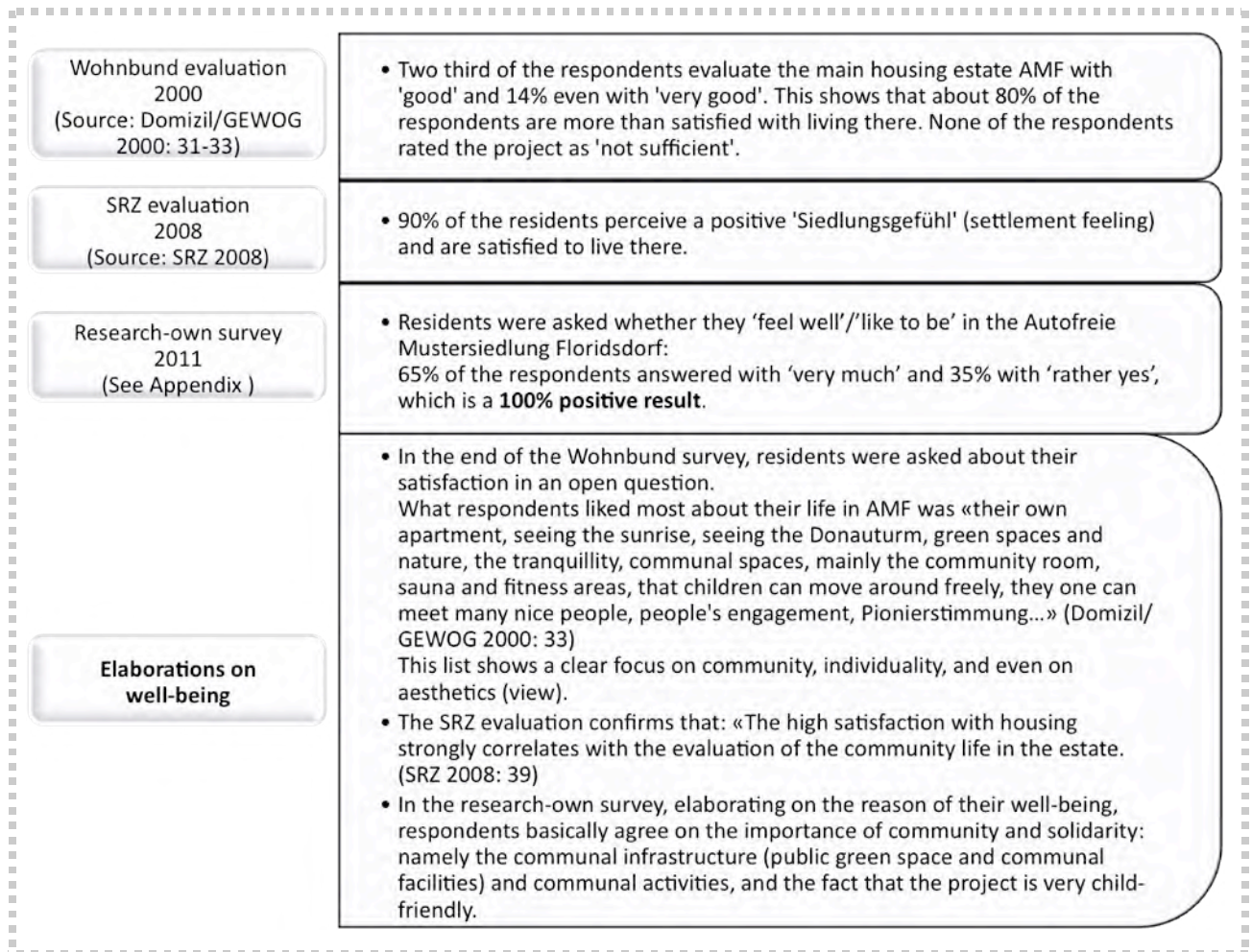


Figure 54. Satisfaction and well-being in AMF

The research-own survey asked respondents, whether they think their well-being is connected to the carfree character of the project:

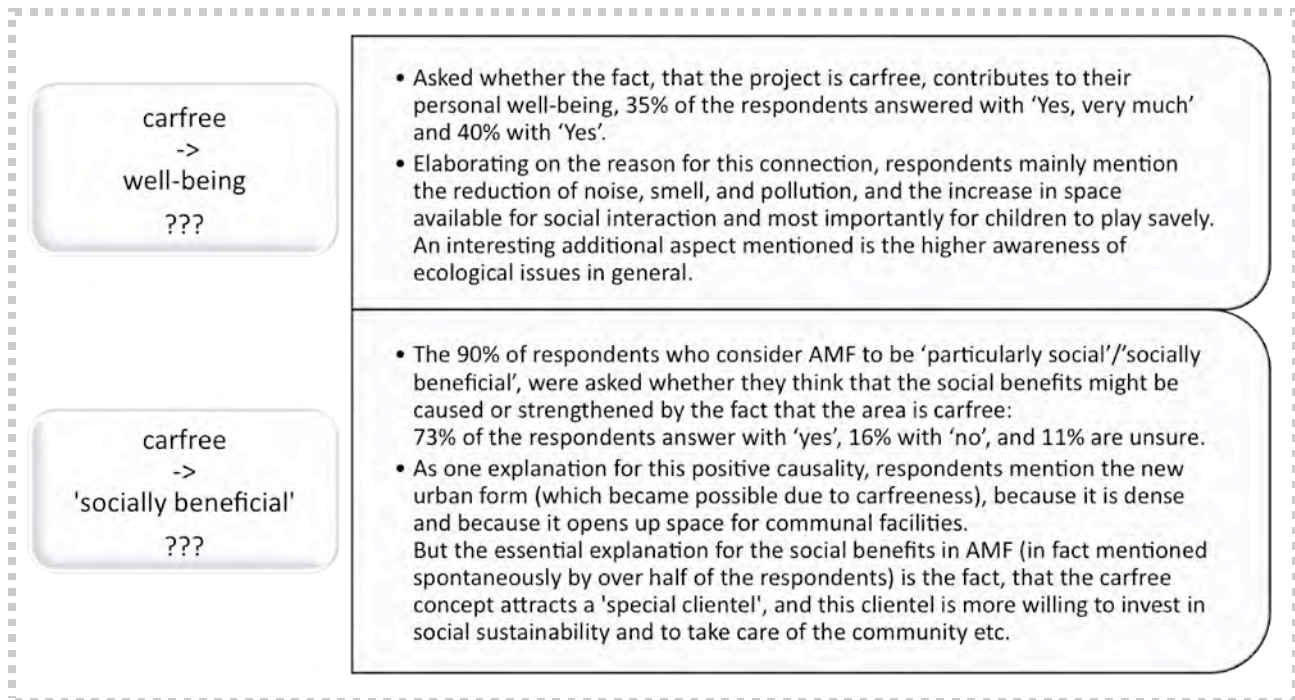


Figure 55. Connections with carfreeness

All studies show that the carfree character of the AMF project was a deciding reason to move there, but that it was by far not the only important motive:

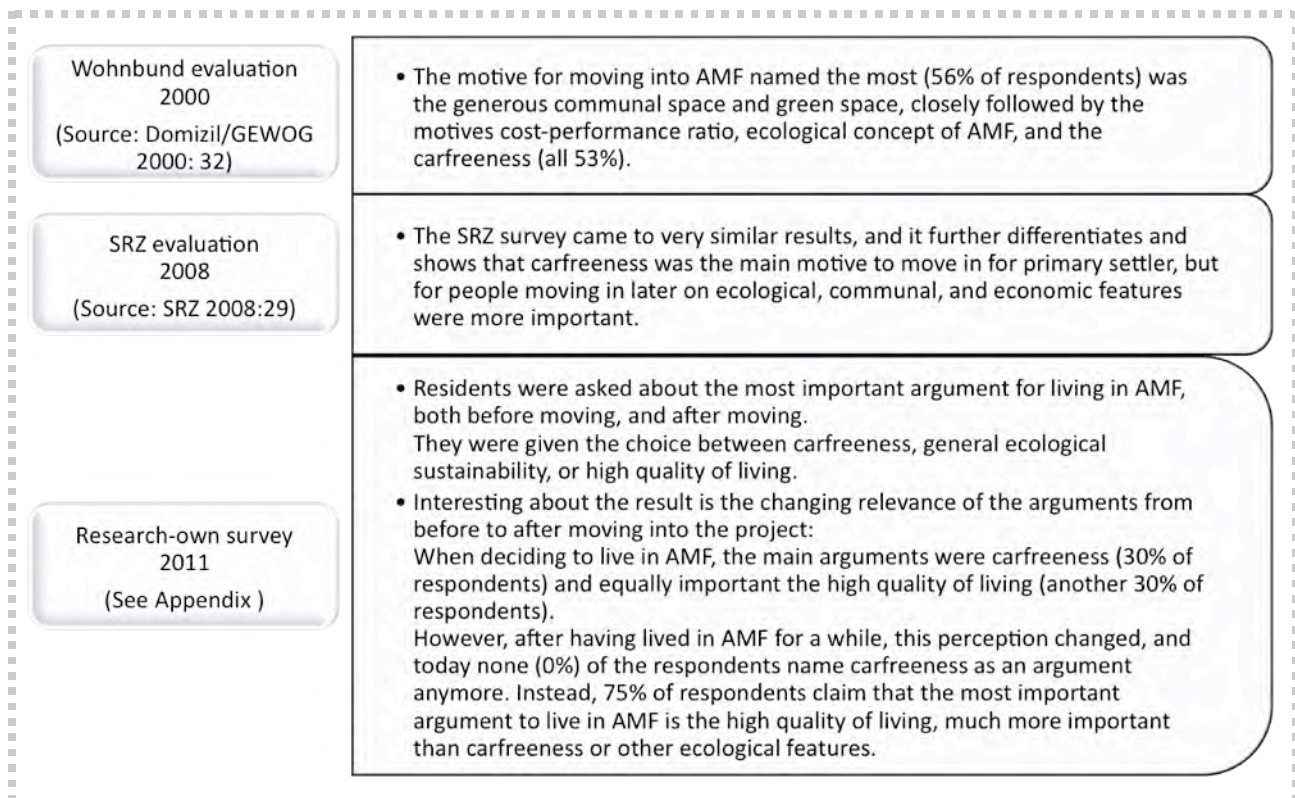


Figure 56. Motivations for moving into AMF

All these results show how the residents' awareness for ecological issues is not restricted to carfreeness or mobility, and that economic and social benefits can be so convincing, that people are ready to give up their car.

Conclusion: The project AMF is more than just carfree!

It follows an all-embracing concept of sustainable development. Chorherr once emphasized the project's main aim: «Not abdication of the car but rather the gains in additional quality of life shall be in the foreground!» ¹ And Scheurer wrote: «Besides the carfree nature of the development, which is mainly a recognition of and conscious offer to the residents' lifestyles, the project also addresses the needs and benefits of a strong local community, and goes a long way to meet latest standards and innovation in resource and energy efficiency.» ² It is not a coincidence that the concept of re-designating financial means from garages to communal facilities and ecological features has never been criticised or regretted by any of the residents. ³ In fact, respondents to the research-own survey consider AMF to be a 'socially beneficial' place:

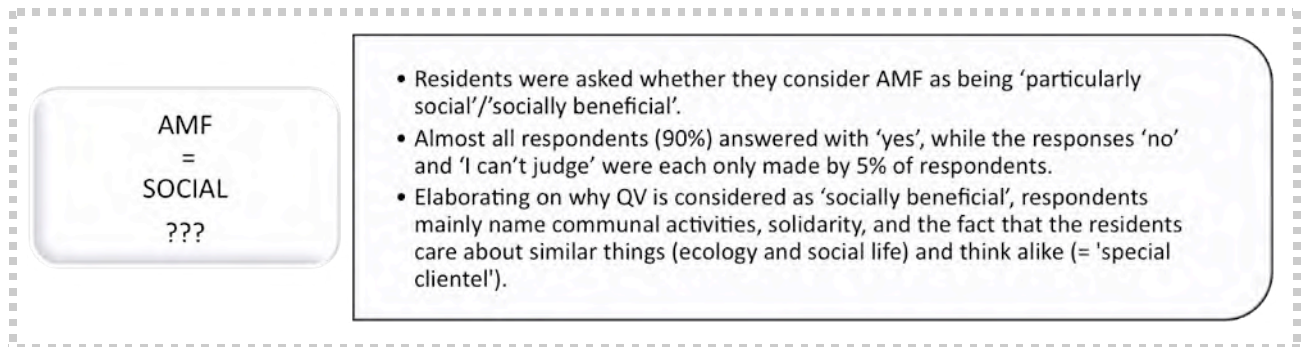


Figure 57. AMF is 'socially beneficial'

Invited to rate eleven different potential social benefits according to personal relevance, by far the most relevant social benefit turned out to be '*community (e.g. neighbourhood, communal facilities etc.)*', rated as being 'important' by 95% of the respondents. The second most 'important' social benefit is '*Solidarity (e.g. social equity, fairness etc.)*' (70%), closely followed by '*Security (e.g. street / traffic safety)*', '*Nature and green space*' (both 63%), and '*Participation / co-determination (participation in development process / in organisation)*'.

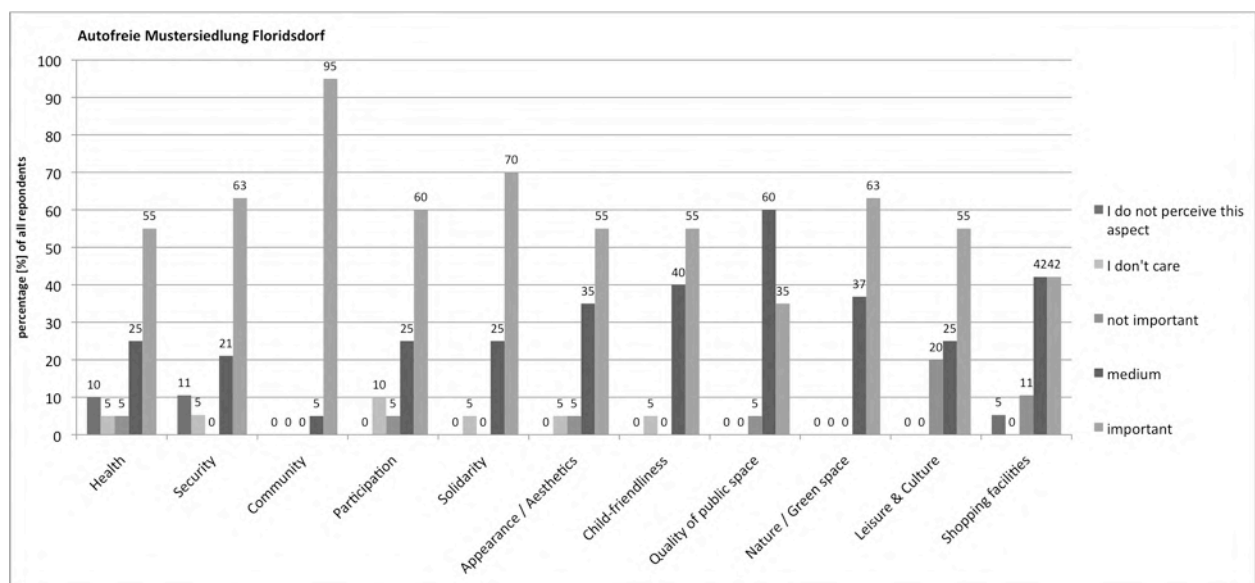


Figure 58. Rating of 'potential social benefits' according to personal relevance (Results of the research-own survey 2011. See Appendix 22 Q.11)

¹ Chorherr 2007 (own translation)

² Scheurer 2001a

³ SRZ 2008: 60

In the following, some of these 'potential social benefits' are discussed:

Economic Benefits

The most obvious and most important economic benefit in the project is the provision of communal facilities instead of parking space.

Housing prices are on the level of standard Viennese social housing (as GEWOG is a 'gemeinnützige' (non-profit) organization). However, the facilities and social benefits of the project are by far above standard¹. This is a result of economic gains that have been re-allocated.

In fact, residents do not have a direct financial gain, but one in form of social benefits. But as they are aware of this, it might be perceived as a 'hidden economic benefit' nonetheless.

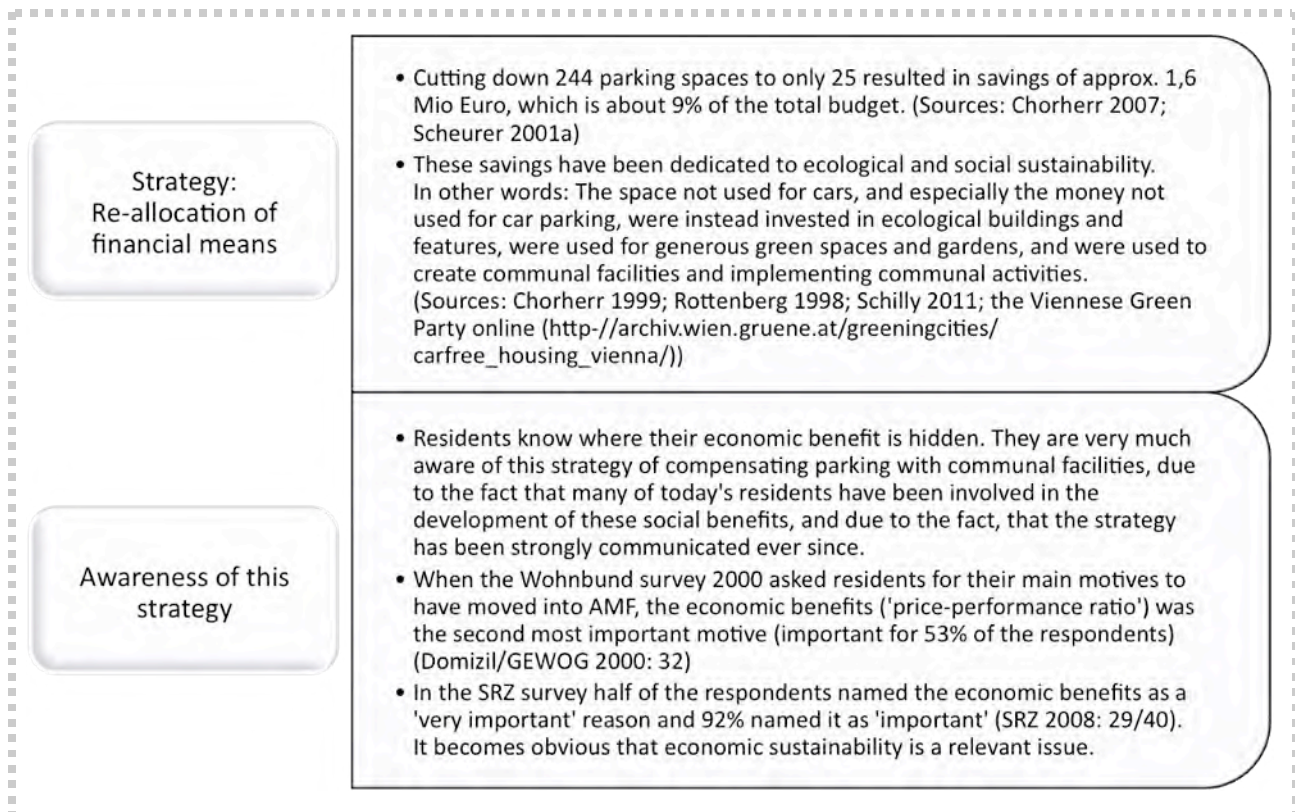


Figure 59. Economic benefits in AMF

Health / Safety / Security / Comfort

In the research-own survey the aspect '*Health*' was rated as 'important' by 55%, as 'medium' by 25% of respondents (and 10% simply do not perceive this aspect in AMF). The aspect on position 6 out of 11 aspects. Elaborating on the reasons why carfreeness has a positive impact on their well-being, respondents mainly mention the reduction of noise, smell, and pollution. On the other hand, the aspect '*Security (e.g. street / traffic safety)*' was rated as 'important' by 63%, as 'medium' by 21% of respondents (and 11% simply do not perceive this aspect in AMF). The aspect '*Security*' ranks on position 2, thus being perceived as the second most relevant, out of 11 potential benefits in total. (Appx 22 Q.11 + Q.5)

The fact that security is considered as more important than health, can be explained by the size of the project. Banning car-traffic from a certain area, no matter how small, does instantly increase the safety of pedestrians and children playing. When this carfree area is in form of a courtyard, protected from noise and smell of surrounding traffic, it is perceived as particularly comfortable, and residents might even feel an increase in health. However, in order to have indirect benefits for health, that could result from a cleaner environment, such as less polluted

¹ domizil/GEWOG 2000

air or increased bio-diversity, can only be felt, if automobility is reduced or eliminated on a large scale. Overall, the project's impacts on health are very much in line with any other housing estate, that puts parking underground and keeps public space and courtyards carfree.

However, individual health can be increased due to the fact, that residents really do not own a car and therefore do more exercise as part of their daily routine. This can be further increased by using the fitness room that is provided, or do some gardening on the rooftop, visiting the rooftop sauna further increases well-being or even health, and eating home-grown veggies from the rooftop might be factored in as well.

Participation / Social Interaction / Community

In the project AMF the co-determination and participation goes way beyond standard, and includes not only the co-determination and co-design of the built environment and communal facilities, but also of the organisation and self-management of these facilities, and of all communal and public space, as well as the organisation of regular communal activities.

The rules of this participatory management are laid down in the 'Mitbestimmungsstatut'. However, participants have been learning by doing, and the rules of organisation have been adapted many times in the last few years. ¹

According to the Wohnbund evaluation, back in 2000 the willingness of the residents to participate in the organisation of the communal life and facilities was very high (87% of the respondents)², and up until today residents appreciate the possibility to participate: In the research-own survey the aspect '*Participation / co-determination (participation in development process / in organisation)*' ranks on position 5 out of 11 aspects. It was rated as 'important' by 60%, as 'medium' by 25% of respondents. (Appx 22 Q.11)

Architect Rudolf Szedenik explains: «The aim was not only co-determination in the development process, but the main aim was to build on a community, that then moves into the estate as such.» ³ According to 70% of the respondents to the Wohnbund survey in 2000, the co-determination of residents in the project's development process had the 'positive side-effect' of getting to know future neighbours and of an early community-building for the future neighbourhood ⁴. This led to a community set up by the tenants was created and has led to various common activities, resulting in a better communication in the neighbourhood.⁵

Moreover it was one of the main goals that green spaces and communal facilities would be frequently used, which would then foster community-building and ideally result in residents spending more of their free time within the project premises. ⁶

Several sources indicate that this aim was achieved, and that community life is strong in AMF:

¹ Scheurer 2001a ; SRZ 2008: 51-52, 61

² Domizil/GEWOG 2000: 32

³ Rottenberg 1998. (own translation.)

⁴ Domizil/GEWOG 2000: 33

⁵ Sources: Chorherr 2007; Domizil/GEWOG 2000: 10; and the website of the Viennese Green Party (http://archiv.wien.gruene.at/greeningcities/carfree_housing_vienna/)

⁶ SRZ 2008: 34

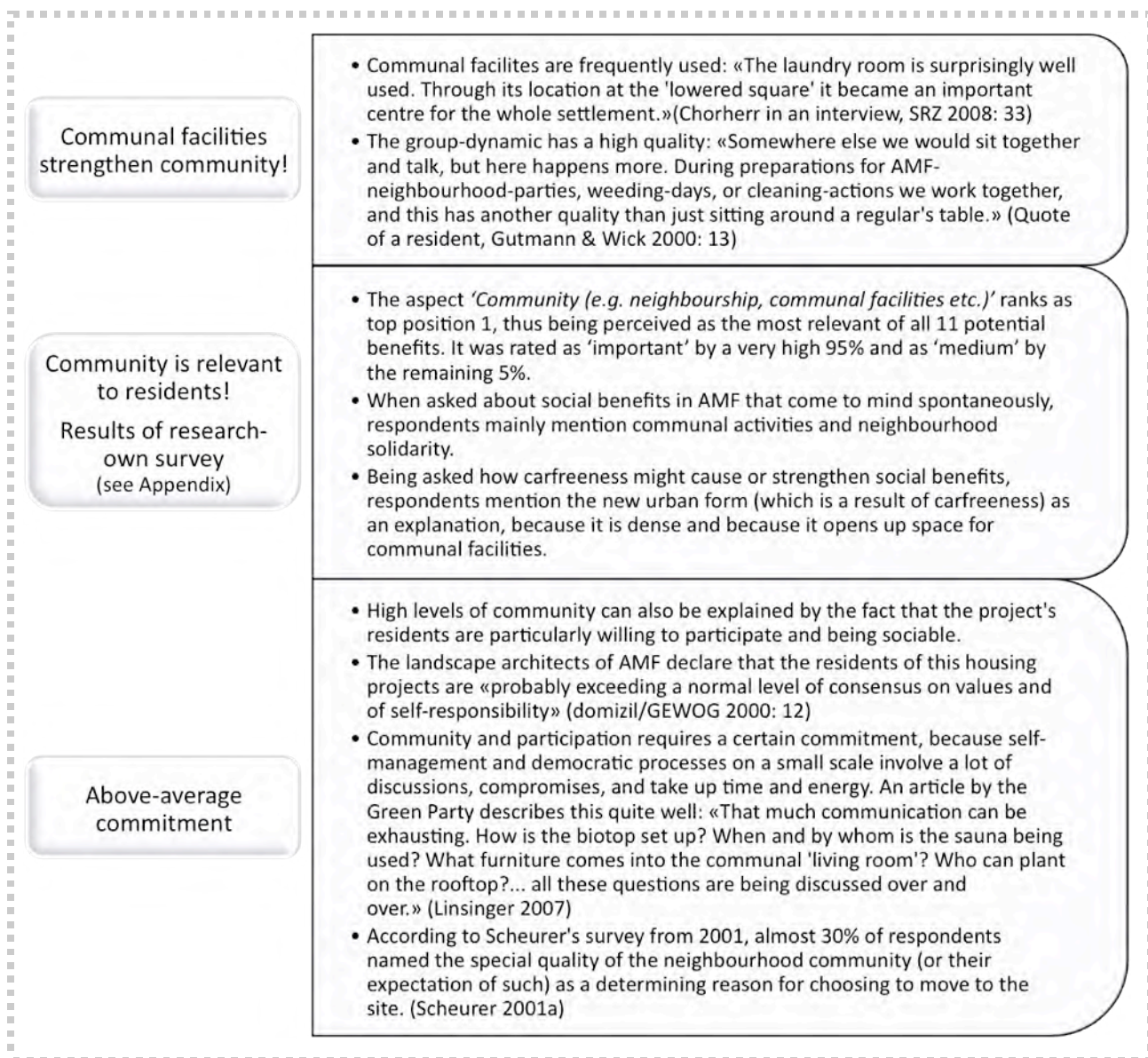


Figure 60. QV and AMF: Successful projects

All results show a clear commitment for more community than usual. ¹

Individuality / Responsibility

Individuality was mainly encouraged by the co-determination of the layout and design of individual housing units. In fact, most residents were mainly concerned with the design and layout of their own apartment. However, it is outstanding that a fifth of the residents were also strongly engaging themselves in the design and organisation of communal facilities and public space, according to the SRZ evaluation.² The project's main focus is clearly on community, on communal space, and on taking responsibility for the living environment, that goes beyond the borders of the individual apartment. This has worked out successfully, and it shows in public space. Concerning the above-average area of communal outside space, the landscape architects have an interesting viewpoint: In conventional housing estates, where most of the outside space is private, the public areas are vandalised stronger. In AMF in contrast, there is less vandalism, however it is also less perfect, neat or clean. ³ Apparently people care about the communal

¹ SRZ 2008: 36

² ibid: 28

³ ibid: 34. (own translation)

space more than usual, but less than they would if it was private space. This is the hitch with responsibility.

7.4 Social Mix and Social Equity

Predominance of Middle-class Families

The populace in AMF is relatively young, and the share of families is relatively high. Moreover, AMF is characterized by a strong middle class. But despite the predominance of middle-class families, the intention was to attain a higher social mix. And some studies in fact show a quite unconventional mix:

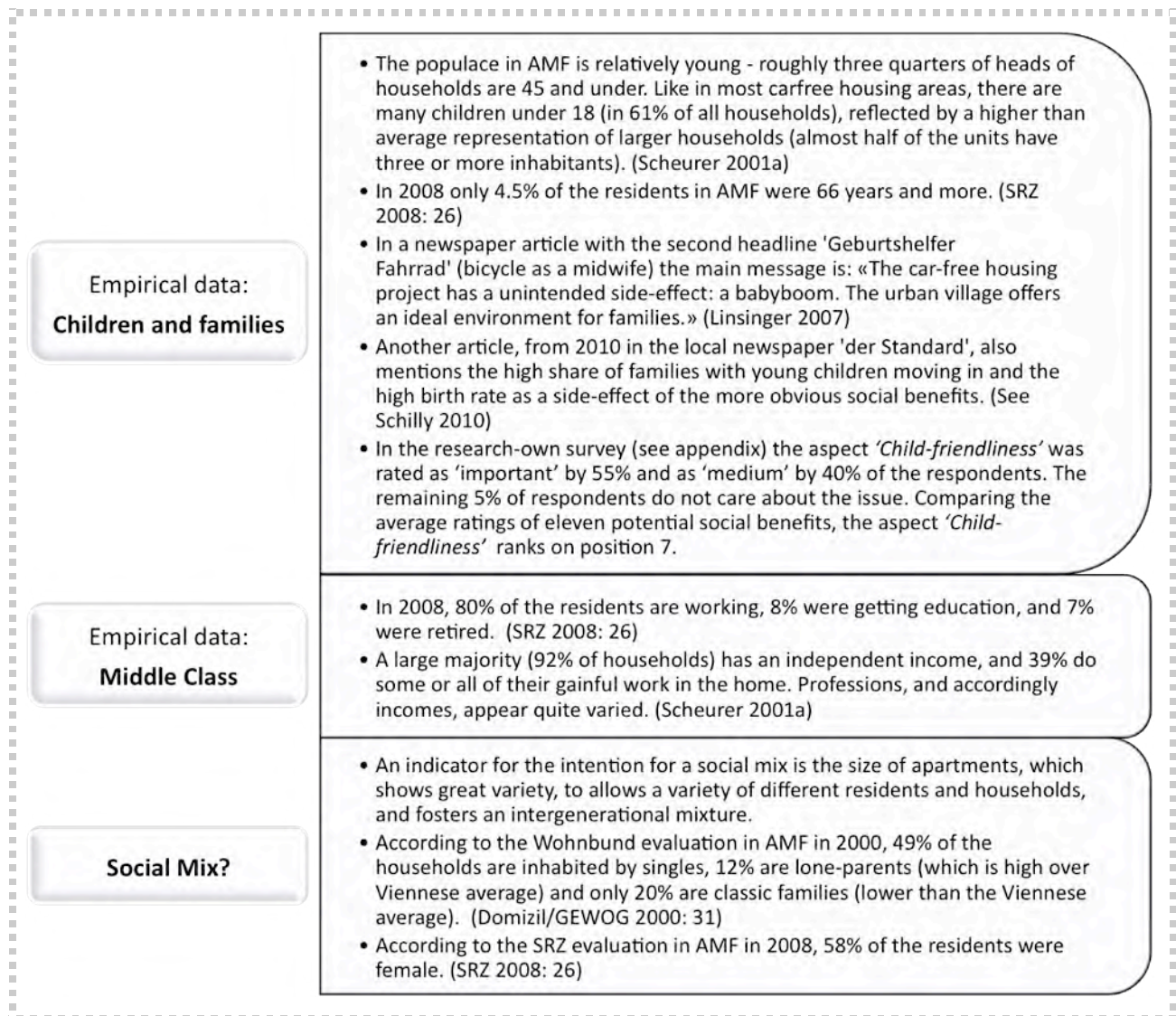


Figure 61. Empirical / demographic data of AMF

However, in the research-own survey, out of eleven potential social benefits, the aspect 'Solidarity (e.g. social equity, fairness etc.)' was rated as the third most important, reflecting its personal relevance to the respondents. And when the respondents were asked about additional social benefits that come to their mind, the main argument in this 'open response' was the lack of social mix and solidarity with various social groups. (Appx 22 Q.11+12)



Picture 8. Meeting of children, at the 'lowered square', AMF

Special Clientel: Good or Bad?

One of the reasons why the participation and self-organisation of the communal life and facilities works so well, is the fact that the project has attracted a 'special clientel' of likeminded people, who are above average willing to engage and to commit. This is shown by various sources:

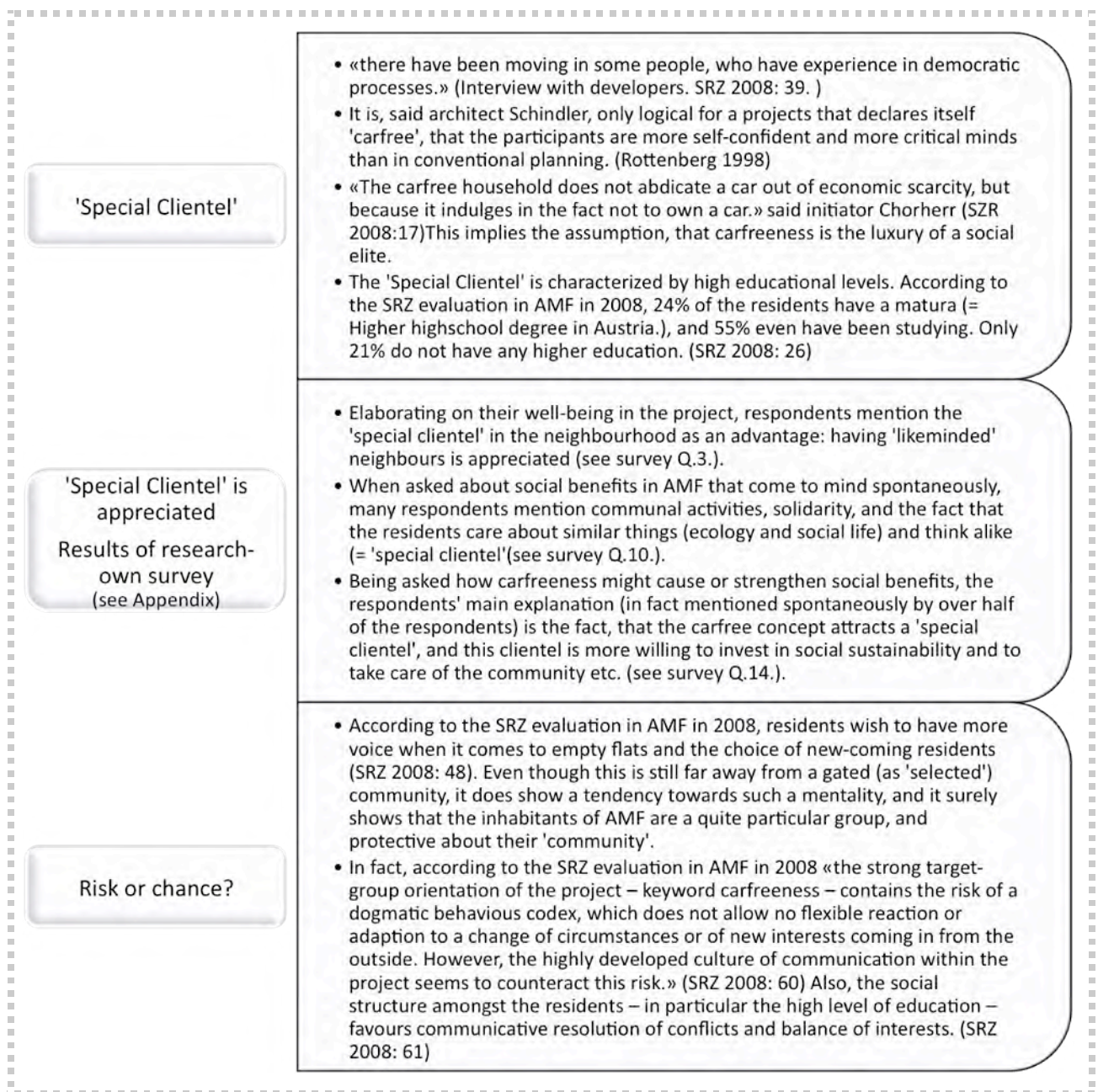


Figure 62. Advantages and disadvantages of the 'Special Clientel' in AMF

Part IV

COMPARISON & CONCLUSIONS

8 Comparison and Conclusions

8.1 Casestudy Comparison

A detailed comparison of the two casestudy's survey-results are part of the result-analysis in the appendix (See Appx 22). This chapter will thus only summarise the most striking and the most relevant matters:

Success & Model Character

Both projects have been very successful in their status of being innovative model projects for the future sustainable city, and as such both were of wide interest to an international public.

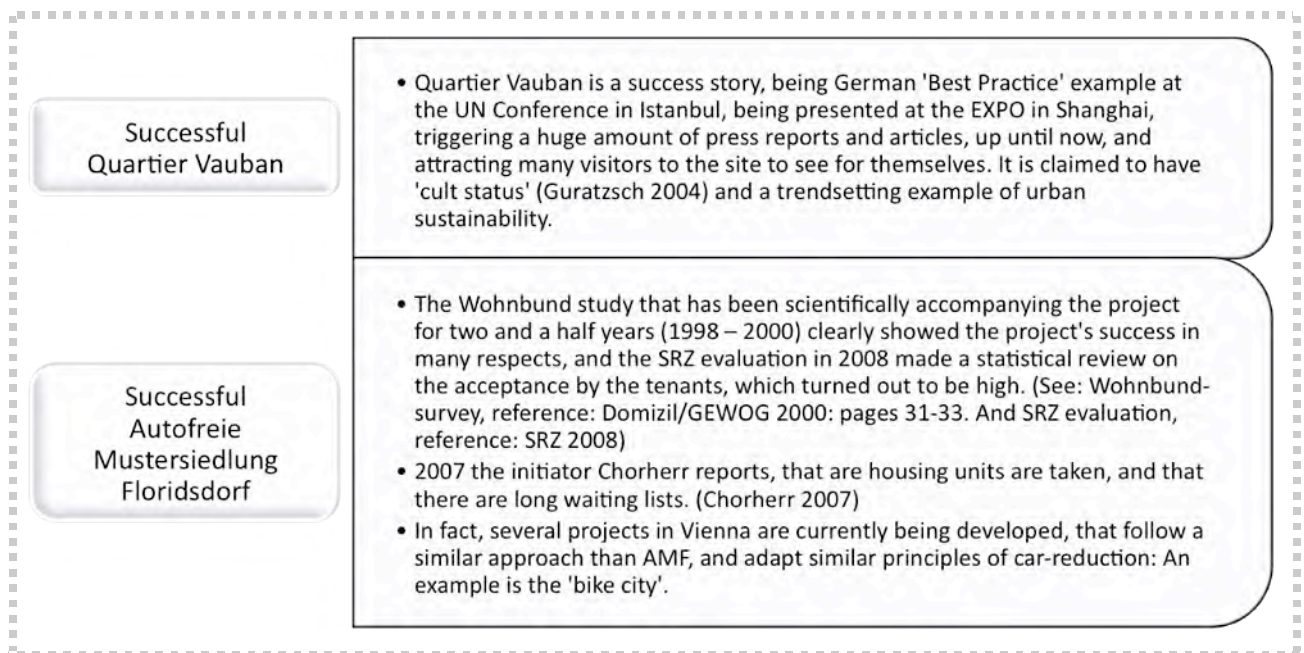


Figure 63. QV and AMF: Successful projects

>> For more information about QV's worldwide attention and success, see Appx 19

From Innovation towards Normalisation

Scheurer describes both casestudies as important impulses, representing «innovations in housing policy that remain, until now, largely isolated examples in their urban context. [...] They constitute something like an 'acupuncture approach' to urban innovation: interventions that set

significant examples and impulses in their own right.»¹ But carfree living projects are not deemed to remain an exception. The decisive questions to ask is: Are carfree living projects still fill a niche, or is carfree living actually striving to become the standard and normal way of life? And if so, how can this be encouraged?

In order to answer these questions, it is crucial to identify the project's key(s) to success, its main benefits, as well as its main pitfalls:

More than Carfree!

Both project label themselves with their carfree living concepts, and they promote this image. However, the key to success, in both projects, is not their mobility concept, but instead it is the participatory development process. And the main benefit perceived by the residents is not a carfree lifestyle per se, but a high quality of life, in particular high levels of social interaction and a strong feeling of community

Main 'Social Benefit': Community

The research-own survey provided a list of eleven potential social benefits, which respondents were asked to rate according to personal relevance. According to this rating, by far the most relevant social benefit in both projects seems to be 'community (*e.g. neighbourhood, communal facilities etc.*)'. It was rated as being 'important' by 92% of the respondents in QV and by 95% in AMF. Not once was it rated as 'unperceived' or 'I don't care' or 'not important'.

Figure 64 shows the calculation of the average relevance (see also Appx 22 Q.11) of each potential social benefit for both casestudies. The graph shows two similar trends for both casestudies, and it clearly shows the highest importance of 'community':

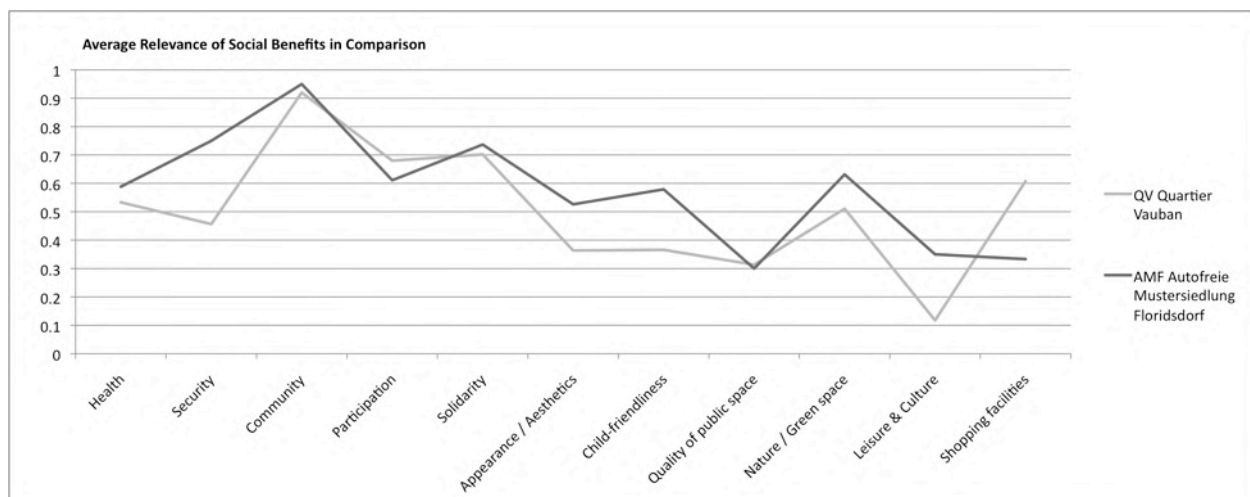


Figure 64. Average relevance of social benefits in comparison (research-own survey, Appx 22)

According to the average relevance (figure 64), the second most important social benefit is 'solidarity (*e.g. social equity, fairness etc.*)'. In this context what is meant is probably a solidarity amongst the existing project-populace, which is certainly prevalent, considering the high rate of communal activity and infrastructure and well-rated neighbourhood.

'Special Clientel'

Results show that the majority of respondents in both projects perceive their neighbourhood as 'particularly social' or 'socially beneficial'. In AMF this share is much higher (90%) than in QV (54%) though. The elaborations of respondents throughout the QV-survey might explain this difference, as they show that people perceive a lack of social cohesion and integration of a broad variety of people.

In AMF the respondents' essential explanations for how carfreeness might cause or strengthen social benefits, (in fact mentioned spontaneously by over half of the respondents), is the fact, that the carfree concept attracts a so-called 'special clientel', and this clientel is more willing to

¹ Scheurer 2001a: 327

invest in social sustainability and to take care of the community etc. While having like-minded neighbours is appreciated in both projects, it is interesting, that only in QV this rather homogenous 'clientel' is also criticised as a negative factor.

Key to Success: Participation

The key to success, in both case studies, is mainly the innovative approach of a participatory planning and building process.

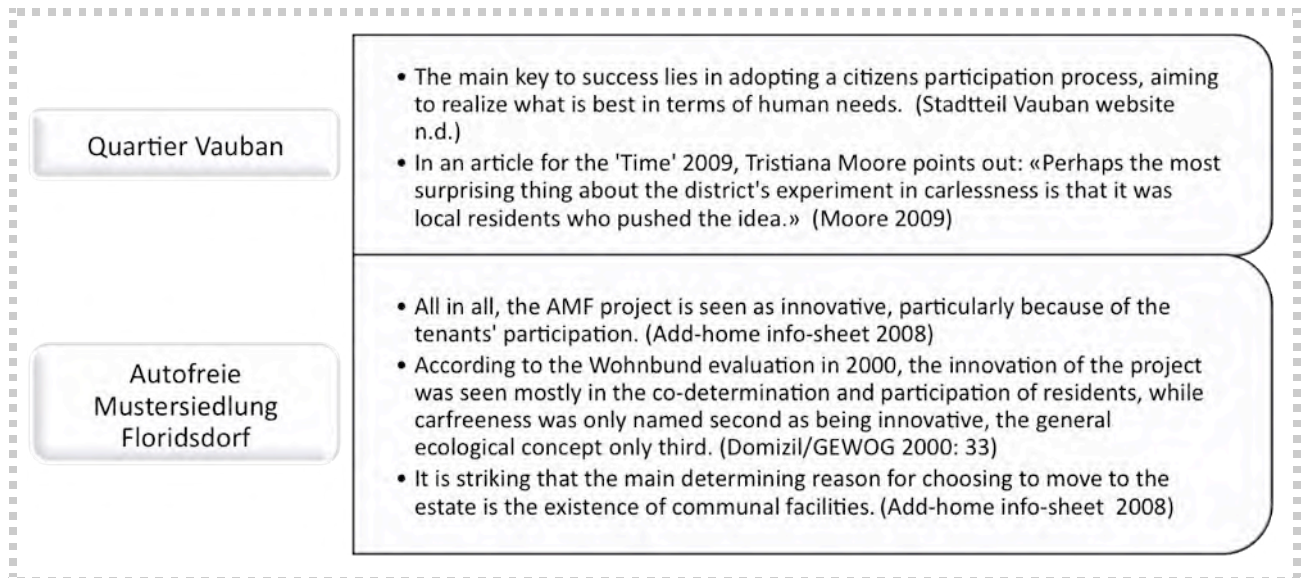


Figure 65. Key to success: Participatory approach

The Question of Scale

Other decisive factors for a successful carfree living project, apart from social benefits and a participatory process, might be the scale of the project, as well as the level of carfreeness and the balance of freedom and obligation (binding character of carfreeness), which are quite different in both projects (See Fig. 66). However, the way these factors determine success depends on the definition for 'success'.

Community versus Society

In a small project it is obviously easier for everybody to know each other, and all residents of the project form one community. That is probably why in AMF the community is perceived by more respondents, is considered as more relevant, and the desire of belonging to this community is stronger. Aside from the highly appreciated communal facilities, there are no facilities or services (for shopping or leisure purposes). AMF feels really like nothing more than a housing estate.

In contrast, a large project feels more urban, as it offers a diverse infrastructure and is inhabited by several groups and communities, which are not necessarily inter-connected (or possibly connected solely by a common ideology such as a sustainable lifestyle). Thus, in large projects the focus is not on tight community so much, but rather on space. In QV for instance, elaborating on why carfreeness has a positive impact on their well-being, respondents name the increase in space available for free movement, as playground or for social interaction.

The difference between community and society, as a consequence of scale, has already been discussed a century ago by Ferdinand Tönnies.¹, and is still valid today. The majority of respondents in both projects feel equally well within QV/ AMF, but for different reasons: In AMF the focus is on community and solidarity, whereas QV respondents mainly mention the nature and the location and accessibility (Appx 22 Q.3). Even though social interaction is an important factor in QV too, it is there based on voluntarism and characterised by anonymity.

¹ Tönnies 1887

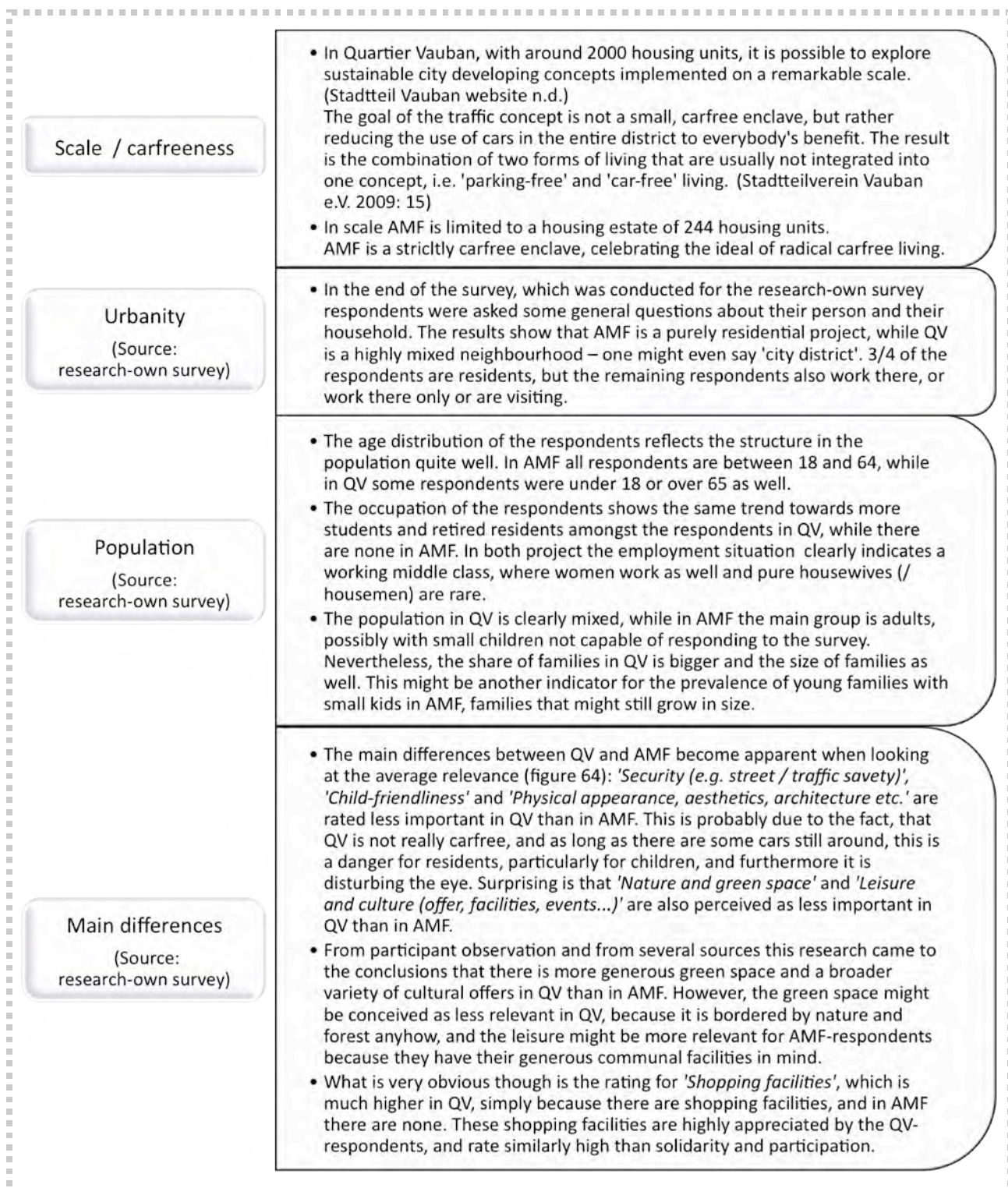


Figure 66. Main differences between QV and AMF

The Potential of Different Scale

The potential of small project is that their approach can be more idealistic (more radical), and still find enough residents to support it and commit to this 'ideal'. In AMF the bindingness of the carfree character in turn is the main contributor to the fact, that the project attracts a group of likeminded people ('special clientel'), and that the resulting homogeneity is even appreciated by the residents.

The larger the project is, the more is its populace a mirror of society. Exceeding a certain size and amount of people, homogeneity cannot be guaranteed, and intruders and divergents cannot be avoided. This might be a threat to radical goals such as strict carfreeness or a perfectly

harmonious community life. On the other hand, heterogeneity and the openness to outsiders and acceptance of all societal groups are the basic conditions for democracy and social equity. In fact, in the much larger project QV – despite the fact that the populace is more socially mixed than in AMF – the lack of social cohesion is more criticised too. And despite the fact that the 'special clientel' in QV is not as extreme as in AMF, it is seen as negative by quite some QV-residents, while it seems to be appreciated in AMF.

8.2 Conclusions from Casestudy Comparison

As to round off this chapter, the key to success is apparently a participatory process and the provision of attractive additional benefits, in both casestudies. Another key to success is the project's scale – depending on the definition for 'success': A small scale project can turn out to be successful for radical ideas and approaches, and for a strong and quite homogeneous community of likeminded people. A large scale project can turn out to be successful, if 'success' is meant to encompass social issues of solidarity and equity.

The authors opinion

Pitfalls of AMF are its smallness and strictness. If its approach is applied to similar but much bigger projects, not the same results can be expected. It is too special to become a widespread phenomenon. It is too radical to become standard procedure. It will hardly ever be adapted by a whole city, and will probably remain a niche in the urban picture. Moreover, AMF is at a much higher risk to be dependent or even a burden on its surrounding.

However, 'Sustainable Development' at a too large scale, or even on a global level, tends to fail as well. As indicated in the introduction (and Appx 1), this research paper advocates a local urban focus.

The living environment requires a certain size to be urban, namely to be dense, accessible, provide plenty of infrastructure, facilities, services, and ensure an interesting mix of uses. However, if a living environment is too large, people might have trouble to identify with it, anonymity takes overhand, and leading ideas might get lost or strategies become unmanageable. Considering the fact that the world today is a highly urbanised network (as coined out by theorists such as Geddes, Sasken, or Castells, who conceptualized 'the network society' made of cities as places in a 'space of flow'¹), and that global trends usually start in and spread out from cities, changing the city on a small scale is the beginning of becoming able to change the world.

The scale of QV seems to be a good compromise. And the level of freedom, when it comes to car-ownership, seems to be a good compromise too.

Freiburg's mayor Salomon praises Quartier Vauban as a big success: «It proves that if you think globally and act locally, every little step helps not only just the people but the environment, too." ² Furthermore, QV project-makers were not too narrow-minded, and the project's concept is not too radical. «We didn't want to be fanatical about the carfree concept. We wanted to reduce individual car use and offer people the option of carfree living» was how one former leader of Forum Vauban described their attitude. ³ Sustainability was not achieved by a wagging finger and a moral sermon, but is mainly based on voluntarism, on resident's deliberate decision.

«If alternatives to car-dependence are to be viable – both for existing communities and new-build developments, carfree living should provide improved quality of life, but should not be perceived as 'anti-car'. The 'do minimum' model [...] recognises the transport needs and 'realities' of 21st Century lifestyles [...]. It is not anti-car and does not aim for zero car-use, but is based upon providing a high quality residential environment, greater modal-choice and decoupling of hidden subsidies, such as parking. This incentivisation of the positive benefits of carfree living and

¹ The whole world is run in partial networks, is a huge space of flows, and cities are nodes in that network. In this way of thinking, Patrick Geddes coined the term 'World City' in 1915, and Saskia Sassen the term 'Global City' in 1991, both describing the growing relevance of cities in a network cities as a 'space of flow', as it was conceptualized by Manuel Castells in, and well analysed and explained by Peter Taylor. (Taylor 2004)

² Kucharz 2007

³ Melia 2006

effective substitution of alternative travel options is one of the keys to successful implementation of extensive carfree housing [...].»¹

A large project will never be as innovative, extreme or radical as some small experimental model projects, but instead it has the potential to become mainstream, because its approach is easily and pervasively adaptable.

According to Freiburg's mayor Salomon «the secret of the success of Freiburg does not consist in us doing something special, the things we do are neither patented, nor are they intellectually hard to grasp. One only has to do them, and we are the living example that it is possible.»² Thanks to its non-radical attitude, its many low-tech but instead social solutions, and the successful implementation of so many ecologically and socially sustainable features on a quite large scale, the concept of Quartier Vauban might be well adaptable to other similar projects.

As to finalize this pleading: Quartier Vauban has the right scale for people to change their world! Andreas Delleske, resident and energy planner, recounts: «All the residents had the chance to plan their own city. And it's just how we wanted it to be.»³ And at the entrance of Quartier Vauban, residents and visitors are greeted by the slogan «We are creating our world the way we like it.»⁴ (See Pic. 9)



Picture 9. Quote of Pippi Longstocking, at a QV-façade.

¹ Morris 2005

² See Analysis of Youtube Video 1 in Appx 21. Source: Youtube movie by Europagruppe Grüne 2009

³ Moore 2009

⁴ Paterson 2009

8.3 Conclusions and Suggestions

Final re-assessment of Initial Hypothesis & Questions

Figure 67 repeats the basic assumption, hypothesis, and research questions guiding this research paper (See chapter 1):

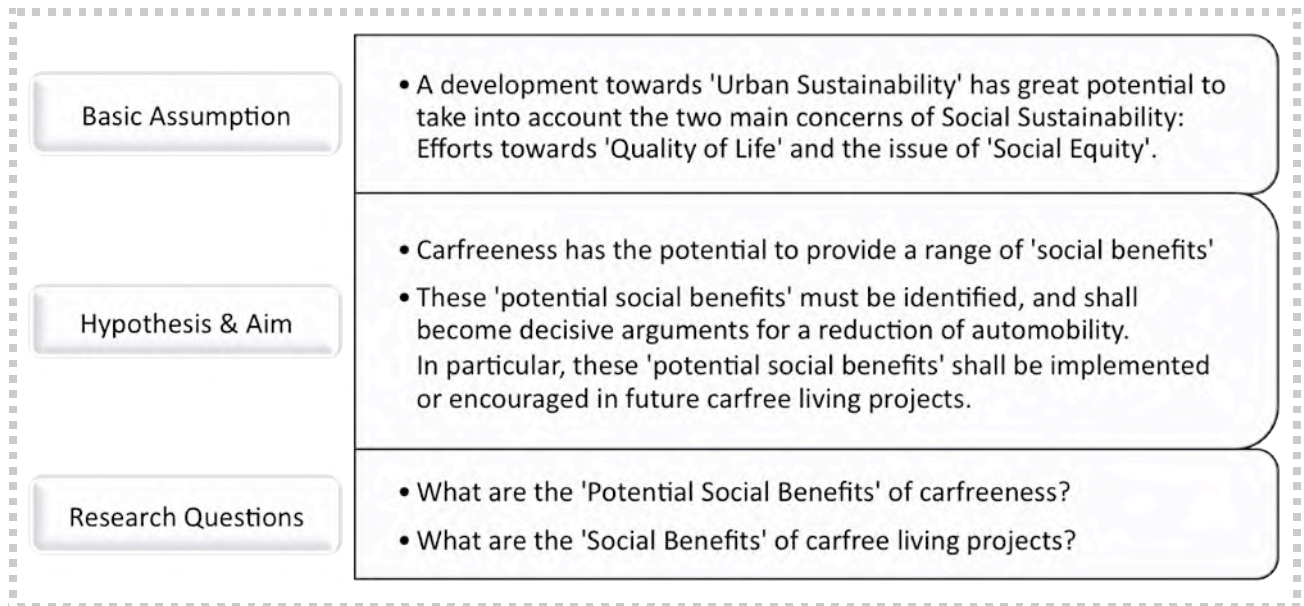


Figure 67. Key to success: Participatory approach

What was brought to light in this research paper – and was clearly confirmed by both casestudies – are two main matters concerning carfree living projects: On the one hand their successful focus on participation and community, on the other hand their tendency to attract a quite special 'clientel' along with the risk of social exclusion.

A comparison of the 'Potential Social Benefits' in the theoretical elaboration with the prevalent 'Social Benefits' in the casestudies shows how difficult it is to measure or scientifically identify 'Social benefits'. Nonetheless the project-based findings are much in line with the theoretical assumptions.

The hypothesis is confirmed by the many 'Potential Social Benefits' in the theoretical elaboration, and re-confirmed by the strongly prevalent 'Social Benefits' in the casestudies. Even though it has shown difficult to measure or scientifically identify 'Social benefits', the main 'aim' to identify the 'potential social benefits' has been achieved, and both research questions have been answered extensively.

The main results in this research paper are:

- A better understanding for the main problems with automobility and the proposal for a necessary change (Part I chap. 2)
- Theoretical elaborations on 'Potential Benefits' (ecological, economic and mainly social) (Part II chap. 3)
- Casestudy descriptions
- Casestudy-specific analyses of prevalent benefits (mainly 'Social Benefits'). (Part III)
- A comparison of the two casestudy-projects, identifying the main differences and things in common (chap 8.1)
- Conclusions and suggestions (chap 8.2 + 8.3)

Suggestions

It has been demonstrated, that the main argument why people enjoy to live in carfree projects is not the mobility concept, but instead are 'Social Benefits'. And it has clearly shown that there is great potential for such 'Social Benefits'.

Hence the general suggestions for future carfree living projects are basic:

- In order to be sustainable, 'carfree living projects' must be more than carfree. They must balance ecological, economic, as well as social concerns.
- In order to be successful, 'carfree living projects' must focus on 'social benefits' that contribute to individual well-being and happiness. And this has to be well communicated and promoted.

'Successful' in this context means for the project to attract a broad variety of people (a majority of society), and for the project's proposed lifestyle (namely 'carfree plus') to become a normal way of life.

As the research-results throughout the paper give a good idea of the potential of carfree living projects, these are obviously part of the suggestion, and can work as a guideline for future carfree projects. Furthermore, the suggestion, as aforementioned, is to keep develop projects on an urban scale, not too small and not too large, but well-located and well-connected to its surrounding.

Suggestions for Further Research

Research with the same or similar leading questions could be conducted on a larger scale or in more detail, based on more widespread and thus more representative surveys.

However the priority should be on taking action: re-focussing existing and developing new carfree living projects. As aforementioned, decisive for a focus on 'Social Benefits' is that these are also well communicated and promoted. It is therefore crucial to focus further research on strategies how to change the image of carfree living in general, and how to raise awareness of the fact, that carfree living can improve the Quality of Life and enhance individual well-being.

BIBLIOGRAPHY

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Essay: Sustainable Development

>> The main points of the following essay have been indicated in chapter 1.1 (Introduction) of the research paper. This essay elaborates on the relevant issues around 'Sustainable Development'. It summarizes the background knowledge, which is necessary in order to understand this research paper's hypothesis. It moreover demonstrates why the author is motivated to contribute to 'Social Sustainability'.

Appx. 1 Sustainable Development

Multiple crises call for 'sustainable development'

The world is currently faced with the convergence of multiple crises: the growing number of international political crises, the global economic crisis, an ongoing energy crisis, and finally, what is referred to as a 'biocrisis'.¹ A biocrisis is comprised of multiple ecological crises, which include, but are not limited to: climate change², global warming, the depletion of natural resources, and damage caused to the earth's biodiversity. The aforementioned crises primarily affect three major components, which are essential to human existence: water, food and health.³ Despite the fact that international agreements urge for ecological measures to be taken, such as the stabilisation of greenhouse gas concentrations,⁴ the financial crisis is at the same time lowering energy prices, and the preservation of jobs as well as national competitiveness are taking precedence over the reduction of emissions that are caused by (over)production and consumption: *«During a crisis, the environment has no lobby.»*⁵ «Thus it becomes clear that the paradigm of economic growth is one of the most significant obstacles to a serious global effort to deal with climate change.»⁶ These multiple crises call for integrated solutions.⁷

«It is becoming increasingly clear, that some form of 'green capitalism' is on the agenda. We are told from all sides that it is finally time to 'save the planet' in order to 'save the economy'.»⁸ Some kind of transition is inevitable, but the question is whether this will happen in a chaotic manner, or rather: «will it be part of a wider process of world-wide emancipatory social change based on the construction of new social relations?»⁹

That there are limitations to growth is not a new: Limits in the global environment became apparent with the first sight of the earth from space¹⁰, and just as well, it was also made clear with the creation of the Club of Rome initiative, which came into formation in the 1970's¹¹. By the end of the 1980's it was decided, that «sustainable development [...] should become a

¹ Multiple ecological crises: The climate crises; a drastic reduction in biodiversity; desertification; a fresh-water crisis, overfishing; the destruction of forest, and several more. Together, they constitute a 'biocrisis', a crisis of human life (bio) on this planet. All these ecological crises are basically the result of an antagonism between capital's need for infinite growth and our collective survival on a finite planet (Mueller & Passadakis 2009). And all these crises increase natural catastrophies, or result in hunger and poverty.

² 'Climate Change' refers to a change of climate that alters the composition of the global atmosphere. According to the UNFCCC (United Nations Framework Convention on Climate Change), climate change is attributed directly or indirectly to human activity, that is in addition to natural climate variability observed over comparable time periods.

³ Sachs 2009

⁴ Sachs 2009

⁵ Brunnengräber 2009

⁶ Bello 2009

⁷ Sources: Constantin 2009; Mueller & Passadakis 2009

⁸ Abramsky 2009

⁹ Abramsky 2009

¹⁰ Newman 2000a

¹¹ Club of Rome 1972

central guiding principle of the United Nations, governments and private institutions, organizations and enterprises.»¹ But what is “sustainable development”?

Sustainable Development

The term 'sustainability' is a befuddling concept, and definitions are often competing and contradictory.²

The terms 'sustainability' and 'sustainable development' are often used interchangeably. However, 'sustainability' describes a desirable state, whereas 'sustainable development' is a process.³ Hence 'sustainable development' is an oxymoron⁴. In this research paper the term 'sustainable development' is used to describe both a process that happens in a sustainable manner, as well as a process towards the attainment of a sustainable state – at best occurring simultaneously.

Presently, the concept of 'sustainability' forms part of a new trend and the term 'sustainable development' has been ubiquitously used, as a result becoming a mainstream word. The focus of the concept varies tremendously. «Perspectives differ primarily in terms of their implicit assumptions regarding WHAT is to be sustained, variously invoking biological systems, development trajectories, investment profitability, power relationships, levels of material consumption, and cultural 'life styles', inter alia.»⁵ The perspective depends on the purpose. A narrow definition, for instance, which focuses on ecological measures, would solely focus on environmental damage: «'Sustainable Development' or 'Sustainability' [...] simply means that in a global context any economic or social development should improve not harm the environment.»⁶ Moreover, the concept is often misused for 'greenwashing', and in turn, it loses the seriousness from its original objective.

However, there seems to be a consensus on the validity of the best-known definition for 'sustainable development', which is originally derived from the forestry. The Brundtland Report of 1987 defined sustainable development as a «development that meets the needs of the present without compromising the ability of future generations to meet their own needs»⁷ But this consensus is solely due to the concept's vagueness.

Public discussion on the issue of climate change was first addressed in earnest in the late 1980's, when European countries began responding to the Brundtland Report. In the year 1992, an 'Earth Summit' convened in Rio de Janeiro, Brazil, and its resolutions were signed by 179 nations.⁸ By proposing 'Agenda 21' the Summit in Rio provided an action plan to implement sustainable development.

Climate Neo-Liberalism and the Paradigm of 'Growth'

The Brundtland Report, as well as the 'Rio Declaration' or the 'Kyoto Protocol', have often been criticised for advocating economic growth.⁹ As aforementioned, the path towards growth incurs limits, and this was made clear by the Club of Rome in the 1970's¹⁰. Nonetheless, forty years later today, after many conferences and signed agreements, both the world population as well as the relative demand for resources are increasing at a high speed. One main reason for the lack of

¹ WCED 1987

² NSF 2000: 6

³ Maclaren 1996

⁴ (Source: Brand 2010)

> Elaboration: To 'sustain' means to continue, to keep up, to prolong. For instance an existence or a certain state. (Webster's New International Dictionary. (Springfield, Mass.: Merriam-Webster Inc., 1986)) To 'develop' however means to bring something to a more advanced or effective state. (Random House Dictionary of the English Language. (New York, NY: Random House: 1987).)

⁵ NSF 2000: 6

⁶ Newman 2000a

⁷ WCED 1987: 8 (Informally but frequently referred to as the 'Our Common Future Report' or the 'Brundtland report', after Gro Harlem Brundtland, Chairman of the Commission)

⁸ Newman 2000a

⁹ Sources: Brand 2010; Charkiewicz 2009, Mueller & Passadakis 2009; and many more

¹⁰ Club of Rome 1972

change is a paradigm of growth, which is both ecologically unsustainable as well as socially unjust.¹ In fact, instead of adapting the global economy to the sustainability agenda, what happened was the opposite: «sustainable development was retooled to work for neoliberal global governance.»² The dominant politics remain neoliberal, or even 'neo-imperial'³. «Destructive modes of production as well as resource-intensive consumer habits and mobility needs are being defended. Neo-liberal policies would not be successful if they were not able to transform the climate change debate into new market opportunities.»⁴ Thus, mechanisms are neither aimed at reducing growth nor at producing renewable energies. «The focus lies instead on the societal use and valorisation of nature, as well as on the enormous innovation potential of the climate change label for the economy.»⁵ The crisis is seen not as a systemic crisis of capitalism⁶, but as an opportunity: a 'Green New Deal' is meant to create jobs, reenergise the global economic system AND protect the climate. Moreover, a new form of capitalism, a 'green capitalism,' is a source of potential technological innovations. «We are witnessing the emergence of a climate neo-liberalism, which may very well energise some national economies, but will certainly not protect the climate.»⁷

Local focus on 'Urban Sustainability'

This raises the question of whether the international climate regime is the right institution to combat climate change.⁸ The UNFCCC might not be an adequate institution to deal with the enormous task of 'changing the world' for it is part of the neo-liberal capitalist, Western regime. We do not need a neo-imperial 'sustainable globalisation'. Instead, the focus needs to be at a local level, locally implementing Agenda21, supporting citizen initiatives in a bottom-up approach. The great challenge that lies ahead shall be referred to as: 'Urban sustainability'.

Sustainable Development: A Tri-fold Concept

What has been widely applied since the Rio Summit of 1992, is that sustainable development lies on three pillars, representing environmental, economic and social concerns. This tri-fold concept of a holistic approach brings together the most important global needs, and balances its three main objectives: social solidarity, environmental responsibility, economic efficiency.⁹

Ecological Sustainability

Ecological sustainability is not limited to stabilising CO₂ emissions, it also encompasses various aims: to fight global warming, to maintain biodiversity, to use resources in a sustainable way etc. Resources, again, are not restricted to energies, such as fossil fuel, but include all kinds of energy, material, food, water, land, etc.¹⁰

¹ Sources: Brand et al. 2009; Brunnengräber 2009

² Charkiewicz 2009

³ The dominant politics remain neoliberal and neo-imperial, oriented towards competitiveness and maintaining and enhancing the power of (mainly North-Western) governments, corporations and elites. What we see in the field of environmental politics is an attempt to restabilise the neo-liberal, neo-imperial globalisation project by presenting a progressive image in the field of environmental policy-making. (Brand et al. 2009)

⁴ Brunnengräber 2009

⁵ Brunnengräber 2009

⁶ Theorists, of course, have recognized the crisis of neo-liberal growth-oriented capitalism. However, they also observe how this is being ignored and how existing structures are being re-inforced nonetheless. Because the end of today's capitalism is not seen as an option. Not yet.

Brand quotes some critical votes: «Geographer Erik Swyngedouw has shown how the catastrophic framing of climate change fits in neatly with powerful political discourses on post-democracy and post-politics. It seems that there is virtually no alternative to existing forms of politics. Quoting Fredric Jameson, he reminds us that today 'it is easier to imagine the end of the world than to imagine the end of capitalism'.» (Brand et al. 2009)

⁷ Brunnengräber 2009

⁸ Brunnengräber 2009

⁹ FSO 2010

¹⁰ Kromp-Kolb 2010

Economic Sustainability: An Urgent Need for a Green economy

Conventionally, economic success is measured by an economy's outcome and by economic growth.

Today, the awareness of the limits of growth returns and, with it, a clamour for degrowth. However, the solution to the problem of growth is not degrowth per se, but «the deconstruction of the economy and the transition towards a new rationality that can guide the construction of sustainability.»¹ According to Leff, this deconstruction of the economy is a complex philosophical, political and social exercise.² The world is currently facing a multiplicity of crisis tendencies, so severe that the current conjuncture has been declared a crisis of the Western model of civilisation.³ Thus, deconstructing the unsustainable economy means questioning the thought, science, technology and institutions that create the cage of rationality of modernity. It is not simply a matter of 'greening' the economy, moderating consumption or enhancing alternative and renewable sources of energy within the niches of opportunity that appear profitable. «We need to deconstruct economic reasons by legitimating other principles, values and non-economic potentials.»⁴

One of the main problems is, that in the current neo-liberal market economy, all social and ecological costs are externalised to households, (with disastrous effects for the weakest social groups). As part of a green change, markets have to become socialized and 'green'. «Socialising markets implies recapturing the notion of a market as a form of exchange, where costs of human and environmental reproduction are shared.»⁵

Social sustainability

Sustainable Development must focus on social aspects: it must meet social needs. This can mean to encourage and secure a high quality of life and perceived quality of the human environment, or – viewed from the standpoint of Justice – to assure equity in access to resources and services.

Social Sustainability

In this paper, 'Social Sustainability' is defined as a combination of Quality of Life (or 'The Good Life' or Well-being or Happiness) and Social Equity.

Necessary social changes essentially involve changing production and consumption patterns. A broad social transition is based on collective thinking and action. It «includes convincing many people to engage in different everyday practices», it includes convincing journalists to refer to important voices, it implies politicians who are willing to break with existing dogmas, «and it takes seriously changes in institutions such as private and public firms, schools and universities.»⁶ «Alternative and attractive forms of living, producing and exchanging; new social divisions of labour; and alternative identities are necessary, as well as possible [...]»⁷ However «an emancipatory politics has to take care not to be moralistic about environmental issues.»⁸ In other words: The necessary change has to be appealing.

What is necessary for a change to happen? A change can be imposed, or people can be forced to change, or to contribute to a change. But history has shown that forced results do not hold up in the long run. For a real ('sustainable') social change, society, communities, individual people, all need to be willing to change. And in order to develop this will, people need to be convinced.

¹ Leff 2009

² Leff 2009

³ Mueller & Passadakis 2009

⁴ Leff 2009

⁵ Source: Charkiewicz 2009. >> For a more detailed discussion of the issue 'internalizing external costs', see Appx 4

⁶ Brand et al. 2009

⁷ Brand et al. 2009

⁸ Brand et al. 2009

«Quand tu veux construire un bateau, ne commence pas par rassembler du bois, couper des planches et distribuer du travail, mais reveille au sein des hommes le desir de la mer grande et large.» ¹

(Antoine de Saint-Exupéry 1943)

In order to convince people, the necessary change has to meet human needs and human desires. In order to be appealing, the change must have obvious social benefits.

Re-focus of SD-projects

Thus, the proposal in this research paper is to redefine the central motivation for 'Sustainable Development'. Why do we fight against a climate crisis? Why do we fight for a green change? Why do we want to change the world? The reason cannot be to save the environment, nor any other altruistic argument. Instead, the focus must be on individual well-being and happiness.

The global 'Green Change' has to be all-embracing (a tri-fold approach). The same applies to every single SD-project (= 'sustainable development project'). Each SD-project must balance ecological, economic, as well as social concerns. In addition, each SD-project must identify those social aspects that could be perceived as beneficial by a majority of people, and it must then communicate and promote those aspects.

The focus of this research paper is on 'social sustainability', and more particularly on the potential social benefits of SD-projects (carfree living projects in particular). The investigation is focussed on what makes people happy! This does not imply that other aspects of 'sustainability' are not equally important. The focus on 'perceived happiness' is simply a strategy to maximize the acceptance and popularity of SD-projects. Because only those aspects that are actually perceived as positive, as beneficial to the citizens, have the chance to convince them, and to become mainstream. Focussing only on the potential social benefits means to focus on the key to success of SD-projects. This can be called goal-oriented research!²

The hypothesis of this research paper is:

Each SD-project has the potential to have various social benefits. And to highlight the social benefits of SD-projects is the key to success.

The remaining part of this chapter first introduces different aspects of the quality of life, well-being, and happiness, and it then elaborates on the issue of social equity. Because «The Good Life is, in essence, a matter of building an economy of solidarity.» ³

¹ Translation into English: «If you want to build a ship, don't drum up the men to gather wood, divide the work and give orders. Instead, teach them to yearn for the vast and endless sea.»

Or: «When you want to build a boat, don't start by gathering wood, cutting planks, and assigning jobs, but rather revive in men's heart the desire for the great big sea.»

² Plaidoyer for goal-oriented research – Position of the author of this research paper:

«I criticize the neutral position of some researchers in the debate around 'sustainable development'. Climate change puts pressure on decision-makers. There is not sufficient time to be neutral. Neutrality has always been hindering fast decisions or fast progress.

Considering the urgency that climate change puts on the issue of sustainable development, there might not be sufficient time to prepare the necessary empirical evidence for an opinion or proposition. However, I think it should not be a question of evidence, but a question of personal belief. And my personal belief consists in giving the environment highest priority!

At some point (maybe very soon) we might all be forced to take action based on urgent necessity. So we might as well take a standpoint based on personal priority today, while we still have the choice, while we still have the luxury of having our own opinion. I advise all researchers and policy-makers to take this standpoint and to start with active goal-orientated work from there.

If research focuses on positive development, it can identify potentials/ strengths/ advantages, which then can be strengthened. It is certainly important to analyse social problems, or to reflect on shortfalls in sustainable development and alike. And certainly the results of such research are useful as well as indispensable in some way. But to actively contribute and forward sustainable development, we must consult research, and then build the future, by including and strengthening as much 'positive' factors as possible, and to avoid the negative factors.»

³ Acosta 2009

Quality of Life / Well-being / Happiness

The terms 'Quality of Life' (or 'living quality'), 'well-being' and 'happiness' are often used as synonyms.¹ Research in 'living quality' and happiness-research usually measure with very similar quantitative indicators (e.g. air quality, crime rates, income levels etc.). However, such indicators do not take into account the complexity of individual well-being. 'Quality of Life' is obviously a very subjective concept, and people's well-being is determined by their environment meeting their very individual needs.²

According to Maderthaner, 'Quality of Life' encompasses all those (objectively perceptible) aspects, which contribute to individual satisfaction and well-being.³ According to Mayring, quality of life is 'a combination of subjective well-being and positive objective living conditions.'⁴ The WHO⁵ defines 'Quality of Life' as the individual perception of the personal living situation in context with its culture and its value system, and in reference to personal goals, expectations, evaluation scales and interests.⁶

In general «Being healthy, feeling safe and having enough income to live are all needs that, when met, contribute to the well-being of the population.»⁷ Maslow divides the human needs in five classes, and structures them into a pyramid according to the 'hierarchy of needs'. The most basic needs at the bottom of the pyramid are breathing, food, water, sex, sleep, etc. Above are issues of security, above are human relations (friendship, family), above are self-esteem, confidence, respect etc., and on top of the pyramid are more philosophical needs such as morality or creativity.⁸ Concerning the living environment, Maderthaner distinguishes ten essential needs: Regeneration, privacy, security, functionality, order, communication, appropriation/claiming, participation, aesthetics, and creativity.⁹

This research paper does consult existing indicators for 'social sustainability'. But the relevance of such indicators is decided by the people, by including many people's votes and opinions. Most importantly, the analysis places its highest importance on the perception of 'social sustainability'.

Social Equity and Climate Justice

There has been injustice in the world since time immemorial. But in today's world, there is an international consensus that the fundamental rights of every human person need to be guaranteed. These rights are equal, inalienable, and universal.¹⁰ And «Climate protection is, fundamentally, about human rights.»¹¹

Social equity should be a main concern in sustainable development. Who are the winners and who are the losers in climate change? Climate change affects the natural asset of human existence, such as water, food and health. The social inequity lies mainly in the fact, that the people who are suffering from this impact are in most cases not the same people who are causing it.¹² Some countries/regions are disproportionately affected by climate change for two reasons: Higher impacts and higher vulnerability. The countries most affected by climate change are those of the global South.¹³ The questions of maximum levels of pollution and limits to the increase in global temperature seem rather technical, but the question of what kind of danger is acceptable implies

¹ Schumacher et al. 2003: 11

² Sources: Bullinger 1998; Maderthaner 1995: 172

³ Maderthaner 1995: 176

⁴ Mayring 1991: 53

⁵ WHO = World Health Organisation

⁶ WHO 1994, cited in Schumacher et al. 2003: 11 (own translation)

⁷ FSO 2010

⁸ Maslow 1954

⁹ Maderthaner 1995: 175

¹⁰ Sachs 2009

¹¹ Sachs 2009

¹² Sachs 2009

¹³ Brunnengräber 2009

the question: what kind of danger to whom is acceptable? ¹ Burning fossil fuels is causing numerous climate threats, to such a degree that fundamental rights are violated. Climate equity in this context is about human rights.²

Another precarious issue of climate injustice is the willingness of some governments or societies to wage a war in the name of oil. «With the Gulf War, many critics of the car culture recognized the extent to which American and European foreign policies are driven by the petroleum interests driving the global economy.»³

The literary meaning of equity is fairness. The most relevant interpretation of this, in the context of sustainability, is «the notion of 'distributive justice' – fairness in the apportionment of resources in society.»⁴ Sustainable development implies that everybody has reasonable access to resources. Hence resources should be fairly distributed. ⁵ Moreover, equality further implies that every individual should enjoy equal opportunities.⁶ «All social primary goods – liberty and opportunity, income and wealth, and the bases of self-respect – are to be distributed equally unless an unequal distribution of any or all of these goods is to the advantage of the least favoured.»⁷ In addition it is crucial to «ensure that all citizens and interested groups have access to information and are able to participate in local decision-making processes.»⁸

Not only is social equity crucial for maintaining human rights, but social equity can also be beneficial for sustainable development. On the one hand, poverty or low education levels may lead to unsustainable lifestyles. On the other hand, equity is the basis for social and political stability, and thus the basis for a consensus to democratically implement sustainable development. ⁹

¹ A survey of possible impacts (Exeter Conference 2005) suggests a target that avoids systematic threats to human rights would need to keep the global mean temperature increase below 2°C above preindustrial levels. (Sachs 2009)

² Sachs 2009

³ Sheller & Urry 2000: 750

⁴ Burton 2000: 1970

⁵ FSO 2010

⁶ FSO 2010

⁷ Rawls 1972: 303

⁸ Aalborg Charter 1994

⁹ Bernhard et al 2011

Appendix of Part II (Theory)

Appx. 2 Discussion: Technical Fixes versus Radical Mobility Reduction

>> The topic has already been indicated in chapter 2.3 (Reducing Automobility). This appendix offers a more detailed explanation why this research paper rejects technical fixes, and advocates a radical reduction of automobility.

The debate around automobility as an ecological problem – analogue to the problem with mobility in general – is proposing two opposite directions: one is to reduce automobile traffic, and to change planning strategies in accordance; the other is to rely on technical fixes of the problem, such as alternative fuels, electrical cars etc. This side is growing, and it will have a very strong lobby in the future, as soon as most car-producers realize that they have to change their strategy. Subsequently more and more low-use, hybrid, and electric cars will be produced and promoted. And as positive as this development might seem, as much should it be feared, because the more this lobby is growing in power, the smaller are the chances to actually reduce automobility.

«Creating a smaller, lighter, fuel-efficient car is a start, but would not be enough. Car manufacturers have already begun production of various micro-cars that are ideal for crowded urban spaces where parking is at a premium and environmental issues are paramount. However, such micro-cars would have to be truly integrated into a mixed transportation system that allowed more room not only for bikes, pedestrians and public transportation, but also for modes of travel that we have only begun to imagine. This would require the redeployment of existing urban zoning laws to exclude or severely delimit 'traditional' cars [...] »¹

As Safdie pointed out: «At some point the answer will not be more roads and cleaner cars, but some radical change.»²

In the long term, 'technical fixes' cannot be the solution, for at least two reasons: On the one hand, it would only touch the surface of the problem. As the chapter 2.2 has shown, the car does much more harm than burning fossil fuels, and the problem with automobility goes far beyond the implications of the individual cars. Roads and car-related infrastructure are negatively affecting the environment, the landscape, and the city, independent of car technology; not to forget about the car-related social structures that affect society. Automobility is interconnected with issues of social sustainability, as it indirectly deteriorates our 'quality of life' in various ways. And not rarely it does so in an unequal manner, which raises the question of 'social equity'.

«Some technical fixes for vehicle pollution, already adopted in most industrial nations [...]. Even more efficient cars and cleaner fuels than these are on the horizon – ultra-efficient vehicles powered by emissions-free hydrogen fuel cells, for instance. While promising, these innovations will still only address pollution, leaving accidents, congestion, and social inequity untouched. The larger issue of linking transportation to land use planning will be essential to reining in automobile use and making cities liveable.»³

On the other hand, technical fixes often rely on electricity as an alternative to fossil fuels. This can only be a short-term solution. Electricity is as less a reliable and secure energy source as oil. Nuclear energy, being one tempting option, is potentially dangerous. It comes with the problem of storing its waste, and it is as much an acute threat (as became apparent this spring (2011) in Japan) as it is a highly political issue. In contrast, 'alternative sources of energy', are a safe and 'renewable' option. Though the term 'renewable' shall not be verwechselt with 'infinite'. Solar energy might seem infinitely available, but there are technical limits to collecting and

¹ Sheller & Urry 2000

² Safdie 1997

³ O'Meara 1999

storing and using it. These are basically the reasons, why this research paper strongly advocates to reduce energy use in general, and car use in particular.

Of course, it is impossible to foresee, what new technologies will be developed in the future. It is not absolutely impossible that a miracle solution will be found to tackle our energy problem, to safely store or even destroy nuclear waste, to stop global warming, and to feed all hungry people as a side effect... Some consider this alchemy, others really hope for it to happen, some might be pragmatic thinkers but tempted to think more optimistically... Anyhow, even if chances to find a miracle solution were fifty-fifty (which they are quite obviously not), we cannot be sure. Based on this uncertainty, a simple old-fashioned risk-analysis can help to find orientation:

The question at stake is: Why should we prepare for and adapt to an era of less energy or less mobility? We cannot be sure, so we evaluate the risk. The risk-analysis poses the questions: What happens if we act? What happens if we don't act? What would we win or lose?

If we do act, if we prepare for a world of less energy and less mobility, we might do it in vain, but even then we would not lose anything. Through 'flexible planning' a city gets the chance for adapting to severe changes. If the expected changes do not happen, or happen in a different way, then the flexible systems are still positive (at least not negative), and adaptable to other changes as well (And that the future will change in some way, that is for sure. Nothing ever remains the same!).

If we don't act, we might be lucky as nothing bad might happen, but if we were mistaken about our assumption, we will lose a lot, and we will end up with a big problem. As simple as this sounds, it results in the logical argument: We have to act! And if we do, we can only win.

Appx. 3 Discussion: The Limits of Telecommunication

>> The topic has already been indicated in chapter 2.3 (Reducing Automobility). This appendix offers a more detailed explanation why there are limits to reducing the need for mobility, and why highly complex information, communication and simulation systems cannot overcome this limit.

«Transport of the mails, transport of the human voice, transport of flickering pictures — in this century, as in others, our highest accomplishments still have the single aim of bringing men together.» (Quote: Antoine de Saint-Exupéry, *Terre des Hommes* (1939), Translated into English as 'Wind, Sand and Stars')

The 'Information Age' (Information and Communication Technology)

Technophiles have promoted electronic information transfer – e-mail, e-commerce, videoconferencing – as a way to reduce the need to move goods and people, and in so doing to avert transportation-related pollution. Indeed, by connecting more far-flung people, communications technologies may actually induce more travel.¹

In the beginning of the debate about the impacts of information age technology, in the 1960s, scholars such as Melvin Webber suggested it would help to disperse cities making them more car dependent. More sophisticated approaches around 1990 recognised that information technology had the ability to reform cities based on the reduced need for face-to-face interchange in some activities, but the continuing need for some quality human interactions critical to economic and cultural processes.²

Fischer points out that «it needs to be stressed that the effects of improved telecommunications are currently unclear.»³

Despite the highly complex information, communication and simulation systems that are available today: «Telecommuting will not be the key to transforming urban life because, as Park and

¹ O'Meara 1999

² Castells 1989, and Castells & Hall 1994

³ Fischer 2001: 6-7

others recognized, people do like to be physically mobile, to see the world, to meet others and to be bodily proximate, and to engage in 'locomotion'»¹

Communication technology will not obviate the need for integrated transportation and land use. Telecommuters lured away from urban centers will still need food and services. And, as urban scholar Peter Hall notes, no information technology in history has ever been associated with a net reduction in travel or face-to-face contact.²

Peter Hall stated that human creativity will flourish where people come together face-to-face. Others have emphasised that 'local milieus' will emerge (Willoughby, 1994) or that local culture will be strengthened as globalised information makes national borders less relevant (Ohmae, 1990; Naisbett, 1994; Sassen, 1991,1994) or that the importance of face-to-face contact will ensure centres emerge as critical nodes of information-oriented production (Winger, 1997).³

The phenomenon of Silicon Valley proves, that creative work still occurs mainly in face-to-face exchange, where people live and work in close proximity. And that there is actually a natural link between the information economy and walkable, mixed-use neighborhoods linked by public transport.

Appx. 4 Discussion: Internalizing External Costs

>> The topic has already been indicated in chapter 2.2 (Automobility: Use of Financial Resources) and in Appendix 1 (Essay on Sustainable Development: A Tri-fold Concept: Economic Sustainability. This appendix offers a more detailed explanation why internalizing external costs is THE way towards sustainable development.

Neo-liberal Market

Markets have always existed as a form of exchange. But one of the main problems today is, how markets are constructed and regulated: in the current neo-liberal market economy, all social and ecological costs are externalised to households, (with disastrous effects for the weakest social groups). What is at stake is to shift the debate from effects (emissions) to causes (the way virtual and productive economies are functioning now). As part of a green change, markets have to become socialized and 'green'. «Socialising markets implies recapturing the notion of a market as a form of exchange, where costs of human and environmental reproduction are shared.»⁴

Automobility Externalities

Up until now all externalities of automobility are paid for by the public. Around the world the infrastructure for automobility (roads, parking etc) is funded by the government, which means that the costs of driving a car is subsidized. This governmental support of automobility makes public transport a less economically competitive choice for individuals. For non-car-users this means not only that they seemingly spend more money on their choice of mobility, but on top of that they cross-subsidize automobility by paying taxes or rent (which is partially used for building parking).

Internalizing External Costs

In general, internalizing external cost is THE way towards sustainable development. Considering automobility, internalizing the external costs can offset the heavy subsidies for driving, and balance car use in cities with alternative modes of transport.

Financial levers can support planning decisions. Local authorities can internalize external costs by charging tolls on roads, bridges, tunnels, or parking fees (at a market-rate), or gas taxes and congestion taxes, which all reflect the high cost to society of car use. Furthermore they can change property taxes: By cutting building taxes and taxing only the land, compact development can be promoted. To reduce fringe development, they can further make complementary policies that offer incentives to protect surrounding forests and farmland from development, combined

¹ Sheller & Urry 2000

² O'Meara 1999

³ Newman 2000b

⁴ Charkiewicz 2009

with policies to encourage 'infill' development of vacant or under-developed lots within the city. Moreover, cities can involve the private sector in financing sustainable transportation systems, or the private sector can also help operate public transit.¹

Appx. 5 **Proposal: Sustainable Mobility**

>> The topic has been introduced in chapter 2.3 (Reducing Automobility: Sustainable Mobility). This appendix offers a more detailed explanation of what 'Sustainable Mobility' would include, and why it is more sustainable than automobility.

Mobility is a vital necessity. In addition, it is of high importance for a health economy. However, a decisive factor for mobility to be sustainable is the choice of transport: taking public transport, cycling and walking are better for the environment and for people's health.²

The proposal in this paper is to substitute car-based automobility by a sustainable, 'smart', inter-modal and highly interconnected transportation system, in connection with an urban form that encourages walking and cycling.

Sustainable Mobility

Sustainable mobility is more efficient than conventional mobility, and it includes less environmentally and socially destructive modes of transport.

According to Giorgi, 'Sustainable mobility' is a term that summarises what is at stake in contemporary attempts to redress the balance of costs and benefits in the transport sector. It marks a shift away from the traditional transport planning approach, which conceptualised transport as a derived demand and as a support infrastructure for economic growth, towards a policy approach that is informed by evidence and risk assessment and which recognises the pitfalls of unconstrained growth.³

«Environmentally, sustainable transportation is now mainstream. The sustainable cities movement has brought the environmental movement into the city and focussed their attention on the myriad of local and regional problems associated with automobile dependence.»⁴

It is argued that the process of achieving more sustainable transportation requires suitable establishment of four pillars: effective governance of land use and transportation; fair, efficient, stable funding; strategic infrastructure investments; and attention to neighbourhood design.⁵

Intermodality

Intermodal transport systems are networks that combine public transit, pedestrian, and bicycle systems (and any other form of sustainable transportation, that might become popular in the future).

Collective public transport and non-motorized forms of transport are much more efficient than automobility in private vehicles. In fact, Cars are the most inefficient mode of transport, but the most preferred and increasingly extended!

Inefficiency of cars (in Spain): due to congestion, space for parking, construction of roads, occupation (1.3 passengers / car) bellow capacity (5 p. / car), low degree of utilization (1 hour / day = 4% of total life expectancy), and high consumption of energy in terms of people transported.⁶

Transportation modes on rail (trains and trams) for instance are by far the most fuel-efficient motorised transport technology, and moreover the least expensive one.

¹ O'Meara 1999

² FSO 2010

³ Giorgi 2004

⁴ Newman 2000b

⁵ Coleman et al. 2005

⁶ Díaz 2000: 7

Rail travel is between 2.5 and 5 times more energy-efficient than buses, and rail systems in European cities are 7 times more energy-efficient than car travel in US cities.¹

An efficient rail network for instance is more efficient than an extensive road network. Data provided by Newman show that cities with the most roads have the most costs for their transportation and the most rail-oriented cities have the least transportation costs.²

According to Newman, «Rail transit systems, compared to all other motorised transportation, appear to have the best energy efficiency and greatest ability to attract people out of cars, they are the most important factor in the recovery of transit operating costs, they seem to be the catalyst for compact sub-centre development and they make a major contribution to sustainability on all indicators. Transforming cities towards efficiency in both economic and environmental terms would appear to involve good rail systems.»³

Furthermore, the comparative loadings or vehicle occupancies contribute significantly to the energy efficiency differences between different modes of transport. Average train wagon occupancies are in average more than twice that of buses and about 20 times higher than cars.⁴

As mobility without 'automobility' ('automobility' meaning 'being individually mobile') is wishful thinking, an intelligent intermodal mobility system might also include individual vehicles (which do not need to be in form of conventional cars), as proposed by Sheller and Urry.

Sheller and Urry advocate a system, that would include the automobile into an intelligent inter-linked mobility system: «Through an interlocking of 'smart' transportation systems and the urban 'info-structure' a new mode of automobilization could be created that would integrate private and public transport, motorized and non-motorized transport, and information transmission and human mobility. Crucial to this detraditionalization of urban transportation will be a redesign of both public mass (and mini) transportation systems and of private or semi-private vehicles. Smaller, smarter, information-rich, communication-enhanced vehicles that are better integrated into the public transport system and public space will be indispensable in the city of the future and to the civil societies that might flourish within them.»⁵

According to Jan Gehl «Among all the activities that take place in the public domain, traffic – people and goods on the way from one place to another – is the most comprehensive.»⁶ A diverse and busy mobility is therefore vital for the activity level in the streets. As long as individual vehicles are an essential part of this mobility, transport intermodality must certainly include efforts to improve walkability by clearly designing streets as pedestrian areas, forcing cars to slow down etc...

Non-motorized Mobility

According to Gehl «the concept of integrating automobile traffic on pedestrian terms offers considerable advantages over methods that segregate traffic. Even though completely carfree areas have both a higher degree of traffic security and a better design and dimensioning for outdoor stays or pedestrian traffic and so offer an optimal solution, the Dutch concept of traffic integration in many cases offers a very acceptable alternative, the second-best solution.»⁷

«The importance of an integrated transportation system to city life can be observed in those cities in which transportation has always been on foot.»⁸ claims Jan Gehl, and uses the example of Venice: «Here life and traffic exist side by side in the same space, which functions

¹ This data is based on an analysis of Overall modal energy efficiencies in the global sample of cities, comparing efficiencies of car, bus, heavy rail(electric/diesel), and light rail/tram, based on data from 1990. (Results published in: Newman 2000b)

² Newman 2000b

³ Newman 2000b

⁴ Analysis of Overall modal energy efficiencies in the global sample of cities, comparing efficiencies of car, bus, heavy rail(electric/diesel), and light rail/tram, and comparing these different modes of transport also by average vehicle occupancy. Based on data from 1990. (Results published in: Newman 2000b)

⁵ Sheller & Urry 2000

⁶ Gehl 1971

⁷ Gehl 1971

⁸ Gehl 1971

simultaneously as a space for outdoor stays and a connecting link. In this context traffic presents no security problems, no exhaust fumes, noise, and dirt, and therefore it has never been necessary to separate work, rest, meals, play, entertainment, and transit. Venice is a living room with integrated process enlarged to city scale. [...] The main traffic principle in Venice is that a transfer from fast to slow traffic occurs at the city limits and not at the front door, as has become customary through the years in most places where the automobile has come into use.»¹ The principle of leaving cars at the city limits or at the edge of residential areas and walking the last 50-100-150m home through the neighborhood has in recent times become widespread in European residential areas.² Jan Gehl's approach does not result in the carfreeness this research paper is advocating for, but it is a step in the right direction. And his concept, finally, makes it much easier to replace the automobile by public transport. Because the main advantage of the car (driving individually to the driver's own door-step!) is out of question already...

According to Jan Gehl «Walking is first a type of transportation, but it also provides an informal and uncomplicated possibility for being present in the public environment.»³ «The act of walking is often a necessary act but can also merely be an excuse for being present – 'I will just walk by.'»⁴

Gehl's is convinced that «Slow traffic means lively cities.»⁵ – the essential statement in his book 'Life between building' – because «Life takes place on foot. Only 'on foot' does a situation function as a meaningful opportunity for contact and information in which the individual is at ease and able to take time to experience, pause, or become involved.»⁶ Therefore «it is important that all meaningful social activities, intense experiences, conversations, and caresses take place when people are standing, sitting, lying down, or walking.»⁷

Walking, in particular, is highly beneficial: Walking provides basic mobility, that is, many people rely on walking to access activities with high social value, such as for medical services, essential errands, education, and employment. Walking provides the basic condition for social interaction. This is one of Jan Gehl's important statements in his book 'Life between buildings', because «Many activities – play, outdoor stays, conversations – get started when one is actually involved with something else or on the way somewhere.»⁸ Moreover, walking is the basic form of exercise which contributes to people's health and well-being. Last but not least, as walking is the most accessible and the most inexpensive mode of transport, walkability is essential for social equity. Consequently, poor walking conditions can hinder equal accessibility and contribute to social exclusion, that is, the physical, economic, and social isolation of vulnerable populations.⁹

Mobility Management

According to Giorgi «intermodal transport is considered promising both with regard to efficiency gains with reference to the whole transport system and with regard to the reduction of external costs like negative environmental effects.»¹⁰ But in order to actually be that beneficial, intermodality needs to be well-organized, it needs management. It is not enough, that different modes exist side by side, but they must be inter-connected, and people must be informed about, accustomed to, and supported in their use of such an innovative system. This must be combined with various different measures to reduce the need for automobility, or to reduce the impacts of mobility, such as «regulatory measures, pricing-policies, infrastructure

¹ Gehl 1971

² Gehl 1971

³ Gehl 1971

⁴ Gehl 1971

⁵ Gehl 1971

⁶ Gehl 1971

⁷ Gehl 1971

⁸ Gehl 1971

⁹ Litman 2003

¹⁰ Giorgi 2004

(planning) and organisational measures»¹. Mobility management is thus essential for the effectiveness of sustainable mobility.²

Carfree living projects are a special case: Even though the project might be radical about excluding cars and prohibiting car-ownership, nonetheless their premises only constitutes a small enclave within a larger system. The surrounding mobility system influences the project's residents mobility behaviour somehow or other. Scheurer's findings confirm that this can put significant limits to potential lifestyle changes or positive ecological effects³. For this reason, an effective overall mobility management is an essential/decisive component of any carfree living project!

Threshold to Sustainable Mobility

Sustainable modes of transportation – non-motorized modes in particular – have always been secondary on the economic and political front.

Non-motorized traffic is very inexpensive. It has neither industry nor market, and consequently non-motorized traffic has no strong lobby (in contrast to automobility or air transport). This is one of the reasons why it is often overlooked in conventional transport planning.⁴ Yago confirms how much «The strength of the road and air industry lobbies vis-a`-vis much weaker rail and waterborne interest representations has contributed further to the difficult progress path.»⁵ According to Giorgi, one of the main reasons for the relative strength of the air and road lobbies is their success in terms of adjusting to the market and competition mentality that has dominated the transport sector since the middle of the 1980s. The liberalisation of the transport market has definitely been the most remarkable development of transport policy over the last several years. Besides introducing the private sector into the running of transport services, deregulation has sought to use competition as a means for encouraging management reforms, efficiency gains and technological innovations. This has been successful in part but not fully.⁶

Another reason why non-motorized traffic is often overlooked is that non-motorized traffic «tends to be stigmatized, whereas motorized transport tends to be associated with success and progress.»⁷ In fact, to quote Yago again, «Urban historians have often attempted to account for public transit's decline by citing some single cause -corruption, poor business practices, overcrowded service, the lack of technological innovation, regulation, or the rise of the automobile.»⁸

Chances for Sustainable Mobility

But, as Peter Newman pointed out, the strength of revival by communities in response to the globalising economy is forcing a more community oriented transportation. And according to his

¹ Fischer 2001: 6-7

² An interesting source concerning the efficient management of mobility is TDM: 'Transportation Demand Management' (TDM, also called Mobility Management) is a general term for strategies that result in more efficient use of transportation resources. This Encyclopedia is a comprehensive source of information about innovative management solutions to transportation problems. It provides detailed information on dozens of demand management strategies, plus general information on TDM planning and evaluation techniques. It is produced by the Victoria Transport Policy Institute to increase understanding and implementation of TDM. For comprehensive information, go online: <http://www.vtpi.org/tdm/>

³ As part of a survey on ecological housing areas in Copenhagen, Jan Scheurer (1998) was assessing the residents' individual lifestyles with regard to activities outside the home. He had to realize that there is little empirical connection between the physical, social and environmental setup of a neighbourhood and its residents' travel behaviour as one of the most significant fields of energy consumption. He saw the reason for this in insufficient policy incentives to the people to adapt to lifestyles embracing sustainable mobility (e.g. maximising the use of non-car modes and organising activities close to home) to complement the ecologically sustainable behaviour that many already practice in-house. Hence, the second phase of Scheurer's dissertation focussed on finding examples for sustainable neighbourhoods where this shortfall had been overcome, and specific strategies for mobility management had been incorporated (Scheurer 2001a)

⁴ Litman 2003

⁵ Giorgi 2004

⁶ Giorgi 2004

⁷ Litman 2003

⁸ Yago 1983: 178

research, most democratic processes lead to sustainable transportation choices rather than outcomes preferred by transportation bureaucracies.¹

After all, sustainable mobility (non-motorized traffic in particular) provides a variety of benefits. According to Newman «Cities with substantial commitment to sustainable transportation are doing better economically as well as environmentally.»² And as Litman elaborates, benefits include accessibility, cost savings (of individual and 'external' public costs), more efficient land use, community livability, improved fitness and public health, economic development, and support for equity objectives.³

Moreover, if a good public transport system is offered as an attractive alternative to car-traffic, the government can then, just by putting taxes on energy, foster innovation and energy-saving measures in the private economy.⁴ Thus, public transport is not only a sustainable mode of traffic, but it can further reinforce sustainable development. It's a win-win situation.

Measures to promote non-motorized and public transportation are manifold. They certainly include changes in infrastructure, changes in policies around pricing and incentives, as well as structural changes in processes of work, industry, as well as social processes. They can further include education and campaigns. But very essentially, measures include changes in urban planning.

Appx. 6 Proposal: Changing Urban Form

>> The topic has been introduced in chapter 2.3 (Reducing Automobility: Changing Urban Form). This appendix offers a more detailed explanation of what change in the urban form is required, why a new urban form is beneficial for the environment, and how a new urban form could encourage 'sustainable mobility', facilitate carfreeness, and moreover come with many social benefits.

As Safdie pointed out: «After a century of use, it is time to reconsider the automobile from first principles. And since we do not live or work 'en masse', clearly we cannot travel entirely 'en masse' by public transportation, no matter how much improved. Therefore, we must acknowledge the car's inefficiencies and study how they can be modified. As we recognize the development of vast new urban forms – and our limited ability to move around them with ease – we might also find that the current necessity to re-examine the city coincides with a time of extraordinary potential for innovation.»⁵

Old Urban Forms

The World has been urbanizing since Mesopotamian villages grew into the world's first cities (e.g. Sumerian city-state), around 4000 B.C.⁶ But for the longest time, cities remained small in size, mainly being important as markets and trade hubs.

Only with the Industrial Revolution starting about three centuries ago, as rural inhabitants poured into cities to seek jobs in industry, cities transformed and grew drastically⁷.

¹ Newman 2000b

² Newman 2000b

³ Litman 2003

⁴ The following strategy follows the principal of 'Ecological Economics': Offering good public transport system as an attractive alternative to car-traffic, results in a flat demand curve for the commodity car. A flat demand curve reflects a very elastic demand for energy or fuel related to car-traffic. This makes it much easier for the government to put taxes on energy, because not consumers have to bare them but the producers do (because if they would raise the price of the commodity car, the demand would instantly crash, because people have public transport as a good alternative). And thus, the producers try to save energy, try to be innovative etc. Improving public transport is therefore not only a preparation for the post-oil era, but it also perfectly fosters sustainable development. It is in fact a perfect synergy-effect! (Source: Stagl 2010, chapter 8/9)

⁵ Safdie 1997

⁶ O'Meara 1999

⁷ O'Meara 1999

Responding to pollution and overcrowding around 1900, **reformers** sketched idealized images of transportation and land use for the future (e.g. Ebenezer Howard with his 'garden cities')¹

While cities were developing, transportation technology developed accordingly. While walking distances constrained life in the earliest cities, by the end of the nineteenth century, electric trolley and **rail** tracks stretched growing industrial cities into radial spokes. However, early twentieth-century cities were initially still compact, with houses a short walk from the stations of public transport.²

Soon after, the automobile allowed the city to spread out in a more random fashion than ever before, and enabled massive suburbanisation.³

French architect Le Corbusier, a generation after Howard, was also offended by the industrial cities of his time: 'They are ineffectual, they use up our bodies, they thwart our souls. Le Corbusier envisioned gleaming skyscrapers surrounded by parks and wide motorways that would shape a 'radiant city' worthy of the new century.'⁴

The Modern urban form of the early 20th century was made of monofunctional areas of static architectonic, connected and intertwined by the 'ways' of mobility. «Hemmed in by this physical infrastructure of mobility, urban architecture has become a function of movement. [...]»⁵ The Modernist city was built for the car: «the matrix of automobility undermines other forms of mobility»⁶ [...] Freund argues that «Modernist urban landscapes were built to facilitate automobility and to discourage other forms of human movement»⁷

*«Stand in any city today and you will see some of the forms prescribed by Howard and Le Corbusier. But you will not see the outcome these visionaries intended: a more equitable society in harmony with nature.»*⁸ In contrary, car use is further escalating⁹, and suburban roads and houses keep on supplanting farmland and agricultural soil¹⁰.

«Automobiles and their road systems have completely redefined the old boundaries of cities. Today's regional city [...] encompasses the 'old' downtown (or in some cases, several old downtowns), as well as industrial, commercial, and residential sprawl. As seen from the air, urbanization extends for miles beyond the old centers, clustering haphazardly along the freeway system and thickening around its cloverleaf intersections. From this distance, in fact, the car and the freeway have become the essence of the regional city.»¹¹

There are many conflicting views as to the impact and meaning of the exploded city in our lives. But without exception, all agree on one issue: a fundamental conflict – a misfit – exists between the scale of cities and the transportation systems that serve them. Dispersed around the region, we can no longer conform our individual paths of travel to the fixed lines of mass transit. And the more highways and expressways we build, the sooner they become overburdened with traffic; no investment in highways seems great enough to satisfy our voracious necessity to travel by car.¹²

¹ O'Meara 1999

² O'Meara 1999

³ O'Meara 1999

⁴ O'Meara 1999

⁵ Sheller & Urry 2000: 740

⁶ Sheller & Urry 2000: 746

⁷ Freund 1993: 119. Cited in: Sheller & Urry 2000: 746

⁸ O'Meara 1999

⁹ Australian researchers Peter Newman and Jeff Kenworthy have documented escalating car use in the United States as part of a larger study of transportation between 1970 and 1990 in 47 major metropolitan areas in Asia, Australia, Europe, and North America. On average, each person in the U.S. cities sampled in 1990 drove 10,870 kilometers (6,750 miles) within the metropolitan area, a distance greater than a round trip across the North American continent. Growth in car use in the U.S. cities between 1980 in 1990 was 2,000 kilometers per person, nearly double the increase in the Canadian cities, which have the next-highest driving level. (O'Meara 1999)

¹⁰ Suburban roads and houses supplant more than 1 million hectares of farmland each year in the United States, much of it on prime agricultural soil. (O'Meara 1999)

¹¹ Safdie 1997

¹² Safdie 1997

Neither the scale of traditional streets, nor the size of individual building parcels, anticipated the growing volume of traffic or the need for off-street parking.¹

Changing Mobility >> Changing Urban Form

Yago once summarized the development of cities under the influence of transportation: «Urban expansion and the evolution of a national urban system were promoted through transportation advances (Pred 1974). As one mode of transportation reached its technological limits in extending urban space, another would take its place. Successive changes in motive power characterized new periods of urban form (e.g. the pedestrian city, the streetcar suburb, and the auto metropolis). As branch lines of horse-drawn trolleys, electrical trams, and steam railways extended, they created a star-shaped, axial pattern of urban growth. Later, automobiles developed the spaces between the axes of this star-shaped pattern, developing a circular urban structure. Central city congestion then encouraged residential and industrial decentralization (Park 1952: 171-77; McKenzie 1968:9-18; Hawley 1950:382-85; Hawley 1970:242--45). Changes in transportation mode extended urban boundaries, increasing the need for transportation along the urban periphery.»²

Technology and mobility patterns have always strongly influence the urban form, and the urban form in turn has fostered certain mobility patterns. In the same manner, today, the urban form needs to change again, as a result of a new form of mobility, and as a condition for this new form of mobility.

Mobility and the urban form determine one another. As Yago pointed out, «Urban characteristics of size, age, and density determine demand for transit services.»³, and O'Meara elaborated on this: «Changes in urban water, waste, food, and energy ultimately hinge on the transportation and land use decisions that shape cities. By building roads, rail lines, or bike paths, cities determine not only how people will move around, but also where the accessible and desirable buildings will be. And by mandating where new buildings can be built and what kind of uses – residential, retail, industrial – are allowed, land use and zoning laws influence how far people must travel to get to work, buy food, and go about their daily business, and how much land is paved over. Taken together, transportation and land use decisions influence where new water, waste, and energy services will be needed, and to what extent urban development will erase farmland. To create better places to live without threatening the planet, local authorities can augment sensible planning with financial incentives and partnerships with the private sector.»⁴

Existing Concepts: Transition Town, Smart Growth, New Urbanism...

Today there is a need to overcome this car-obsessed modernist urbanism and suburban sprawl, and to build cities in accordance to classical urban architecture, combined with a efficiently organised transport system based on the latest technology. Safdie pointed out how «Today the greatest task confronting us is to evolve, invent, and create a new urban environment: a place of meeting and interaction; a place that is adaptable and pluralistic; a place of man-made and natural beauty.»⁵

Rob Hopkins and his students developed the concept of 'Transition Town'. Their message is: If we want to prepare for a world after the oil peak, we must start adapting to the possible scenario: Fossil fuels might not be substituted, so we have to cut the need for them, today! Thus, the future of the world must be to produce more diversity, locally!⁶

One concept for achieving a new urban form is 'Smart Growth'. The recommendations include «implementing good urban design that integrates higher-density housing with existing urban landscapes through an inclusive planning process. Positive design features include adequate open

¹ Safdie 1997

² Yago 1983

³ Yago 1983: 174

⁴ O'Meara 1999

⁵ Safdie 1997

⁶ 'Transition Town' (Rob Hopkins): «from oil dependency to local resilience»! Energy and resilience plan objectives: Produce food locally, working locally, energy produced locally, renewable materials (for buildings, daily used products, clothes...) and produced locally, passive energy, natural light, less transportation, less waste etc,
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space, a pedestrian-friendly environment, traffic-calmed side streets and 'urban oases' where people can get away from the hustle and bustle of the city. In integrating the built and natural environments, greenways, re-established stream corridors and community gardens can all bring nature into the city and relieve the predominance of asphalt.»¹

Another concept of new urban form is 'New Urbanism'. New Urbanists are a band of architects and urban planners who have gained prominence in the United States in the 1990s. They are promoting walkable neighborhoods connected by rail², and they think that the whole community life can be shaped by the urban planning. This thinking is similar to Jan Gehl's elaborations on 'Life between building'³, however New Urbanist thinking it is more deterministic, and quite extreme! But obviously, building a door more accessible than a window, people will use the door to get in and out.

Again another concept is the so-called 'Compact City'. According to Elizabeth Burton, compact city means «a relatively high-density, mixed-use city, based on an efficient public transport system and dimensions that encourage walking and cycling.»⁴ It thus contrasts with the car-oriented 'urban sprawl'.

These examples of possible concepts towards a new urban form clearly have a few characteristics in common: The focus is on mix-use and density (or 'compactness')⁵, on a traffic-reduced pedestrian-friendly environment with good access for non-motorized transport and to public transport. The focus is on open public and green space, and on community life. And the focus is clearly on the 'urban', on a new urban form and lifestyle, instead of 'suburban' or rural.

Why do people live in the suburbs? Because it's cheaper, calmer, cleaner, greener... Because they can have their 'own house' and their own nice garden... Such arguments – as promoters of the new urban form would say – are just not valid. Safdie, for instance, counteracted: «What if this new environment integrated the best aspects of traditional cities – and the calm green neighborhoods so long ago promised by suburbanization? What if, in the course of a single day, we could choose to experience any one of a whole range of different types of cities and experiences? How would our lives change if we lived in dense urban centers, but had easy access to nature – or in the old downtown, but physically connected by easy and affordable transportation to the diversified economy, social opportunities, and natural amenities of an entire region?»⁶

Dense / Compact City of Short Distances

O'Meara and Litman pointed out, how low-dense and sprawling cities «require not only more fuel for transportation, but also more land, building materials, water lines, roads, and other infrastructure than compact ones do»⁷, and how this all «imposes various economic, social, and environmental costs»⁸ «Thus strategies to contain sprawl, to re-urbanise, to traffic calm, to build new light rail systems into car dependent suburbs with focussed sub centres, and to facilitate biking and walking, all appear to add to the economy of a city.»⁹

Re-urbanisation in compact centres has the strongest direct impact on mobility patterns and on the environment. «Neighborhood layout and transportation affect not just local livability but the resource demands that a city makes on many parts of the planet.»¹⁰ O'Meara points out that

¹ Alexander & Tomalty 2002: 404

² O'Meara 1999

³ See: Gehl 1971

⁴ Burton 2000: 1959

⁵ Urban density is defined and measured in a number of different ways. Indicators can roughly be categorized by the main categories gross density (e.g. person or household per hectare), population-weighted density, housing density, or the increase in density. (Burton 2000: 1970)

⁶ Safdie 1997

⁷ O'Meara 1999: 8

⁸ Litman 2003

⁹ Newman 2000b

¹⁰ O'Meara 1999: 44

radical densification of the urban form can lower energy demands from transportation by a factor of 10. ¹ Not to forget the «reduced consumption of water and energy, which is typically higher in low-density districts due to higher heating and cooling costs for single-family homes and excess water use on lawns, gardens and cars.» as being pointed out by a study on 'Smart Growth' ²

Compact cities, if implemented correctly, are cities of short distances. According to Newman, density reduces transport energy mainly because it shortens distances for all modes and it makes transit and bicycling and walking more viable as alternatives to the car. ³ Short distances encourage walking and cycling, which in turn can foster urban densification. Walkability improvements, according to Litman, can help reduce costs by reducing the amount of land required for transport facilities and encouraging more accessible, clustered land use patterns. These improvements provide economic, social, and environmental benefits. ⁴

Furthermore, compact cities strengthen the local economy, confirmed by Heller⁵ as well as Elizabeth Burton who stated that high densities support services (e.g. shopping). ⁶ This, in turn, fosters a mix use of the area, and further encourages walking and the active use of public space. Jan Gehl demanded: «One of the most important demands on a well-functioning pedestrian system is to organize pedestrian movement to follow the shortest distance between the natural destinations within an area.» ⁷ And by 'natural destination' he did not mean nature or green spaces, but services and facilities that are necessary daily destinations by definition (by 'nature', so to say), such as shopping, schools etc.

Re-use of Space

In addition to a new dense urban form, through a reduction of road and parking space, more space becomes available for other uses. This space is at best being used for a high variety of uses, services and facilities: the more mixed the better. Moreover, this space can be used for non-commercial public space, it can be made open for alternative uses, activities, or art forms, supporting citizen initiatives, which would in turn encourage the participation and identity-building of citizens. Finally, this space can be used for more green space, which is beneficial for the environment and for human health.

Diversity / Mix-use

Many authors have pointed out the various advantages that a human scale and walkable city can have for the community and the social well-being of people. One of the first was Jane Jacobs 1961 in 'The death and life of great american cities', another one is the Danish architect Jan Gehl in 1971 in his book 'Life between buildings. What they agree on is the fact, that their proposed dense and lively city is based on a high diversity of people, activities, facilities, and buildings.

But, as McLaren points out, «high residential densities can only contribute to reducing trip length and encouraging modal shift if the trip generators are appropriately located.»⁸ The new urban form must be mix-use and diverse. Carfree living MUST include facilities and job-opportunities on a small scale! Otherwise the commuting-problem is just externalised but not solved. In order to really be sustainable, trips outside the area must be easily possible, but not necessary for daily life!

¹ O'Meara 1999

² Alexander y Tomalty 2002

³ Furthermore, density makes many journeys redundant as when transit is used many journeys are combined (e.g. going to shops on the way to or from the train). Data from a 1996 study by Dunphy and Fisher show a 21% decrease in daily driving between central Manhattan and outer suburbs in New York but transport energy is 500% less in Manhattan on a per capita basis. (Newman 2000a)

⁴ Litman 2003

⁵ Heller (n.d.)

⁶ Burton 2000: 1982

⁷ Gehl 1971

⁸ McLaren 1992: 217. Cited in Burton 2000: 1974

Moreover, the mixed land use that suggests a fairly well job-housing balance is only then sustainable, when housing and employment opportunities are used by the same people. If not so, it is producing as much commuting as would an imbalance.

Appx. 7 Classification of Potential Benefits

>> The issue of classifying benefits has been indicated in chapter 3.1 (Potential Benefits of Carfreeness: Introduction: Classification). This appendix offers a more detailed explanation of what potential benefits of carfreeness depend on, and what classifications could help to structure and distinguish them.

Appropriate changes in behaviour, mobility, and in urban form have at least two conditions: On the one hand it is a matter of time, because cars will not disappear over night. And consequently, it is – at least preliminary– a matter of the degree of carfreeness, and of the scale and extent of carfree areas. On the other hand, the direction of a shift is strongly dependent on a society's intention (or will).

Up until now, carfreeness only exists on a very small scale, and even there often not to a complete degree (not total exclusion of cars). The casestudies in the empirical part of this paper reflect this reality. It is therefore very unclear whether carfreeness on a large scale, or even world-wide, would be possible and beneficial, and how this world would look like. It is still very much a matter of believe. But in general, many researchers assume large-scale cities to have efficiency advantages.

Benefits of carfreeness can be distinguished by the scale or degree of carfreeness: Some benefits result already from a slight but ubiquitous reduction of car-traffic, some benefits can be expected from carfreeness in a small area, and other benefits only show if cars are completely eliminated from a large area such as a city or a region. Moreover, benefits can be distinguished according to a time-line: There are benefits that become apparent as soon as measures towards car-reduction/carfreeness are taken, other benefits however need some time to develop and become strong. This is especially the case for 'indirect' benefits (see below).

The time-factor has yet another dimension, as it raises the question: What should actually happen first: Car-reduction or a change in urban form? Car-reduction would clearly result in a new form of mobility, and subsequently, after some time for adaption, in a new urban form. But first improving public transport, walkability, and densifying the urban form would facilitate conscious car-reduction. Or at best car-traffic would decrease consequently by itself.

Benefits of carfreeness can be distinguished according to their source: Some benefits result directly from a reduction of car-traffic, such as improved traffic-safety. Most benefits however are caused indirectly by carfreeness. These benefits are resulting from new forms of mobility, a new urban form, or alternative land uses (such as more public or green space), which can all be results of carfreeness. And then finally there can be additional benefits, which are not connected with carfreeness, but often appear along with it. Indirect and additional benefits are highly dependent on the society's intention/will.

If carfreeness is not only to happen as an undesirable result of resource scarcity or natural disasters, then there needs to be a clear intention and will and a conscious decision to plan for a world without automobility. This must involve developing and encouraging a new form of mobility, and subsequently a new urban form, which goes hand in hand and is both reinforcing each other.

Finally it seems necessary to emphasize the potential of additional benefits. Carfree living can provide additional environmental-friendly or social features. The potential is particularly high, because not only does carfreeness save land and money (as shown in chapter 2.2 Automobility: Resource-Use and Impacts and chapter 2.3 Reducing Automobility), but thanks to the special awareness and motivation of the people responsible, this land and money is actually being invested in environmental-friendly or social features. Thus, even though 'additional' benefits are not really connected with carfreeness, they often appear along with it, as much as a change of

awareness and motivation in society might go hand in hand with carfreeness and might be strengthened by it.

Such additional features are consciously planned and implemented by project-makers who care for sustainable development, and it is also demanded by the residents who often form an «ecological community [which] educates and reinforces a lifestyle of ecological sensitivity»¹ Additional features are also quite often initiated by a community, in so-called bottom-up or grassroot-movements. At best, additional benefits can even be the goal (or 'intention') of the majority of a society, expressed through political decisions.

This clear intention (or 'will') of certain people and groups, or even the majority of a society, is part of a broader change in awareness, behaviour and lifestyle: A broad societal change which may include new principles and morals, new forms of mobility, new forms of consumption, new educational goals etc. And preferably this societal change is backed up by a changing economic paradigm, which is not based on the necessity to grow.

Additional benefits usually need some time to be implemented, but they do not depend on the scale or degree of carfreeness. Implementation can start as soon as the will becomes strong enough, a decision is taken, and land and money is available. 'Additional' benefits even have the potential to be implemented on very small scale. Savings of land and money can be re-directed to environmental and social features by individual households or single non-car-drivers. However, the larger the carfree area and community, the more diverse and communal can subsequent 'additional' benefits be. And often does the size also increase the efficiency of systems.

These proposed differentiations of potential benefits seems necessary for a proper interpretation of the research results. In order to give suggestions to policy-makers, to project-makers and developers, or simply in order to give convincing arguments to potential residents of carfree living environments, it is important to be aware of the different stages and levels of benefits. It can help to answer the following questions:

- Which benefits can be expected if cars are really eliminated from an area, and which benefits can already be expected if car-traffic is only being reduced (as more people live without car, and lead a carfree lifestyle)?
- Which benefits can be expected if carfreeness is implemented as a small project (for instance one housing estate), compared to an implementation on a larger scale, for a whole neighbourhood, city, or even worldwide?
- Which benefits can I expect, when I personally decide to live a carfree lifestyle, without moving to a carfree area or adapting my environment?
- Which benefits can be expected as soon as car-reduction is implemented, and which benefits become apparent only after a while, a few years, or maybe not earlier than in the next generations?
- Which benefits can be expected from a car-reduction/carfreeness automatically (without additional effort), and what additional benefits can develop, if there is a conscious intention/will to foster them?
- Which benefits can be expected if the urban form is consciously being adapted to car-reduction or carfreeness, or if new carfree areas are even built up from scratch, applying an accordant design?

The potential benefits of carfreeness that are mentioned in the research paper chapter 3 are be roughly structured or classified according to these proposed differentiations: 'by scale / degree of carfreeness', 'by time-factor', or 'according to the source of the benefit'.

¹ Kushner 2004
Appx 7—22

Appx. 8 Social Equity

>> The issue of social equity has already been indicated in the chapter 3.4 (Potential Benefits of Carfreeness: Social Equity) of the research paper. This appendix repeats an essay of the author about social equity specifically concerning automobility and carfreeness. A short introduction on social equity in general can be found in the end of appendix 1 (Essay on Sustainable Development).

'Social sustainability' is a combination of a high quality of life (or happiness or well-being) with social equity, thus a high quality of life for everybody, and not at the cost of others (neither other groups of people, nor other countries or continents, nor future generations).

Automobility has its particular issues with social equity. As much as it is seen as a democratizing device, it is also hindering democratic process, excluding certain people from access to the services of democracy and from political participation. This chapter will divide the issue roughly in three main areas of inequality: The social issue, the spatial issue, and the financial issue.

First of all, not everybody has the ability, the possibility or the financial means to drive or own a car. This is addressed by the concept of 'motility',¹ which considers the ability and capacity to be mobile and to access and use and afford various forms of transport, as being an essential issue in the discussion around social equity in mobility.

From automobility excluded groups are children and youngsters under the legal age to drive, as well as elderly or physically disabled people. Obviously excluded from automobility are all those people, who can simply not afford to own or to drive a car. Even ethnic minorities that are affluent enough to afford a car, can experience inequity concerning automobility: As Sheller and Urry point out, there is a «disproportionate stopping of black male drivers by police.»²

Another potentially excluded group are women. «Women have a very different relation to cars than do men as a group.» In the interwar period of massive motorization and suburbanization, the car was a tool (and symbol) «to enable the 'husband' to travel quite long distances to get to work.[...] In most countries women became eligible to be licensed drivers later than did men, and in some countries they still face severe restrictions on their ability to drive.»³ And it is again especially the poor and the immigrant women who are the most disadvantaged, as Sheller and Urry point out: «Women working in domestic service jobs (often from racialized minority groups or recent immigrants) faced (and still face) a gruelling journey on unreliable public transport between the city and the suburbs. Single mothers without cars are among those groups most dependent on public transport and most likely to find their particular 'taskscape' fraught with gaps and inconveniences.»⁴

A second injustice is the fact, that automobility changes our landscape and city scape, and has strong negative impacts on the urban environment, on accessibility and usability of the city by foot, by bicycle, and of the public transport system. This makes the disadvantage of non-car-drivers more severe, considering that «automobility disables those who are not car-drivers (children, the sight impaired, those without cars) by making their everyday habitats dangerously non-navigable.»⁵

«In particular, the car enables seamless journeys from home-away-home. [...] And this is what the contemporary traveller has come to expect. The seamlessness of the car journey makes other modes of travel inflexible and fragmented. So-called public transport rarely provides that kind of seamlessness [...]. There are many gaps between the various mechanized means of public transport: walking from one's house to the bus stop, waiting at the bus stop, walking through the bus station to the train station, waiting on the station platform, getting off the train and waiting for a taxi, walking through a strange street to the office and so on, until one returns

¹ The concept of 'Motility' is discussed by Kaufmann et al. 2004

² Sheller & Urry 2000: 749

³ Sheller & Urry 2000: 748

⁴ Sheller & Urry 2000: 748

⁵ Kunstler, 1994. Cited in: Sheller & Urry 2000: 744

home. These 'structural holes' in semi-public space are sources of inconvenience, danger and uncertainty. And this is especially true for women, older people, those who may be subject to racist attacks, the disabled and so on (see SceneSusTech, 1998).»¹

The convenience of automobility does not only stand in contrast with alternative modes of transport, but the rise of the automobile even reinforces this contrast. On the one hand, because human beings tend to compare themselves with what they do not have, and by not having a car as a device and 'status symbol' they feel disadvantaged. On the other hand, more importantly, because automobility takes away space and financial means and demand for alternative forms of transport. Which makes the alternative not only worse in comparison, but also in absolute terms.

This goes so far that in some areas the car is so dominant, that there is no pedestrian space or public transport, and people do not even have the choice anymore. They can either afford a car, or else they are immobile.

«Advances in transportation technology make more information, goods, services, educational and employment opportunities, land, recreation, and so forth available to those with access to transportation.»² The unequal distribution of that access on the basis of race, sex, income, and class suggest a distributional impacts of physical mobility upon social mobility.³ This results in a fact pointed out by Savage, that «Spatial mobility is highly socially specific with higher social groups being more mobile.»⁴

This is even more unfair when considering Savage's further assumption that «Those individuals who are best able to move geographically are also more likely to achieve intra-generational mobility.»⁵ This has for instance to do with the fact, that the post-modern job-market requires a high level of flexibility and mobility. People who can adapt to these new requirements have better chances on the job-market. 'Motility' (the ability to be mobile) becomes a form of capital.⁶ On the one hand this is a change towards a more just job market, as it provides more fair access for everyone, independent of his cultural or financial background. It does not exclude anyone for his family name, his father's profession, his ethnic background etc... But on the other hand it excludes people according to their ability to be mobile, and mobility is not equally accessible.

Furthermore, Savage's assumption obviously does not necessarily hold true in the case with migrational movement. As their status is often only provisional, they usually cannot travel without difficulties. Moreover migrants tend to be rather immobile and stigmatize in their new environment, and their life-world is limited to one neighbourhood.

A third inequality is the fact that the whole population – including non-car-users – pay the costs for automobility. Automobility is a private good, which is publicly cross-subsidized. The various financial costs of automobility include direct financial costs for the roads and other infrastructure for car traffic, but it also includes the indirect costs that come with the automobility's impacts on the environment, extending even to health costs.

«Inequities result not only from inaccessibilities of urban transportation, from the structure of job and residential locations in the metropolitan region, and from the distance and duration of work-related travel but also from the pricing and subsidy policies of local, state, and federal transportation agencies.»⁷ Subsidies for highway development, free parking and alike are

¹ Sheller & Urry 2000: 745

² Yago 1983: 183

³ Yago 1983: 183

⁴ Savage 1989: 555

⁵ (Savage 1989: 554) >> By intra-generational mobility he means 'social mobility', which is about changing oneself's social position (graduating, earning better salary etc), independent from his starting point which was defined by his parents position. Savage's assumption is, that the more one moves geographically, the better are his opportunities to move socially upwards.

⁶ «We propose to consider motility as a form of capital. In other words, motility forms theoretical and empirical links with, and can be exchanged for, other types of capital.» (Kaufmann et al. 2004: 749-750)

⁷ Yago 1983: 184

encouraging car-ownership (and fostering suburbanisation), while fare practices in public transit can enhance inequities, as fares and pricing foster or decrease the use of public transport, especially among minorities, women, and those without cars.¹

And even though carfree households pollute their environment with less emissions, and put a smaller burden on the public authorities, they cannot benefit of all the advantages of their abdication. As most of the carfree households do not live in carfree housing projects, they still suffer from street noise and air pollution, they live in streets dominated by parked cars, instead of enjoying green space for recreation and for the children to play in.² In the confined realm of a housing estate the inequality lies in the fact, that non-car-owners usually pay for parking provision, while this money and space could actually be used for other services which are more to their benefit. Carfree housing is thus specifically designed to «roll back these disincentives to abstention from car ownership.»³ This is done by ending the cross-subsidy enabling car owners to park. This contributes to more social justice along the 'user pays' principle and to better housing affordability within the carfree market.⁴

Some might argue that carfree living is a luxury, as do for instance Sheller and Urry: «Living without a car has become a significant lifestyle choice for both environmentalists and for a small cosmopolitan elite able to live in expensively gentrified city-centres. 'Global cities' (Sassen, 1991), increasingly polarized between ghettos of wealth and of poverty, may no longer have a place for the car-bound middle classes. The carless urban poor and growing population of new immigrants (who may actually want cars) are often cut off from cheaper out-of-town shopping, from many public facilities accessible only by car, and from a host of job opportunities in urban fringes and 'edge-cities'. [...]»⁵

Car reduction's potential benefits for 'Social Equity'

On the global (and local) level, reduced car-traffic reduces pollution and energy use, which both have an unjust impact on the world population.

On the local (and mainly urban) level, reduced car traffic on the one hand allows to re-focus and invest in an improved and more accessible public transport system, which has the potential to be much more socially equal than automobility. On the other hand, reduced car traffic can improve the quality of the urban environment, can make it a more liveable place to all, with better opportunities for walking and biking, which are the most socially equal (and the healthiest and safest) modes of transport.

Sheller and Urry clearly see this two-fold urban potential: «Country life is especially car-dependent. (...) An alternative lifestyle with voluntary limitations on car use is most feasible in medium-sized regional towns where a mix of cycling, walking and public transport can develop.»⁶

Elizabeth Burton, in her research on social equity in the 'compact city' considers ten main indicators for social equity: Access to superstores, access to green space, job accessibility, public transport use, the extend of walking and cycling, the amount of domestic living space, indicators of health, indicators of crime, the level of social segregation, and housing affordability.⁷

Highly contributing to social equity is a dense urban form, in contrast to suburbanisation and sprawl. The term 'Accessibility' refers to the ability to reach desired goods, services, and activities. As walking, according to Litman, is the most accessible and the most inexpensive mode of transport, walkability is essential for social equity. Walking provides basic mobility, that is, many people rely on walking to access activities with high social value, such as for medical services, essential errands, education, and employment. It is particularly important for people who are transportation disadvantaged (people with disabilities, elders, children, and people with

¹ See Yago 1983: 184

² Haefeli & Bieri 2008

³ Scheurer 2001a

⁴ Scheurer 2001a

⁵ Sheller & Urry 2000: 749

⁶ Sheller & Urry 2000: 749

⁷ Burton 2000: Appendix 1, Table 1

low incomes). Consequently, Walkability (= good walking conditions) can help achieve several equity objectives, including a fair distribution of public resources for nondrivers, financial savings and improved opportunity for lower-income people, and increased and more equal accessibility to people who are transportation disadvantaged. And walking decreases to social exclusion, that is, the physical, economic, and social isolation of vulnerable populations.¹ Similar arguments can be used in favour for public transportation, being equally important than non-motorized traffic. Newman emphasizes that sustainable transportation modes have a stronger element of social justice.²

An issue that lies somehow between the global and the local level, but seems crucial when talking about carfree living projects, is the autonomy of the project. After naming all the advantages that residents can benefit from within the project area, it is, in the name of global equity, just as important to take care of the impact the project has on its surrounding.

Conclusion

As a conclusion I want to emphasize again the two contrasting inequalities: In a world dominated by automobility, it often seems a necessity to drive a car, almost a human right, as carfree living is immensely restricting one's mobility. On the other hand, in a world dominated by automobility, carfree living can be seen as a luxury, which is associated with a high quality of life and individuality, but available only to those who can afford it, who can either pay for the pricy compensative modes of mobility, or who can afford not to care about mobility at all (it is always the highest luxury to have an option, but not to chose it.³).

However, my assumption is, that these contrasting and contradicting inequalities can be dissolved in a carfree environment, provided that living there is both attractive as well as accessible to various groups of the population. It therefore must be affordable or partly subsidized. This allows a mixed population in an area, where the advantages of carfree living dominate, while the disadvantages of carfree living are minimized, and alternatives to automobility are accessible to all. As carfree living projects do not have to invest into car-related infrastructure, they save up money, which can be invested into more socially equal services and infrastructure. And this is often really being done, due to the fact, as mentioned before, that residents of carfree living projects are usually quite aware of and sensitive for various issues of sustainability, including social equity.

In such an environment high living quality is not a luxury anymore, but available to all, and while certain inequalities are reduced, solidarity and tolerance can be strengthened.

¹ Litman 2003

² Newman 2000b

³ In this context, car-free living can be seen as the highest form of motility. «Motility encompasses interdependent elements relating to access to different forms and degrees of mobility, competence to recognize and make use of access, and appropriation of a particular choice, including the option of non-action» (Kaufmann et al. 2004: 750)

Appendix of Part III (Casestudies)

Appx. 9 QV: Sources / Information

The main sources for the casestudy 'Quartier Vauban' are the following:

Evaluations

Evaluation of the Mobility Concept, by Nobis

Claudia Nobis carried out an evaluation of the mobility concept in Quartier Vauban, the resident's mobility patterns and the impact of the mobility concept on the residents' satisfaction and well-being. The evaluation was part of the project 'Umsetzungsbegleitung des Verkehrskonzeptes des Stadtteils Freiburg-Vauban', supported by the DBU (Duetsche Bundesstiftung Umwelt). The survey was in May 2002, and the analysis of the results included 438 personal questionnaires and 247 household-questionnaires. The questionnaires contained data on a total of 774 residents. In comparison with the total population of the district, this counts to a 32% Rücklaufquote. This is surprisingly high, considering the fact that the questionnaires were about 10 pages long. The results of the evaluation were published by Nobis herself as a final report, or as papers in journals. (Main reference: Nobis 2003a & 2003b)

Evaluation 'Sozialraumanalyse Vauban' 2009 (= 'Social space analysis')

Facing the problematics of a demographic change in Quartier Vauban, inspired by the results of a citizens workshop, the 'Quartiersarbeit' decided to conduct an evaluation amongst QV residents on the issue of 'Social space'. The leading question behind it was about a suitable district planning strategy, which builds on its existing structures but adapts to the inter-generational requirements of its residents. The evaluation was conducted through 1250 questionnaires, distributed to QV households in May 2009. Out of the returning questionnaires, 304 were analyzed and included in the evaluation. This is a return rate of 24%. A short report on the results was written by Schings in 2009. (Reference: Schings 2009. See Appendix 20)

Research-own survey

As part of this Master Thesis, a survey has been carried out in the two casestudies 'Quartier Vauban' and 'Autofreie Mustersiedlung Fluridsdorf'. The aim was to find answers to the research papers leading questions: Namely whether the project is perceived as 'socially beneficial', whether this is more or less or equally important than the mobility concept or other ecological features, and which social benefits are perceived by the residents and how relevant these are. The number of completed interviews was 54 in QV (and 20 in AMF). The questions, results, and an analysis of the results can be found in appendix 22.

Casestudies

Jan Scheurer, Australian Researcher, has written his PhD Thesis in 2001 for the ISTP, Murdoch University, in Perth. The title of the thesis is 'Urban Ecology, innovations in Housing Policy and the Future of Cities: Towards Sustainability in Neighbourhood Communities'. A main part of the thesis are six casestudies of car-reduced living environments or housing estates, 'Quartier Vauban' being one of them. (Reference. Scheurer 2001a)

Steve Melia, English Researcher, has made a casestudy on Quartier Vauban with the title: 'On the Road to Sustainability – Transport and Carfree Living in Freiburg'. 2006, faculty of the built environment, UWE Bristol. (Reference: Melia 2006)

Reports / Information / Articles

The Forum Vauban, and later on the Stadtteilverein Vauban, have published and revised a guide-book for 'Quartier Vauban'. It is a nice and extensive brochure of about 50 pages, containing lots of information and pictures, a map, data etc... The first version came out 1999, and an adapted version has been published in English in 2009. (References: Forum Vauban e.V. 1999; and Stadtteilverein Vauban e.V. 2009)

Moreover, co-initiators and important figures in the project process, such as Sperling, Nobis, Linck or Veith, have published many articles and hold presentations about the process of 'Quartier Vauban'.

Sperling, in collaboration with many co-workers, co-initiators and experts, has edited and published a guide-book for planners called 'Nachhaltige Stadtentwicklung beginnt im Quartier. Ein Praxis- und Ideenhandbuch für Stadtplaner, Baugemeinschaften, Bürgerinitiativen am Beispiel des sozial-ökologischen Modellstadtteils Freiburg-Vauban.'. The book describes the project process in detail on about 400 pages, and gives ideas for similar projects. (Reference: Sperling Ed. 1999)

Furthermore, aside from tons of articles and online information in local press, there have been a couple of articles in reknown international newspaper.

Interesting Websites

www.freiburg.de

<http://www.freiburg.de/servlet/PB/menu/1167123/index.html>

www.vauban.de

>> English introduction / info : <http://www.vauban.de/info/abstract.html>

www.forum-vauban.de

www.stadtteilverein-vauban.de

<http://www.autofrei-verein.de/>

<http://www.quartiersarbeit-vauban.de/>

>> ideas workshop: <http://www.eingang-freiburg-vauban.de/>

>> history: <http://www.vauban.de/info/geschichte.html>

Appx. 10 AMF: Sources / Information

The main sources for the casestudy 'Quartier Vauban' are the following:

Wohnbund Evaluation

The Austrian 'Wohnbund' carried out a social-science-evaluation in form of a survey amongst AMF-residents in 2000, on behalf of the city of Vienna. Back then, 80% of the apartments were rented out, and 247 adult residents (over 18) were living in AMF. 126 adult residents have filled out the questionnaire, which counts to a 60% return rate for the survey. The research question of the evaluation were concerned with demographic structure of the populace, motives of moving in, expectations and satisfaction of the tenants. The results were published as part of the information brochure by Domizil/GEWOG in 2000. (Reference: Domizil/GEWOG 2000: pages 31-33)

SRZ Evaluation

The SRZ (Stadt+Regionalforschung) made a study and evaluation amongst AMF-residents in 2008, on behalf of the city of Vienna. The mainly qualitative methods of the survey were indepth-interviews, discussions in small groups, and a written survey. There was an estimated 390 residents over the age of 15 living in AMF, and 133 filled out the questionnaire, which counts to a 34% Rücklauf for the survey. This study asked again about demography and characteristics of households, about initial motives to move in and expectations of the residents. But the main aim was to find out, whether these expectations had been fulfilled, and whether residents are satisfied with the living quality in general, and in particular with the broad range of ecological features, communal facilities, and possibilities of participation. The results of the study were published as a final report in 2008. (Reference: SRZ 2008)

Research-own survey

As part of this Master Thesis, a survey has been carried out in the two casestudies 'Quartier Vauban' and 'Autofreie Mustersiedlung Flordisdorf'. The aim was to find answers to the research papers leading questions: Namely whether the project is perceived as 'socially beneficial', whether this is more or less or equally important than the mobility concept or other ecological features, and which social benefits are perceived by the residents and how relevant these are.

The number of completed interviews was 20 in AMF (and 54 in QV). The questions, results, and an analysis of the results can be found in appendix 22.

Casestudies

Jan Scheurer, Australian Researcher, has written his PhD Thesis in 2001 for the ISTP, Murdoch University, in Perth. The title of the thesis is 'Urban Ecology, innovations in Housing Policy and the Future of Cities: Towards Sustainability in Neighbourhood Communities'. A main part of the thesis are six casestudies of car-reduced living environments or housing estates, 'Autofreie Mustersiedlung Floridsdorf' being one of them. (Reference. Scheurer 2001a)

Reports / Information / Articles

The project developers Domizil and GEWOG have published an extensive project information magazine, containing information, interviews with initiators, planners, residents, and the results of the Wohnbund evaluation. (Reference: domizil/GEWOG 2000)

Furthermore, Christoph Chorherr, the main initiator of the project, back then member of the city council and of the Green party, has published many articles, reports and presentations on the project 'Autofreie Mustersiedlung Floridsdorf'.

Appx. 11 Casestudies in Context

Quartier Vauban – Freiburg im Breisgau – Germany

	Quartier Vauban	Freiburg	Germany
Area	410 000 m ² (41 ha) ¹⁷³	153 qkm (15.306 ha) ¹⁷⁴	357 000 qkm ¹⁷⁵
Population	5340 residents ¹⁷⁶	214 000 residents ¹⁷⁷	Approx 82 Mio ¹⁷⁸
Car-ownership rate	160 cars per 1000 residents ¹⁷⁹	339 car per 1000 residents ¹⁸⁰	509 cars per 1000 residents ¹⁸¹

Table: The Project QV and its context, numbers in comparison.

Autofreie Mustersiedlung Floridsdorf – Vienna – Austria

	AMF	Vienna	Austria
Area	11 382 m ² (ca 1.8 ha) ¹⁸²	414 qkm (41.487 ha) ¹⁸³	83 871 qkm ¹⁸⁴
Population	Around 600 residents ¹⁸⁵ (no data found)	1 719 730 residents ¹⁸⁶	Approx 8,4 Mio ¹⁸⁷
Car-ownership rate	36 cars per 1000 residents ¹⁸⁸	390 cars per 1000 residents ¹⁸⁹	522 cars per 1000 residents ¹⁹⁰

¹⁷³ Freiburg website 2011

¹⁷⁴ Arbeitsgemeinschaft Autofreies Stadtviertel 2001

¹⁷⁵ DESTATIS

¹⁷⁶ FRITZ 31.12.2010

¹⁷⁷ FRITZ 21.12.2010

¹⁷⁸ DESTATIS 31.12.09

¹⁷⁹ FRITZ 1.1.2010

¹⁸⁰ FRITZ 1.1.2010

¹⁸¹ The motorisation rate in Germany in 2009 was 509 cars per 1000 inhabitants. This is higher than the European (EU) rate of 473, but Austria for instance has an even higher rate of 522. This difference was already prevalent back in 1991 (EU 334, D 393, A 402) (motorization rate always in cars per 1000 inhabitants.).

However, the car share of total inland passenger transport in Germany (in 2008) was 85.1%, which is in line with the EU average (83.3%), and higher than Austria (78.6%). (Car passenger-km in % of total inland passenger-km.).

Another interesting number is the share of renewable energy in total fuel consumption of transport, which is very high in Germany (6.5%). This data is only available from 2006 to 2008. Even though in Germany the share is very high, it slightly decreased during these 2 years (from 6.7% to 6.5%). This is in contrast to the average share of the European Union, which is low, but increasing (from 2% to 3.5%), and to the impressive increase in Austria (from 2.2% to 7.1%).

(Source for statistical data: Eurostat)

¹⁸² Domizil/GEWOG 2000: 5

¹⁸³ Stadt Wien MA05

¹⁸⁴ Statistik Austria

¹⁸⁵ own estimation

¹⁸⁶ Stadt Wien MA05 1.4.11

¹⁸⁷ Statistik Austria 1.1.2011

¹⁸⁸ Scheurer 2001a

¹⁸⁹ Stadt Wien MA05 1.1.10

¹⁹⁰ The motorisation rate in Austria in 2009 was 522 cars per 1000 inhabitants. This is high in comparison with the European (EU) rate of 473, and the german rate of 509. This difference is nothing new, already in 1991 (EU 334, D 393, A 402) the Austrian motorization rate was the highest. (motorization rate always in cars per 1000 inhabitants.).

However, the car share of total inland passenger transport in Austria (in 2008) was 78.6%, which is lower than in for the EU (83.3%) or Germany (85.1%). (Car passenger-km in % of total inland passenger-km.).

Another interesting number ist the share of renewable energy in total fuel consumption of transport, which in Austria increased from 2.2% in 2006 to 7.1% in 2008, and is now the highest within the European Union. During the same two years, the European average did increase much less and on a lower level in the European Union (from 2% to 3.5%), and it stagnated in Germany on a relatively high level (from 6.7% to 6.5%).

Appx. 12 Freiburg im Breisgau, Germany

(Main sources for the chapter about Freiburg im Breisgau: de Pommereau 2006; Gradinger n.d.; Kucharz 2007; Melia 2006; Purvis 2008; Scheurer 2001a: 328-329)

Freiburg in Breisgau is a rather small and compact city (15 306 hectare, 214 000 residents.¹⁹¹) in the 'state' (= 'Bundesland') of Baden-Württemberg, in the South-West of Germany, and close to the border of France and Switzerland. Freiburg is also called 'Germany's Tuscany', as it is known for having Germany's sunniest climate. Freiburg has a reputation for its medieval town, for the vineyards surrounding the city, and for its spectacular setting between the mountain ranges of the Black Forest and the Kaiserstuhl. Furthermore Freiburg is a historic college town, with an intrinsic student population (15% of the whole population), and up until today the main employer is the university¹⁹². Hence it became a «significant destination for both tourism and lifestyle migration.»¹⁹³

Freiburg used to be a conservative place with a growing traffic problem. But in the early 1970s, the city became the cradle of Germany's powerful antinuclear and pro-environment movements after local activists killed plans for a nuclear power station nearby. This battle was a turning point in Freiburg's history, and brought energy-policy issues closer to the people and increased community involvement in local politics. As a result, Freiburg's situation contained most of the vital ingredients for a creative and innovative milieu according to Peter Hall (1995) and Charles Landry (2000)¹⁹⁴. But with nuclear power off the agenda, Freiburg found itself with a problem: a finite amount of electricity, but a growing population.

This energy-problem, in combination with a specific socio-cultural milieu and the presence of the university, sparked numerous local environmental initiatives and resulted in clusters of research and development facilities¹⁹⁵. It resulted in «the emergence of professional and entrepreneurial networks to capitalise on the economic potential of ecological urban innovation.»¹⁹⁶ Hence environmental research also became a backbone of the region's economy.¹⁹⁷ Vauban's founders explain that much of the eco-friendly technology that has gone into the complex was conceived and developed around Freiburg as an alternative to nuclear power.¹⁹⁸

(Source for statistical data: Eurostat)

¹⁹¹ FRITZ 1.1.2010

¹⁹² Purvis 2008

¹⁹³ Scheurer 2001a: 328

¹⁹⁴ The ingredients for a creative and innovative milieu include: * Creativity is manifest in all dimensions relevant to urban change - culturally, intellectually, technologically and institutionally, based on local knowledge, skills and resources. This is present in the richness and diversity of initiatives from experts, community groups, authorities and the private sector to pioneer new solutions to sustainability challenges in Freiburg. * Innovation constitutes an integrative approach that draws on alternative, forward-looking visions of urban life communicated in an open discourse involving a multitude of stakeholders and shaping the identity of a place, which becomes apparent in Freiburg being dubbed as 'eco-capital'. * An openness to new ideas exists, which is epitomised in Freiburg's cosmopolitan character as part of a cross-border region with stimulating international exchange as well as its willingness to accommodate, and benefit from, a growing population. * A high quality of life is offered (by Freiburg's natural and cultural heritage) and actively sought to consolidate and further improve as a major objective of urban innovative processes. This is assisted by an adequate level of wealth in the region, underwriting the cost of experimentation and learning. * Perceived threats or crises, such as the risks of nuclear power or the impact of air pollution on the fragile highland ecology of the Black Forest, sensitise the population for alternative solutions such as renewable energy technologies and less car-dependent urban and regional transport. (Scheurer 2001a: 329)

¹⁹⁵ Most notable in this context are the Fraunhofer-Institut ISE (Germany's largest solar-research center), the International Solar Energy Society ISES (an international center for renewable energy), ICLEI as an umbrella organisation for sustainability policy in local communities, and the Öko-Institut, a non-profit environmental research institution. (Scheurer 2001a: 328)

¹⁹⁶ Scheurer 2001a: 328

¹⁹⁷ Example: Services such as installing solar panels and purifying wastewater account for 3 percent of jobs in the region, according to city figures. (de Pommereau 2006)

¹⁹⁸ Paterson 2009

Another result of the anti-nuclear movement was a revolutionized transport strategy¹: From 1971 onwards Freiburg made its medieval center more pedestrian-friendly and laid down a lattice of bike paths. Moreover, defying a national trend, a decision was taken to retain and extend the tram network ², and in 1984 a flat rate for all modes of regional public transport was introduced. This might have been the most important factor for the doubling of public transport journeys over the following decade. Thanks to the efficient network for alternative mobility the medieval centre today is kept carfree, but there is still parking for those who need to travel downtown by car ³.

Freiburg's transformation into a 'green' city was also helped by the (uncomfortable) fact that it was flattened by Allied bombers in the Second World War and rebuilt on enlightened, energy-saving principles. ⁴ Today Freiburg is the Germany's 'ecological capital', where energy-saving buildings are the norm, and the government is dominated by the Green Party. ⁵ Freiburg's Green mayor Dieter Salomon emphasizes that «[...] the population in Freiburg is a lot more ecologically orientated and a lot more willing to dare to try. Yes, our flagship district, our ecologic blueprint model district is the Vauban [...]»⁶

>> For a comparison of QV with Freiburg, Germany, and with casestudy AMF, see appendix 11

Quartier Vauban

Freiburg is one of the few German cities that have been growing constantly up until today. In the beginning of the 1990s Freiburg was thus experiencing a severe housing shortage, and was in urgent need for new residential development. When a former French military base ('Quartier Vauban') became available in 1992, the city of Freiburg bought the area from the German Federal Authorities ⁷. Being the owner of the land, the city was responsible for its planning and development. This gave the city the chance to not only foster the development of a usual residential neighborhood, but to determine the property for redevelopment as a model sustainable urban district. This was decided by the Municipal Council in December 1993. In the beginning, the main but still rather vague objective of the project was «to implement a city district in a co-operative, participatory way which meets ecological, social, economical and cultural requirements».⁸

¹ The city's transport strategy rests on five 'pillars': Extension of the public transport network; Promotion of cycling; Traffic restraint; Channelling of motor traffic; Parking space management. (Melia 2006)

² The old streets were widened to take trams, and the tramway became the backbone to the public transport network. 70% of local public transport trips are made by tram; 30% by bus. (Purvis 2008)

³ Parking is not cheap, but for those who do drive there are about 300 solar-powered parking meters for short-term parking in use in downtown Freiburg. (Kucharz 2007)

⁴ Purvis 2008

⁵ With a quarter of its people voting for the Green Party, Freiburg became a political counterweight in the conservative state of Baden-Württemberg. Freiburg's city government is run by a coalition of conservatives and Green Party councillors and the Greens hold the most seats. Freiburg is Germany's only major city with a Green mayor, namely Dieter Salomon. (de Pommereau 2006; Paterson 2009)

⁶ Youtube movie by Europagruppe Grüne 2009 (See Appx 21)

⁷ The 'Leo Schlageter' army barracks at the southwestern fringe of Freiburg were built in 1937, as a collection of three-storey stone buildings to house Adolf Hitler's expanding Wehrmacht army. After World War II the Allied powers divided Germany into four quadrants, and 1945 the Schlageter barracks were taken over by the French military and renamed 'Quartier Vauban' (after a noted 17th century military architect). French Army soldiers were stationed at the Vauban barracks for over forty years. Only after Germany's re-unification the French troops withdrew from 'Quartier Vauban' in 1992, and ownership reverted to the federal government of Germany. In 1994 the district was sold to the city of Freiburg (for 40 mio DM, which is approx 20 mio Euro), and was promptly occupied by squatters.

Two parcels of the area (4 ha) were sold separately at the beginning to a Student's association and to S.U.S.I. („Selbstbestimmte Unabhängige SiedlungsInitiative“). The ten old barracks on this part of QV have been converted into a student village and an alternative housing community for people with low income.

(Sources: Freiburg website 2011; Gradinger n.d.; Linck 2008a; Paterson 2009)

⁸ Stadtteil Vauban website n.d.

Appx. 13 **'Autofreie Mustersiedlung Floridsdorf' in Context**

Location and Access

The project 'Autofreie Mustersiedlung Floridsdorf' is located in the Floridsdorf, which is the 21. district of Vienna. Floridsdorf is not an inner-city district, but lies in the North-East of Vienna in the so-called 'Transdanubien'¹, North of the recreation area 'Alte Donau' (= old Danube). Air-line distance to the city centre approximately 5 km.² The project is well-connected to public transportation (100m to the tram stop) and only in 1km distance (a short bike ride, or 3 tram-stops) from the district centre, which connects Floridsdorf with the Viennese metro network. However, shopping facilities or schools can be found in the immediate surrounding.³⁴

Neighbourhood: Floridsdorf

Floridsdorf is the 21. Viennese district, situated on the Eastern side of the Danube river. The district is a rather heterogeneous conglomeration of housing of various ages and densities. Floridsdorf is considered a mixed-use suburban centre, including manufacturing industry, new business parks, market gardens, a university campus, allotment gardens and the popular parkland around the lakes at Alte Donau. Floridsdorf's centre is a metro interchange with fast and frequent service to Vienna city centre.

Relevance of Location

There clearly are parts of Vienna more suitable for a carfree housing project. The project's connection to public transport and to the city centre are not excellent, and moreover Floridsdorf carries a slight stigma of being on 'the wrong side of the river' ('Transdanubien') which to many Viennese is a psychological barrier. But the initiators preferred a demonstration project on the ground by 2000 to a long wait until 2010 that would have been likely if availability of an inner urban site near a metro station had been made conditional.⁵

According to the Wohnbund evaluation in AMF in 2000, almost half of people initially interested in becoming residents in AMF changed their mind because of the project's location in the 21st district Floridsdorf. Almost as many named as a reason that the access to public transport is not sufficient.⁶ When the SRZ survey in 2008 asked the residents for their main motives to have moved into AMF, only 21% named the location in the 21st district as an important motive, and for 36% it was a 'negative reason'⁷. The location is thus clearly not an attracting aspect of the project.

Vienna, Austria

Vienna has some of the most extensive pre-war housing stock in Europe, and the city of Vienna is also the world's largest residential landlord, looking back onto 80 years of social housing policy under the auspices of a socialist-dominated municipal government. The associated densities and limited road infrastructure result in increasing traffic congestion despite the prominence of mostly carfree travel patterns with a large number of city dwellers. Yet, a parking requirement of one space per new housing unit introduced in the 1930s remained in place, and was only amended in 1996, to make the 'Autofreie Mustersiedlung Floridsdorf' possible at all.⁸ However, thanks to the decades of social-democratic ('Red Vienna') housing policy, Vienna has a long tradition of social housing with various communal facilities. Implementing social benefits in form of communal facilities in AMF were thus not a new phenomenon in Vienna.

¹ Chorherr 1999

² Dittrich & Klewe 1996: 35

³ Arbeitsgemeinschaft Autofreies Stadtviertel 2001

⁴ Dittrich & Klewe 1996: 35

⁵ Scheurer 2001a

⁶ Wohnbund evaluation 2000. In: Domizil/GEWOG 2000: 31

⁷ SRZ 2008: 18, 29

⁸ Scheurer 2001a

>> For a comparison of AMF with Vienna, Austria, and with casestudy QV, see appendix 11

Appx. 14 **Chronologies**

Chronology of the Project 'Quartier Vauban'

1938	Construction of the Schlageter barracks ²¹⁵
1945	Takeover by the French military deployment – Vauban barracks ²¹⁶
1992	The French army vacated Vauban barracks
December 1993	Official start of planning for the neighborhood: Decision of the Freiburg City Council to develop a new residential area.
	Urban idea competition
1995	Start of participation process: Forum Vauban Association takes on responsibility for the broad citizens' participation.
	Start of conversion of 10 of the old military buildings, for student village and the alternative cohousing group S.U.S.I.
1996	Main discussions on the master plan (development plan). Citizen participation (coordinated by 'Forum Vauban') crucially influences the master plan.
	Main publicity campaigns mobilizing the first future inhabitants occurs
	Formation of the first co-building groups
	Freiburg-Vauban is a German Best Practice example at the UN World Settlement Conference 'Habitat II' in Istanbul
July 1997	Approval of the final development plan.
	The City starts the sale of properties to private builders and cooperatives.
April 1998	Start of construction (Erster Bauabschnitt)
Fall 1998	First family moves into their new home.
1999/2000	'turning point' for Forum Vauban: conceptional and scientific work is completed and documented with a number of publications. New focus: the social work. (communication with all new inhabitants and the developing of neighbourhoods)
	International conference 'UrbanVisions' in Freiburg
2002	Start of renovation for the neighbourhood center 'Haus 037'
2006	Development of Quartier Vauban largely completed.
	Opening of the new tram line number 3 to Vauban.
Today	Very few allotments are still open for development.

Main sources for the QV chronology: Amtsblatt 2007; Becker 2001; Freiburg website 2011; Gradinger n.d.; Linck 2008a; Loose 2007; Melia 2006; Sperling 2011

²¹⁵ Linck 2008a

²¹⁶ Linck 2008a

Chronology of the Project 'Autofreie Mustersiedlung Floridsdorf'

1992 / 1993	The green party and the main initiator Christoph Chorherr ²¹⁷ promoted the idea of carfree housing in Vienna and managed to convince the Social Democrat City Government to enable the realisation of a carfree pilot project in Vienna. A location was chosen in the area of Nordmanngasse/ Fultonstrasse/ Donaufelder Strasse in the 21. District.
June 1994	Preparation for the project 'Autofreie Mustersiedlung' began, by the green party together with the responsible local authorities. Out of this cooperation a project team ²¹⁸ was formed, which was meeting regularly from 1995 to 1999.
1994 / 1995	The search for potential residents began. Quickly 300 to 400 people showed strong interest in the project.
September 1995	First public presentation of the project by the Stadträte Chorherr, Faymann, and Swoboda. ²¹⁹
March 1996	March 1996 >> Unanimous decision for the project's location in the Viennese council (Gemeinderat).
1996	A developers competition was arranged. The winner of the contest was the building project by the organising companies Domizil and GEWOG, designed by the architects Cornelia Schindler and Rudolf Szedenik.
May 1996	First official information event for potential residents, with over 200 participants.
June 1996	Change of the Viennese law on parking space provision ('Garagengesetz'), allowing the project not to build parking space.
1996 / 1997	Detailed evaluation of the needs (Bedürfniserhebung) of the then 550 interested citizens (potential residents).
1997 / 1998	Individual planning process, in which residents choose their apartments and together with the architects they decide for interior design, materials etc. Several meetings of potential residents in order to plan the communal facilities.
1997	Building permit for the 'Autofreie Mustersiedlung' in June 1997, and laying of the foundation stone in October of the same year.
January 1998	Start of construction work.
1998	Decision to let the 'Österreichische Wohnbund' do a 2.5-year-long evaluation of the project, which was subsequently followed by surveys and interviews with residents.
December 1999	First residents are moving in.
June 2000	Big opening celebrations.

Main sources for the AMF chronology: Add-home info-sheet 2008; Chorherr 1999; Domizil/GEWOG 2000: 6-7; http://archiv.wien.gruene.at/greeningcities/carfree_housing_vienna/; Scheurer 2001a; Schilly 2011

²¹⁷ Christoph Chorherr is a green politician, a developer, and he was a councillor, 1991-1996 Member of the Viennese City Government. The idea of car-free housing was initially considered for the city of Bremen (Germany), where Chorherr learned about it.

²¹⁸ This project team includes members of the green party, representatives of the 'Geschäftsgruppe Wohnbau und Stadterneuerung', the 'Magistratsabteilung 18' and other 'Magistratsabteilungen', the Viennese 'Bodenbereitstellungsfonds', the urban planning department, the 'Bezirksvorstellung' of the 21. district, the developers etc.

²¹⁹ First presentation of the project by city councillor Chorherr (green party) as the initiator, together with city councillor Faymann (SPÖ) responsible for housing, and city councillor Swoboda (SPÖ) responsible for urban planning. The SPÖ is the social democratic party in Austria. (Sources: Chorherr 1999 and Domizil/GEWOG 2000: 6)

'Forum Vauban' – Association for the Coordination of Participation Process and Social Work in Quartier Vauban

Soon after the old military base was vacated, a group of ecologically minded and mostly middle-class people became interested in the quarter. In summer 1993 two young men met in a bar behind the university in Freiburg's Old Town: an geography/architecture student (André Heuss) and a public transportation advocate (Matthias-Martin Lübke). They discussed the City's recent acquisition of the Vauban property and shared their dreams for the development of a community built with ecologically-friendly construction and energy concepts, public participation in the planning phase and largely carfree living; all under the motto to minimize costs and to minimize land-use, at a preferably high living quality. Soon they found like-minded people (amongst others: Michael Berger, law-student and environmental activist Christian Epp, or Bobby Glatz from S.U.S.I.), and decided to make their dream reality. On December 22, 1994, they founded the 'Forum Vauban'. And after two months, the Forum Vauban had grown to 60 members who lobbied the City with their vision for a sustainable neighborhood. ²²⁰ The «combination of idealism, knowledge, and economical structures led to a breakthrough for the Forum's work.» ²²¹ In 1995 Forum Vauban was recognized by the city council as legal body of the broad citizen participation process.

'Forum Vauban' was founded as an NGO and had non-profit-status. The initiative started with a handful of volunteers, but November 1995 onwards the Forum Vauban received funding from the city of Freiburg, from the German Environment Foundation (Deutschen Bundesstiftung Umwelt, DBU), and later on – becoming an EU-LIFE project – some funds from the European Union. Thanks to this financial support, the NGO created a few moderately paid jobs for young graduates. (The first paid employees of the Forum Vauban were: André Heuss, Christian Epp, Laurenz Hermann und Carsten Sperling, später Ralf Tiltscher, Georg Steimer, Eva Luckenbach and Claudia Nobis)

The following years were very work-intensive. In countless meetings in an old army barrack the small core team of full-time professionals developed visionary ideas for the new district, supported by experts, a honorary executive board and several working groups created from a large group of potential future residents. ²²²

The Forum Vauban's main fields of activities were: Organizing a far-reaching citizen participation; Supporting the implementation of community-based building projects such as 'Baugruppen' (co-building groups), co-housing and co-operative building ²²³; Realizing of a sustainable model district, especially in the fields of traffic ('Wohnstrassen', streets as shared space) and energy (Sustainable energy concept: solar and regenerative sources). ²²⁴

Between 1996 and the End of the year 2000, Forum Vauban – as legal body of the participation process – organized about 40 major workshops and excursions, and three district's festivals. Additional, numerous regular working groups' gatherings and meetings of special projects or Baugruppen / co-housing groups linked with or situated at Vauban took place regularly. ²²⁵

1999 was a turning point in the Forum's work. The participation in the district's development came to an end, which was documented in several publications. As a closing event of the participation process in Quartier Vauban, an international conference was hold. The conference 'UrbanVisions' in Freiburg was a pre-event of UN Urban 21 conference in Berlin. After 1999 the Forum Vauban's new responsibilities were the coordination of the social work ('Quartiersarbeit Vauban') in the district and implementation of a neighbourhood center ('Haus 037') and

²²⁰ Becker 2001; Gradinger n.d.

²²¹ Sperling 2011

²²² Becker 2001

²²³ About 40 major workshops and excursions were organized by Forum Vauban to spread information about ecological building corresponding to the current needs of builders and Baugruppen. (Stadtteil Vauban website n.d.)

²²⁴ Stadtteil Vauban website n.d.

²²⁵ Stadtteil Vauban website n.d.

adjoining market and meeting place (square in front of Haus 037). ²²⁶ When the 'Forum Vauban' went bankrupt in 2004, the responsibility for the social work 'Quartiersarbeit' was 2005 taken over by the newly founded 'Stadtteilverein Vauban e.V.'²²⁷

In 2004 the association 'Forum Vauban' was forced into bankruptcy, due to a reclaim of part of the funds by the European Union. ²²⁸In 2008 a judge ruled that the former responsables of the Forum Vauban had only a small guilt - if ever. ²²⁹

Appx. 16 **Examples of Building Projects in Quartier Vauban**

- 'DIVA', (Haus für "Dienstleistung, Kunst und Handwerk") offering space for small businesses and start-ups and artists... See: www.diva-freiburg.de
- 'Ökologisches Bauen', 8 apartments for 26 inhabitants, high ecological standard, main facilities are communal.
- 'Genova' (Genossenschaft Vauban), housing co-operative. Focus: communal, intergenerational, inexpensive and ecological living, for rent within a collective process (communal ownership). Integration of various age-groups and living-forms, socially challenged and economically disadvantaged people. Genova developed out of the 'Forum Vauban'. See: www.genova-vauban.de
- 'Kleehäuser', plus-energy houses. See: www.kleehaeuser.de
- 'Wohnen & Arbeiten', passive houses. See: www.passivhaus-vauban.de
- 'Solarsiedlung', solar settlement by the architect Rolf Disch. See: www.solarsiedlung.de or www.rolfdisch.de
- 'S.U.S.I.' (Selbstorganisierte Unabhängige Siedlungsinitiative), self-organized and independent housing initiative, refurbished four old army barrack buildings which became home for more than 200 young people. See: www.susi-projekt.de
- 'VAUBANAise', an OEKOGENO housing project. See: www.vaubanaise.de
- 'Villaban', see: www.villaban.de

(Source: Forum Vauban e.V. 1999)

> Further list of building projects, cooperatives and associations, available as PDF on: http://www.quartiersarbeit-vauban.de/userdocs/Adressliste_Wohnungsbau_Vauban_2009.pdf

Appx. 17 **Ecological Standards in QV**

- All buildings meet (and in some cases substantially undercut) the 'Freiburg Low-Energy Standard' as pioneered in Rieselfeld and later made into municipal law (from 2001 these standards will apply throughout Germany), which caps the permissible heating energy need of new housing construction at 65 kW (234 MJ) per sqm and year. (Scheurer 2001a: 333 ff).

This 'low-energy standard' is calculated similar to the Swiss SIA 380/1 standard which is more strict than the German WSchVO'95 standard; a house with 65 kWh/m²a Swiss

²²⁶ Sperling 2011; Stadtteil Vauban website n.d.

²²⁷ The politically independent association 'Stadtteilverein Vauban e.V.' was founded in 2004 (after 'Forum Vauban' was forced into bankruptcy), has currently about 100 members, and has its office in 'Haus 037'. It is the supporting organisation of the 'Quartiersarbeit Vauban', and thus the host of the community festival, the flea market, and of diverse workshops and cultural events, as well as the publisher of information about the district... Its main organs are the member-assembly and the board who represents the association. (Quartiersarbeit Vauban website n.d.; Stadtverein Vauban 2011)

²²⁸ Forum Vauban website 2008; Sperling 2011

²²⁹ Sperling 2011

standard reaches 48-55 kWh/m²a German standard. The average energy standard in Germany for newly houses built between 1995 and 2000 is about 100 kWh/m²a, the standard of older houses is about 200 kWh/m²a. (Stadtteil Vauban website n.d.)

- Who is building a flat roof to 7 degree slope, has to green this roof - in this way, rainwater will be retained. Days after the rain event, rainwater still flows from the substrate of these green roofs. (Veith 2005a)
- Passive houses do not need conventional heating systems: the heat requirements are almost entirely covered by so-called internal gains, passive-solar gains and a technically simple heat recuperation system (heat exchangers). For heating 'passive houses' need no external energy input other than from the sun except in extreme winter conditions.
- Plus-energy houses are build with 'passive house' standard, but with photovoltaics they produce their own energy, and in fact they even produce an energy 'plus' which they then feed back into the grid. Example in Vauban: Solar district Schlierberg.
- The parking garage is environmentally-friendly: The “Solargarage” is outfitted with a solar photovoltaic array and contains the neighborhood grocery store on the ground level. (Gradinger n.d.)

Appx. 18 Kommando Rhino

At Kommando Rhino, people try to live an alternative to the systematics of hierarchies and exploitation. Cheap housing was created and cultural potential is beeing promoted and self-organized. For years the city refused to assume the needs of the Vauban-residents – as it's due to be within capitalism. The administration is more to emulate so it could finally become a corporate-city. It want's to build a green-painted concrete-block and make a lot of money – and an anarchist trailor-parc is a pain in the arse for them.

Two years after the squatting of the so-called M1-ground in Freiburg-Vauban, the police is due to evict the waggon-squat Kommando Rhino after july the 31st 2011. We call everyone to support the diverse actions for the preservation of the art-, culture- and waggonspace-collective. Come to Freiburg to defend a unique self-managed residential-project!

In the beginning of August 2011, violent riots with burning barricades in the middle of the night marked Kommando Rhinos' last protest. The next day they were evicted from Quartier Vauban.



Photo left: 'Rhino' waggon-squat in Quartier Vauban. ²³⁰

Photo right: Message from QV residents, saying that they miss the 'Rhino' waggon-squat. ²³¹

²³⁰ Source of photo: Newspaper archive online: www.badische-zeitung.de

²³¹ Source of photo: Newspaper archive online: www.badische-zeitung.de

Appx. 19 QV: a Success Story, a Model project

Success

Quartier Vauban is a success story. 1996 the project was nominated by the national government to be presented as a German 'Best Practice' example at the UN World Settlement Conference Habitat II in Istanbul, because of its cooperative planning process. Due to its innovative technology, the project contributed to Freiburg's presentation at the German EXPO 2000 in Hannover.²³² As a German 'Best Practice' example, the project was finally presented individually at the EXPO 2010 in Shanghai.

October 1999, as a closing event of the participation process, Forum Vauban organized the international conference 'UrbanVisions' (as a pre-event of the UN 'Urban 21 conference in Berlin). The conference included excursions and workshops on topics such as 'New Mobility', 'Energy Efficiency', 'Ecological Buildings', 'Building Neighborhoods' or 'Processes of Citizen's Participation', and resulted in a list of ten final theses on 'the sustainable city'.²³³

According to an article in the *Badische Zeitung*, the State-of-the-World report of the leading US Eco-institute Worldwatch holds as the 'bible of sustainability'. The new edition 2010 also mentions Quartier Vauban, and calls it a 'model project for the city of the future'.²³⁴

Moreover, continuous press reports, and numerous publications, articles and reports on the project Quartier Vauban have been published. Sperling and his co-workers even published a hand-book 'Nachhaltige Stadtentwicklung beginnt im Quartier' containing a detailed description of the project's development process, a praxis and idea book for urban planners (Sperling (Ed.) 1999)

An article in the 'Welt' claims the Quartier Vauban to have almost cult status through its trend-setting urban structure that offers a compromise of sense urban and suburban/rural single-family house living.²³⁵ Consequently, the district is regularly visited by groups of planners, architects, scientists and (municipal) representatives from different countries.²³⁶

«Word about the Vauban experiment is spreading. Each day, six or seven busloads of visitors roll up – parking on the outskirts, needless to say – to witness the suburb's environmentally friendly living.»²³⁷

All these possibilities to present and explain QV's successful concept and story to the public or even to an international audience, offer Quartier Vauban the chance to be a trend-setting example of a sustainable district, to spread its ideas and experiences around the world, and to an adapting of its concept duable and appealing.

Model Project, and Key to Success

Freiburg's mayor Salomon praises Quartier Vauban as a big success: «It proves that if you think globally and act locally, every little step helps not only just the people but the environment, too.»²³⁸

²³² Sources: Becker 2001; Linck 2008a; Scheurer 2001a: 330; Stadtteil Vauban website n.d.

²³³ The ten final theses of the conference 'UrbanVisions':

The Sustainable City... *... promotes an integrated planning culture *... makes use of new forms of citizen participation *... implements sustainable transport and mobility concepts *... promotes environmentally sound and healthy building measures *... has an ecologically sound energy supply and minimises energy consumption *... strengthens regional economies *... designs socially oriented living spheres *... mixes requirements with supporting measures *... cultivates good contacts and exchange of experiences *... has the courage to leave the beaten track (Forum Vauban 1999)

²³⁴ The State-of-the-World-report 2010 of the US Eco-institute Worldwatch is a book of almost 300 pages. About 60 scientist have collected many interesting facts on consumption and climate change. In the chapter about building future cities, the australian professor Peter Newman mentions and lobt Quartier Vauban as a positive example. Other cities should become more like Quartier Vauban, he writes, they should be «Sitting lighter on the planet» (Röderer 2010)

²³⁵ Guratzsch 2004

²³⁶ Becker 2001; Stadtteil Vauban website n.d.

²³⁷ Paterson 2009

²³⁸ Kucharz 2007

An article about the project in 'The New York Times' starts with this sentence: «Residents of this upscale community are suburban pioneers, going where few soccer moms or commuting executives have ever gone before: they have given up their cars.»²³⁹ But according to the 'Independent' «Being virtually car-free is only the start of what has been hailed as one of Europe's most successful experiments in green living and one which is viewed increasingly as a blueprint for a future and perhaps essential way of living in an age of climate change. »²⁴⁰ Besides the innovative technology, a highly innovative aspect is the culture of planning and of the participation process, aiming to realize what is best – not only in terms of ecology but also in terms of human needs.²⁴¹

According to a press release of the project itself, the main key of success lies in adopting a citizens participation process. In an article for the 'Time' 2009, Tristiana Moore points out: «Perhaps the most surprising thing about the district's experiment in carlessness is that it was local residents who pushed the idea.»²⁴² «Lots of people got together and they sat down with the local council and came up with the idea of a reduced-car community» Roland Veith explains (himself a Vauban project leader from Freiburg city council).

The project-makers were not too narrow-minded, and the project's concept is not too radical. «We didn't want to be fanatical about the carfree concept. We wanted to reduce individual car use and offer people the option of carfree living» was how one former leader of Forum Vauban described their attitude.²⁴³ Sustainability was not achieved by a wagging finger and a moral sermon, but is mainly based on voluntarism, on resident's deliberate decision. Andreas Delleske, resident and energy planner, confirms: «All the residents had the chance to plan their own city. And it's just how we wanted it to be.»²⁴⁴ At the entrance of Quartier Vauban, residents and visitors are greeted by slogan in big letters that reads: «We are creating our world the way we like it.»²⁴⁵

According to Freiburg's mayor Salomon «And the secret of the success of Freiburg does not consist in us doing something special, the things we do are neither patented, nor are they intellectually hard to grasp. One only has to do them, and we are the living example that it is possible.»²⁴⁶ Thanks to its non-radical attitude, its many low-tech but instead social solutions, and the successful implementation of so many ecologically and socially sustainable features on a quite large scale, the concept of Quartier Vauban might be well adaptable to other similar projects.

Appx. 20 **QV: Evaluation Sozialraumanalyse 2009**

Analysis of the Results of the Evaluation 'Sozialraumanalyse' 2009

(Source: Schings 2009)

'Sozialraumanalyse' = 'Social space analysis'

Background

Facing the problematics of a demographic change in Quartier Vauban, inspired by the results of a citizens workshop, the 'Quartiersarbeit' decided to conduct an evaluation amongst QV residents on the issue of 'Social space'. The leading question behind it was about a suitable district planning strategy, which builds on its existing structures but adapts to the inter-generational requirements of its residents.

Main questions of the evaluation

²³⁹ Rosenthal 2009

²⁴⁰ Paterson 2009

²⁴¹ Stadtteil Vauban website n.d.

²⁴² Moore 2009

²⁴³ Melia 2006

²⁴⁴ Moore 2009

²⁴⁵ Paterson 2009

²⁴⁶ See Analysis of Youtube Video 1 in appendix 21. Source: Youtube movie by Europagruppe Grüne 2009
The social benefits of carfree living - 4cities Master Thesis - Sabeth Tödtli

- How are the current facilities/services in the residents' direct living environment evaluated?
- What is the space for social interaction? Which places are used as meeting points?
- How can the inter-generational dialogue and the solidarity in the district be attained and improved?
- How can the living quality of public space be improved?
- What further planning is considered necessary by the residents?

Methodology

The evaluation was conducted through 1250 questionnaires, distributed to QV households in May 2009. Out of the returning questionnaires, 304 were analyzed and included in the evaluation. This is a return rate of 24%.

A short report on the results was written by Schings in 2009.

Results

Living in Vauban: General satisfaction

The majority, namely 90% of the respondents, like to live in Vauban. ('very satisfied' with living there are 45%, 38% are 'satisfied', 16% 'partly satisfied', and only 1% unsatisfied.)

Satisfaction, differentiated by topics:

Most positive: Connection/Access to ÖPNV, the Kindergartens and playing possibilities for children. Also very positive: Shopping facilities, bicycle lanes, green space

80% of the respondents are (very) pleased with the environmental situation ('Umweltsituation'), the energy supply ('Energieversorgung') and the social contacts.

Critically rated are indicators in connection with social change, demographic change in particular. This includes the relations between kids, youngsters, adults, inter-generational supplies/services ('Angebote') and supplies/services for only elderly people or only youngsters.

Moreover, the question of parking and regulation of car traffic seem to most respondents debatable / worth another discussion. In general (as a result of the 'open question') residents wish for a more consequent carfreeness and more restrictive regulations concerning parking.

Open Question: Satisfaction

Results show the significance of existing infrastructure, social togetherness and the location.

Reasons for dissatisfaction furthermore show a strong concern with social togetherness, mentioning noise, disrespectful behaviour etc, and point to the problematic side of dense living. Another issue that is raised is the problematic of a 'too' homogenous population

'Quartiersarbeit'

94% of the respondents know (more or less) about the work/supply/services of the 'Quartiersarbeit', and out of these 94% only 1% finds the 'Quartiersarbeit' in general useless.

The concrete work/activities of 'Quartiersarbeit' is clearly appreciated (82% satisfaction, only 4 % dissatisfaction). According to the respondents, the QA largely contributes to the community-building and assures the social peace ('sozialer Frieden') in the district. Their engagement is therefore highly appreciated, as well as their manifold services/activities ('Angebot'), the quality of these and the continuity.

Young Population and Demographic Change

As already apparent in the questions on satisfaction by topics, most residents are aware of the problematic concerning the growing number of teenagers/youngsters and their needs. Only 18 % of the respondents are content with the possibilities that are supplied for this young group of the population. The rest is only partly or not satisfied, and worried about the development. Most of them see the offer for the youth as not sufficient.

A main criticism is the lack of public space for youngsters, as well as spaces/rooms that they can co-determine and organize themselves. Moreover, most respondents wish for more sports facilities, possibilities for communal engagement and youth participation, and their involvement into the social projects.

Feeling of Safety versus Unease in Public Space

More than half of the respondents (57%) feel uneasy or threatened in certain places within the district. (It has to be considered that 1. this response also includes discomfort due to noise or dirt, and 2. the answers have to be seen with a background of a very high standard of security in public space)

Described as most problematic is the Paula-Modersohn-Platz, second is the public transport stop Innsbrucker Straße, the carpark (Parkhaus/ Solargarage) and the area around the little stream (Dorfbach).

To tackle this problem, there have already been several organized walks at night, which are seen as unnecessary or unnatural by a quarter of the respondents, while 10% have never even heard of them.

'Brunnenprojekt'

One specific topic of the evaluation is the planning for a new fountain. 73% of the respondents approve of this project, and 96% vote for the location Alfred Döblin Platz. The main criterium (77%) is the usability/playability for children. Other criteria are the fountain being an art object (74%) or offering drinking water (73%).

Future Topics

Asking about the relevance of different themes for the future (next 5 years), the demographic issue (including topics such as youth, inter-generational co-habitation, elderly etc...) is the most prominent. This is followed by the topics 'individual mobility', 'social togetherness' (Soziales Miteinander) and issues of building/constructing ('Bauliche Fragen'). Questions of infrastructure and the issue of ecology are clearly not a main concern.

Appx. 21 **Youtube-Movies**

Analysis: Youtube Video 1– QV

Source / Relevance / Autonomy

Title: We just do it ! Freiburg - Green City

Description: Green makes a difference across Europe - part 3

Source: http://www.youtube.com/watch?v=7eox2__W9gg&feature=relmfu

Produced and uploaded by 'Europagruppe Grüne' (European Green Alliance), 17.04.2009

Autonomy: semi-independent / 'bias' (produced by the European Green Alliance)

Total length 3:38 minutes, in German (English subtitles)

Transcription of the Video

Until 0:40: Introductory shots of Freiburg, focussing on nature and alternative energy: landscape, nature, windmills, solar panels on roofs, and ecological buildings...

0:30 «We just do it! Freiburg – Green City»

0:40 'Messe Freiburg' -> Freiburg: Green City

0:52 – 1:05 Focus: Solar energy! Statement of a 'Messe'-participant: «Politics here creates the right conditions, in order for Freiburg as a solar capital to remain a world leader in solar technology. That is the politics of the Green Mayor Dieter Salomon.»

1:06 – 2:05 Statement and explanations of mayor Salomon, emphasizing that «[...] the population in Freiburg is a lot more ecologically orientated and a lot more willing to dare to try. Yes, our flagship district, our ecologic blueprint model district is the Vauban [...]», and talking about the history, the good insulation of buildings, and the general heating and energy-concept. Only then he mentions that Vauban is «largely car-free, or let's say, car-poor, and therefore we could say that Vauban is an almost CO2-neutral district»)

1:28 shot of a wall-painting at the Motto of 'Quartier Vauban', being Pippi Longstocking's song: «Wir machen uns die Welt widdi-wie sie uns gefällt.» (=We make ourselves a world the way we like it!)

2:06 – 2:35 Statement of a resident and mother about the relevance of sustainable living (pointing out that it is important to make an own contribution), and that it is good for their children to live there, and that the district is «within the reach of all the [social] classes».

2:35 – 2: 50 Focus: Economic sustainability (Salomon: «In Freiburg, economically we have been profiting for years from our decision to make ecology our guiding principle. We have many jobs in the ecology sector that other cities don't have.»)

2:50 – 3: 07 Focus: Standardisation? (Final statement of Salomon: «And the secret of the success of Freiburg does not consist in us doing something special, the things we do are neither patented, nor are they intellectually hard to grasp. One only has to do them, and we are the living example that it is possible.»)

3:08 -3:21 Shots of tram (public transport!)

Summary

The Youtube movie about the 'district Vauban' of almost 4 minutes is produced by the 'Europagruppe Grüne' (European Green Alliance). It shows the estate, the housing, green space and gardens, several ecologically sustainable features and it includes statements of the mayor Dieter Salomon, as well as of residents.

Analysis: Youtube Video 2 – QV

Source / Relevance / Autonomy

Title: Freiburg Vauban: Wie der (grüne) Zeitgeist wohnt - SPIEGEL TV

Source: <http://www.youtube.com/watch?v=wrFd6Xswx8Y>

Produced and uploaded by Spiegel TV, 01.04.2011

Autonomy: independent

Total length 3:19 minutes, in german

Transcription of the Video

It starts with the energy-efficiency of the buildings, as e.g. the vacuum toilets

0:15 first mentioning of its potentially trend-setting character, for future housing construction in general.

0:25 – 1:00 Interview with energy planner Andreas Delleske -> Interest for energy-efficiency, Freiburg as an interesting place (Frauenhofer Institut, Öko-Institut)

1:00 – 1:19 Freiburg as a special case, because it is not only ecologically sustainable (as much german individual housing), but it is also dense (first multi-family housing in ecological standards) and urban, and it is big (almost 6000 inhabitants)

1:20 By various energy-saving and energy-producing measurments residents also save money, and can sometimes even sell electricity to their neighbours. -> Statement on economic benefits by Andreas Delleske

1:40 – 1:55 eco-village Freiburg not even up to date? Much more could be done, according to the city and citizens of Freiburg. Awareness for issues of sustainability is a self-evident fact, it seems natural. The Zeitgeist is green, and so is the mayor of the city.

1:55 – 3:02 Interview with the mayor Dieter Salomon, who is described as not being an ideological 'hippie'-green but 'pragmatic'-green, and independent of green-party programs.

3:03 – 3:14 Success of strategy, interest from all around the world, and building is continued.

Analysis: Youtube Video 3 – QV

Source / Relevance / Autonomy

Title: EcoQuartier Vauban

Source: <http://www.youtube.com/watch?v=Fsgv4R3U3UI&NR=1>

Uploaded by bplaneterre, 12.02.2009

Autonomy: independent (?)

Total length 9:55 minutes, in French

Transcription of the Video

0 – 1:30 Introduction of the project, as being carfree, walking and bicycle friendly, ecological sustainable in buildings etc...

1:30 – 2:30 Social benefit: Family life and communal life (a resident and mother talks about her daily family life)

2:30 – 4:20 Ecological features of the architecture and the green space and biodiversity in the project (Explanations of an expert)

4:25 – 5:20 Carfreeness and exceptions and parking opportunities outside.

5:30 – 6:25 Solar heating system (Explanations of an expert)

> Shots of the buildings, green spaces, and children playing

7:10 – 7:45 communal room

7:45 – 8:35 Reduction of private space in order to have more communal space (instead of little private party-rooms, that are only used rarely, there is one big one.)

8:45 – 9:15 Of course this lifestyle also comes with problems, and if people can live with this or not depends on the situation.

9:15 – 9:40 Final note: Similar project in Strasbourg?

Analysis: Youtube Video AMF

Source / Relevance / Autonomy

Title: Car free district in Vienna - it works well!

Description: Green makes a difference across Europe - part 2

Source: http://www.youtube.com/watch?v=7eox2__W9gg&feature=relmfu

Produced and uploaded by 'Europagruppe Grüne' (European Green Alliance), 17.04.2009

Autonomy: semi-independent / 'bias' (produced by the European Green Alliance)

Total length 3:48 minutes, in German (English subtitles)

Transcription of the Video

Whole first minute (- 1:00): Introductory shots of Vienna.

0:40 «Carfree district in Vienna. It works well!»

1:00 onwards: Mustersiedlung Floridsdorf

1. house, 2. Children with their bicycles, smiling/happy, 3. House

1:10 – 2:10 Statement of Christoph Chorherr: Emphasizing that he is politician for the green party, and he is particularly proud of THIS project! «My motivation to be a passionate green politician is to develop models that show that a sustainable life is possible. That with a fraction of the resource consumption, with a fraction of automobility, it is possible to live a better life.»

While Chorherr is talking, shots of the project are showed: housing, green space (e.g. ducks on water), art in public space, trees, people gardening, bicycle parking, flowers, children...

2:15 – 2:48 Tour with tenant Wolfgang Parnigoni, showing and explaining the bicycle workshop, the wood workshop, and pointing out the fact, that such facilities are financed by the means that were saved by the elimination of car parking.

Shots of the communal room and the fitness room.

2:55 – 3:07 Statement of a teenage boy (resident): «Well, it is really not bad to live without car. I really like that we can go to the fitness room. That this is offered here.»

Shots of the public space, a woman with a cargo-bike, smiling

3:12 – 3:17 Shot in the 'garage', Wolfgang Parnigoni again: «What is striking about this garage are the few recognisable car parking spaces.

Shot of the bicycle parking, and a woman parking her bike (10 seconds)

3:28 Final statement of Wolfgang Parnigone (standing in the garden): «Das passt scho!» (=Typical Viennese expression of approval)

Summary

The Youtube movie about the 'Mustersiedlung Floridsdorf' of almost 4 minutes is produced by the 'Europagruppe Grüne' (European Green Alliance). It shows the estate, the housing, green

space and gardens, happy residents and smiling children, and it includes statements of the initiator Christoph Chorherr, as well as an adult and a teenage resident.

Sustainability : Social Focus

Particular emphasize is put on the fact that it is a 'green' project, with model character, and that it is facilitating a sustainable life, and that this is also a better life. Thus, a relationship between sustainability and well-being is assumed as being obvious.

Social Sustainability Focus: Communal Facilities

The focus is then on communal facilities such as bicycle and wood workshop, fitness room, or bicycle parking. Other social benefits, as for example resident participation and co-determination, are not mentioned.

Survey

Appx. 22 Research-own Survey

The following interview was hold in person or online, with random residents or users of the respective project / neighbourhood (QV 'Quartier Vauban' or AMF 'Autofreie Mustersiedlung Floridsdorf'). The respondents were approached in the public space of the respective project, they were handed out flyers to participate in the survey online, and flyers were also distributed into mailboxes of residents. Moreover, in the case of QV, a post was set up in the online neighbourhood forum to invite people to participate in the survey, while in the case of AMF an email was sent out to several institutions and leading figures.

The interviews were hold in German. In the following transcript the questions are translated into English, but where questions allow an 'open response', the respondent's elaborations are not translated, in order to keep them as authentic as possible. However, the complete list of answers is provided (the responses are separated by //). Usually, in the end of these lists of 'open responses', the arguments are categorized according to the main topics, and it is counted how often the categories were mentioned. A resident's statement is only translated when it is very significant and thus quoted in the report. Else, all responses are summarized in English in a brief synopsis for each part of the interview.

The abbreviations QV and AMF stand for 'Quartier Vauban' and 'Autofreie Mustersiedlung Floridsdorf'. In the real interviews the projects' names were not abbreviated, and the questions would only contain one of the two projects, in accordance with the interviewee's background/interest.

In the following transcript, the questions do not follow their original order, but are grouped according to topics or in order to refer to more than one question in the analysis. However, the sequence of how the questions were posed originally is indicated by the number of each question (on the document's right side, numbered by Q. #.).

Respondents

Number of completed interviews:

QV: Quartier de Vauban: **54**

AMF: Autofreie Mustersiedlung Floridsdorf: **20**

The difference is explained by the very different size of the projects. While there are almost 3 times more interviews

Q. 1.

Resident or not? **«What is your connection with the QV / AMF?»** (Original question in German: «Was verbindet sie mit dem Quartier Vauban?»)

(in % of all respondents)	QV Quartier Vauban	AMF Mustersiedlung
I live here	76	100
I work here	2	
I spend my leisure time here	-	
I'm visiting	4	
other, namely ... → text input	-	
I live and work here	19	
no answer	-	

Results / Analysis: AMF is a purely residential project, while QV is a highly mixed neighbourhood – one might even say 'city district'. 3/4 of the respondents are residents, but the remaining respondents also work there, or work there only or are visiting.

Data

Q. 16.

Sex

(in % of all respondents)	QV Quartier Vauban	AMF Mustersiedlung
Female	52	65
Male	48	30
no answer	-	5

Q. 15.

Age

(in % of all respondents)	QV Quartier Vauban	AMF Mustersiedlung
under 18	6	-
18 – 35	11	25
36 – 64	76	75
65 – older	7	-
no answer	-	-

Q. 17.

(main) occupation

(in % of all respondents)	QV Quartier Vauban	AMF Mustersiedlung
no answer (chosen answer)	4	5
student / in education	11	-
working / employed	70	85
unemployed / searching for work	2	5
in pension/ retired	7	-
housewife / houseman	4	5
other, namely... → text input	-	-
no answer (left blank)	2	-

Q. 19.

Household: «In your household you are living...»

(in % of all respondents)	QV Quartier Vauban	AMF Mustersiedlung
alone	15	35
in a couple	15	10
as a family -> altogether	63 (average: 3.9p/family)	50 (average: 3.3p/family)
in a flatshare -> altogether	7 (average: 4.3p/flatshare)	5 (average: 2.0p/flatshare)
other, namely... → text input	-	-
no answer	-	-

Household: car? «Is your household in possession of a car?»

Well-being? «Do you like to be / live here in OV / AMF? Do you feel well here?»

Possible responses: No / Rather not / Rather yes / Very much / no answer

Quartier Vauban

Response	Percentage [%]
Rather not	7
Rather yes	26
Very much	67

percentage [%] of all repondents

Autofreie Mustersiedlung Florldorf

Response	Percentage [%]
Rather yes	35
Very much	65

percentage [%] of all repondents

Follow-up question: Why? **Elaboration** (optional) → text input

Auf die Bäume den nicht vorhandene Verkehrslärm die Nähe zu den meisten Beseitigungen

The social benefits of carfree living - 4cities Master Thesis - Sabeth Tödtli Appx. 2

Grünflächen, die gute Anbindung per Tram in die Stadt und zum Hbf. Ansonsten bin ich viel mit dem E-Bike unterwegs. Ich brauche selten ein Auto und nutze es dann per Car-Sharing. In unserer Baugemeinschaft haben 17 von 25 Haushalten seit Jahren kein Auto mehr. Wenn es Sie interessiert: ich habe zum Thema "Wohnen im Vauban - Wie Baugemeinschaften einen Stadtteil der Zukunft gestalten" gerade eine 56 Min. DVD-Doku produziert. Die DVD können Sie für 18 EUR zzgl. Porto/Verpackung ab 18. Juli bei mir beziehen. Den Film habe ich gedreht, um zu zeigen, warum Wohngemeinschaften ein sozialer, ökologischer und ökonomischer Wohlfühlfaktor sind. // *Lehrer ,Hebammen und ego-geboostete Gutmenschen unter sich, kein Platz für Jugendliche, zu dicht bebaut, Krieg um die wenigen Parkplätze die es gibt* // Schöne Umgebung, enge soziale Bezüge, differenzierte Menschen, Schutz und Erhalt von Natur und Ressourcen, autofrei, kurze Wege, Nähe zu Stadt und Natur. // stadtnah, gut angebunden, Geschäfte ortsnahe // Sehr kinderfreundlich // alles kompakt an einem Ort - Natur und Stadt in Symbiose // Ich wohne in der Stadt und trotzdem "im Grünen" (Schönberg). // Keine Stellplätze vor meinem Haus. Kurze Wege zur Stadt. Gute Infrastruktur // Autofrei ist es nicht 100%. Meine Straße ist zwar besonders verkehrsberuhigt, da es eine Sackgasse ist, aber Autos fahren dennoch hier rein. – – Es ist hier in jedem Fall sehr kinderreich und man tut wirklich sehr viel für die kids. – – Ich bin leider Single und in einer solchen Singleeinheit wohnend, so dass man nicht ganz so in Kontakt kommt. Mit Kindern kann ich zum Glück gut. Die Erwachsenen Familienväter und Mütter gucken einem eher etwas schief an, wenn man im Vauban "alleine" wohnt! // Es ist bunt, voller Leute, ökologisch und grün. // Wenig Verkehr, kinderfreundlich, kurze Wege, gute Infrastruktur // ruhige Atmosphäre, schöne Lage am Stadtrand // recht zentral, ruhige Lage, nah am Grünen (Wald, Wiesen) // stadtnahes und familienfreundliches Quartier mit überzeugendem Wohn-, Einkaufs- und Verkehrskonzept // Kein Verkehr, viele Bäume, Nähe zum Schönberg/Natur, gute Infrastruktur (alles vor Ort, Straba, Geschäfte, ..), freundliche Menschen, ... // *ZU einseitig ausgerichtete Klientel, zu viele Jungfamilien, großer Aktionismus* // Wir sind beide über 40 und haben noch nie ein Auto besessen oder dauerhaft gebraucht. Wir fanden die Idee vor 14 Jahren toll und haben uns von Anfang an beteiligt. Wir mögen unsere Nachbarn in der Baugruppe und haben die sich eröffnenden Freiräume für eigene Gestaltung genutzt. Es war schön, zur bestimmenden Generation zu gehören und sich die Welt - frei nach Pippi Langstrumpf-zu machen wie sie uns gefällt, wenn auch nur beschränkt auf unser Wohnumfeld. Unsere Kinder wohnen auch gerne hier. // wenig Verkehr, guter ÖPNV Anschluss, dichte Bebauung mit viel Freiflächen // Freundliche Atmosphäre, ökologisch, stadtnah und doch direkt im Grünen, ein Stadtteil der kurzen Wege und wo man alles kaufen kann // Super Atmosphäre, sehr bunter Stadtteil (Ökos, Genossenschaften, Initiativen, Studenten, Bauwagendörfer), beste ökologische wohnortnahe Einkaufsmöglichkeiten, viel Platz zum Erholen dank autofreiem Konzept, sehr kinderfreundlich aufgrund Spielmöglichkeiten auf Grünflächen und Straßen; gemeinschaftliche Wohngenossenschaften mit sehr netten alternativen Nachbarn, grüne Naherholung // Innenstadtnah, ziemlich grün, nette Nachbarn. Nachteile: enge Bebauung, manchmal ziemlich laut, wenig soziale und altersmässige Durchmischung. // Stadtteil der kurzen Wege, ruhig obwohl eng bebaut, gute Verbindungen mit öffentl. Verkehrsmitteln, offene Menschen, Strassen ohne Autos, super für die Kinder,... // lebendig, urban, kurze Wege, nicht eingeschlafen, nicht spießig

Summary in categories: Nature 10; Ecology 5; Carfree 8 (carfree negative 1); No noise: 3; Location/Facilities 8; Public transport 8; Urban design 6; Social aspects / community 9; Children/family-friendliness 6; Special clientel positive 3 and negative 2; Self-determination 1

AMF Mustersiedlung Floridsdorf

Viele nette Kontakte, viele gemeinsame Aktivitäten, viel Nachbarschaftshilfe, viel Spaß miteinander. // soziale Gemeinschaft – – Nähe zur alten Donau – – Freunde – – gemeinsame Aktionen und Urlaube // 1. nette, umgängliche und interessante Menschen – – 2. ruhige und grüne Anlage - sehr kinderfreundlich! – – 3. Gemeinschaftseinrichtungen wie Veranstaltungsraum, Kinderraum, Dachterrasse, Sauna,... // nette Nachbarn, viele Grünflächen, viele Pflanzen, viele Gemeinschaftsräume, viele gemeinsame Unternehmungen, für Kinder ideal // Viele Menschen mit ähnlicher Gesinnung in nächster Nähe, viele Gemeinschaftsräumlichkeiten - Kontaktpflege ist leichter als anderswo // ruhig, grün, nette Leute // viel Grün, "Dorf in der Stadt", Gemeinschaftseinrichtungen, kinderfreundlich, autofrei // Surch Wegfall der Garagen

mehr Hofraum, Anbindung zu Öffentlichen gut, Fast ausserhalb der Stadt. // die wohnung ist nett und günstig und rundherum ist grün und es ist sehr nahe der alten donau // Eingebundenheit in eine Gemeinschaft, verschiedene (spontane) Aktivitäten mit NachbarInnen // Die vielen Gemeinschaftsräume (wie z.B. Hügelbeet am Dach oder Wohnzimmerdach mit Griller oder Veranstaltungsraum für Geburtstagsfeste,...) sind eine wichtige Bereicherung für das Leben hier in der Siedlung.

Summary in categories: Nature / green space 5; Carfree 1; No noise: 2; Location 3; Communal facilities 5; Public transport 1; Urban design 2; housing / apartment 1; Social aspects / community 5; Children/family-friendliness 3; Special clientel positive 1

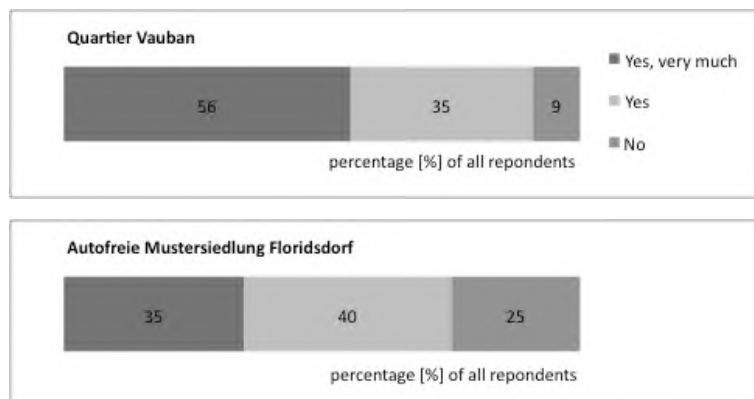
Results / Analysis:

The majority of respondents in both projects feels rather or very well within QV/AMF, and the share of respondents who feel 'very well' is almost identical for both projects. However, the reasons for this well-being that are mentioned in the 'open-response-field' are different for the two projects. In QV respondents mainly mention the nature within the neighbourhood, and the nature surrounding it, the project's location, public transport facilities, closeness to the city centre, and its distinct urban design of being a 'village in the city', of being green and calm but urban at the same time. In AMF the focus is on community and solidarity: namely the communal infrastructure (public green space and communal facilities) and communal activities, and the fact that the project is very child-friendly. The 'special clientel' in the neighbourhood is mentioned as an advantage in both projects, and having likeminded neighbours is appreciated. In QV this very 'clientel' is also mentioned as a negative factor. All in all the open responses reflect the choice of 'potential social benefits' that is the basis of this paper, as nothing was mentioned that has not already been part of the theoretical part of this paper.

Q. 4.

Carfree <-> well-being? **«Does the fact, that the area is car-reduced, contribute to your personal well-being?»** (Original question in German: «Trägt die Tatsache, dass das Quartier Vauban auto-reduziert ist, zu ihrem persönlichen Wohlbefinden bei?»)

Possible responses: Yes, very much / Yes / No / no answer



Q. 5.

Follow-up question: Why? **Elaboration:** (optional) → text input

QV Quartier Vauban

Die Ruhe ist beeindruckend. Kinder statt Autos auf den Straßen - das mag ich. Kein Dröhnen, kein Gestank. // auf der Straße Fußball, Volleyball...spielen, ruhiger und angenehmer // *Es ist gar nicht wirklich autoreduziert, die Straßen sind enger, einfach mehr Einbahnstrassen und Sackgassen und wie gesagt: Partisanenkrieg um Parkplätze. Muß allerdings dazusagen, daß ich ein Auto besitze (wie letztendlich doch die meisten hier)* // 4 eigene Kinder wollen alle auf der Strasse spielen, autofei schafft Raum und wirkt friedlich, stinkt nicht, ist sicherer, reduziert eigenes Fahrverhalten wegen weiten Wegen zur Garage, man realisiert das Besondere der

Vauban-Atmosphäre // Ich empfinde das Quartier nicht als autofrei. Lediglich einige wenige Bewohner müssen in entlegenen so genannten Hochgaragen parken. Sie werden gezwungen nur dort, zum Teil sehr überbezahlte Stellplätze zu kaufen, wenn sie ein Auto besitzen. Andere Bewohner des Stadtteils dürfen bequem Stellplätze unter den Häusern nutzen. // Weniger Lärm, und kindersicherer. // Ich muss nicht ständig auf fahrende Autos achten. // Wenn man es mit verkehrsreichen Vierteln vergleicht, ganz sicher! – – Was im Vauban jedoch enorm negativ ist: Die Mobilfunkstrahlung! Man ist von Mästen nur so umzingelt und wenn man in einem mehrstöckigen Wohnhaus mit direkten Nachbarn wohnt, wird man in einem Federkernmatratzenbett regelrecht von unten, oben und seitlich wie auf einem Rost gegrillt, wenn man sich schlafen legt. Die Mobilfunksensibilität nimmt enorm zu! // mehr Bewegungsfreiheit für alle Bewohner, kein Platz verschwendet, Auto nur, wenn ich es wirklich brauche // ich habe den Eindruck, dass der Autoverkehr zugenommen hat, – – da es vielleicht mehr Besucher gibt – – und vielleicht auch, weil immer weniger Bewohner auf ein Auto verzichten möchten. // Die Menschen begegnen sich zu Fuß, mit dem Fahrrad etc. Das ist deutlich weniger anonym als wenn man sich im Auto entgegenkommt. – – Der Stadtteil hat andere Geräusche. // wobei die Parkplatzsituation blöde ist // Ruhe, // Insbesondere die gemütlichen Seitenstraßen haben die Kinder als Lebensraum zurückerobert und wir auch. // ruhiger, anderes Straßenbild, die Straße als Aufenthaltsort möglich // Spazieren auf den Straßen; Spielen der Kinder auf den Straßen; Autos verstellen nicht die Sicht vor den Eingängen, sondern es gibt ein Gefühl der Offenheit; der Mensch dominiert das Stadtviertel, nicht das Auto // Die Wohnstraßen sind nicht mit Autos vollgestellt, kaum Verkehrslärm. // es könnte noch erheblich autoreduzierter sein, habe selbst kein Auto und finde es für den Stadtbereich überflüssig

Summary in categories: Less noise 7; Less smell 2; More space 5; Aesthetics 2; More interaction (more social) 2; Safety in general 2; Save space and streets for kids to play 6; Change of personal behaviour 2; Criticism of carfreeness 5

AMF Mustersiedlung Floridsdorf

Ich bin leidenschaftliche Radfahrerin, Umweltbewusstsein ist hier bei den meisten groß geschrieben. // weil dadurch die Verbindung Wohnungstüre-Garage unterbrochen ist, sich die Menschen am Weg von und zum ÖV in der Siedlung treffen, dadurch auch miteinander sprechen, man sich dann auch so trifft und aus dieser Kommunikation unglaublich viel entsteht // die Siedlung ist umringt von starkem Verkehrsaufkommen - ein "Autofrei-Gefühl" kann daher nicht aufkommen // keine Auto-Parkplätze, kein Autolärm, keine Abgase // generell achtsamere Menschen leben hier // angenehmeres Wohnklima

Summary in categories: Less noise 2; Less smell / pollution 2; More space 1; More interaction (more social) 1; higher awareness of ecological issues in general 2; Criticism of carfreeness 1

Results / Analysis:

In both projects do the respondents feel that carfreeness has a positive impact on their well-being. In QV over 90% of the respondents perceive this connection, while the small number of respondents that do not think so is congruent with the number of respondents who do not consider the area as carfree (mentioned as 'open response'). Thus, all respondents who perceive the area as carfree also connect their well-being with this carfreeness. Reasons for this connection – in both QV and AMF – are mainly the reduction of noise, smell, and pollution. In QV another main reason is the increase in space available for social interaction and most importantly for children to play safely. Interesting additional aspects are the aesthetics of a carfree environment, and the fact that people feel that the carfreeness has a positive impact on their personal behaviour.

Arguments

Q. 6.

Pre-moving (Question only for residents!) «Which of the following three arguments was the most important, when you decided to live in QV / AMF?» (Original question in German: «Welches der folgenden drei Argumente war für sie das wichtigste, als sie sich entschieden haben im Quartier Vauban zu wohnen?»)

Q. 7.

Follow-up question: After moving: «And today, after you have lived here for a while: which of the three arguments would you name as the most important?» (Original question in German: «Und heute, nachdem sie eine Weile hier wohnen: Welches der drei Argumente würden sie heute als wichtigstes nennen?»)

Q. 8.

Non-residents: moving? (Question only for Non-residents!) «Which of the following three arguments would be the most important, if you decided to move to QV / AMF?» (Original question in German: «Welches der folgenden drei Argumente wäre für sie das wichtigste, wenn sie sich entschieden würden im Quartier Vauban zu wohnen?»)

Categories to chose from: (no multiple selection possible)

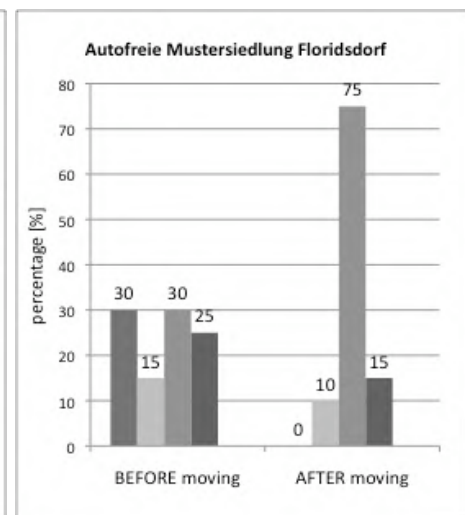
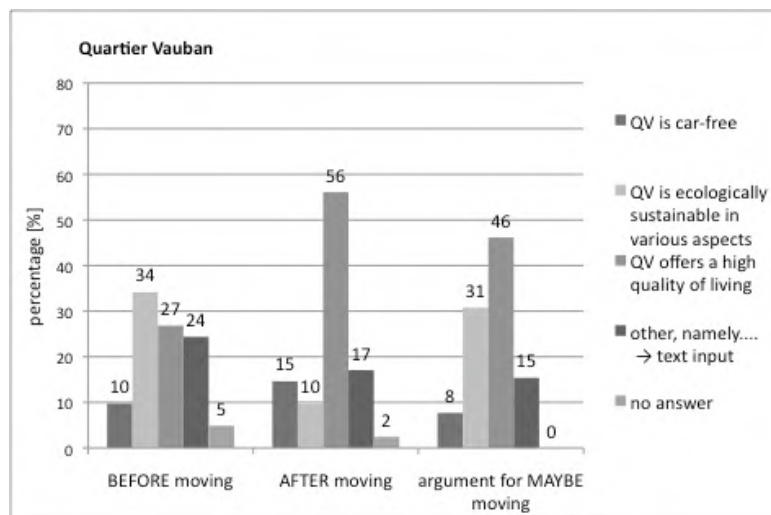
QV / AMF is carfree

QV / AMF is ecologically sustainable in various aspects

QV / AMF offers a high quality of living

Other, namely... → text input

no answer



Text input ('others'): QV Quartier Vauban

PRE-moving: Möglichkeit mit anderen zu bauen // Nähe zum früheren Wohnort // stadtnahes Wohnen // Relativ preisgünstiger Kauf einer sehr guten Wohnung // ich war zu jung. // kinder- und Altenfreundlich // am Rande der Stadt, Natur vor der Haustür // Zufall beim Wohnungssuchen // Stadtnah // naturnah und doch in der Stadt // nebst den obengenannten Gründen, wohne ich seit über 16 Jahren hier und habe mein soziales Umfeld hier

AFTER-moving: Kinderfreundlichkeit // stadtnahes Wohnen // gute Hausgemeinschaft // Einkaufsmöglichkeiten sind in wenigen Minuten zu Fuß zu erreichen+Natur vor der Tür // nahe an der Natur, Vertrautheit mit den Nachbarn

MAYBE Move?: starke persönliche Kundenbindung (als Einzelunternehmer) // schön

Text input ('others'): AMF Mustersiedlung Floridsdorf

PRE-moving: freunde wohnen hier // autofreies und naturnahes wohnen zu einem günstigen Preis // niedrige Kosten // mehrfachnennung wäre nett, gilt alles drei. Unten auch! // Übernahme von der Mutter nach einer Trennung

AFTER-moving: Die Siedlung bietet eine hohe Lebensqualität weil sie autofrei ist // siehe oben und eben die vorher erwähnten MitbewohnerInnen. All das zusammen ergibt eine hohe Lebensqualität! // günstig, grün, nette Leute

Results / Analysis:

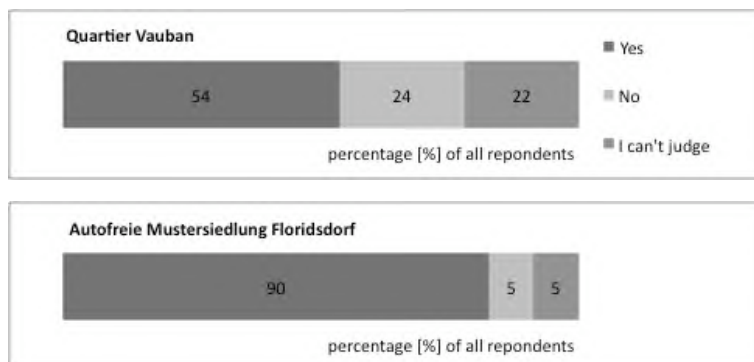
The most interesting result in both projects is the changing relevance of the argument of 'high quality of living'. The majority of respondents did not think of the 'quality of living' as a main argument to move into the project, but after moving an essential share of respondents (approx 30% in QV and 45% in AMF) changed their mind, and do now consider the 'high quality of living' as the most relevant aspect in the project, more important than carfreeness or ecological features. One could translate this into the slogan: *They came for pragmatic reasons, but they stay and enjoy!*

Potential Social Benefits

Q. 9.

Social? «Let's put aside the arguments of 'carfree' and 'ecological', and think about the social benefits in QV / AMF. **Do you consider QV / AMF as being particularly social / socially beneficial?»** (Original question in German: «Legen wir nun die Argumente 'autofrei' oder 'ökologisch' kurz beiseite, und denken an die sozialen Vorzüge im Quartier Vauban. Empfinden sie das Quartier Vauban als besonders soziales / sozial hochwertiges Quartier?»)

Possible responses: Yes / No / I can't judge / no answer



Q. 10.

Follow-up question: Potential? **«If you think about the SOCIAL benefits, that you perceive in QV / AMF. What comes to your mind, spontaneously?»** → text input (Original question in German: «Wenn Sie an SOZIALE Vorzüge denken, die sie im Quartier Vauban wahrnehmen. Was kommt ihnen spontan in den Sinn?»)

QV Quartier Vauban

Stadtteilzentrum, Nähe zu Arbeit und Besorgungen, Erholungswert // Das Leben in den 60 Baugemeinschaften - siehe mein Film. – – Nachbarschaftshilfe, Integration von Ausländern und Demenzzkranken in der Wohngruppe WOG. – – SUSI und die Wagenburgler. // Raum für Kinder und Erwachsene auf den Straßen – – Gemeinschaftsprojekte und selbstorganisierte Betriebe und Einrichtungen wie Quartiersladen, Wohngenossenschaft, Baugruppen, Kinderabenteuerhof etc. – – Viel Kontakt untereinander – – Engagement für den Stadtteil – – Politisches Engagement für Verbesserung des Stadtteils // Nachbarschaftliches Verhältnis // Kinderfreundlichkeit, // viele Kinder/Jugendliche im gleichen Alter wie ich, soziale Gruppen wie z.B. Pfadfinder, Stadttelfeste // soziale Kontrolle // Freundliche Nachbarn, die ähnlich denken

wie ich. // gute Nachbarschaft // Enge und verbindliche Nachbarschaften mit gegenseitiger Hilfe und Unterstützung, soziale Kontrolle von wertvollen Regeln, Selbstverwaltungscharakter und Möglichkeit der Einflußnahme // Gutes Nachbarschaftsverhältnis, gemeinsame Visionen, v.a. für junge Familien viel Nachbarschaftshilfe und Austausch, weniger anonym, wie andere Stadtteile; – – ABER: Deshalb das Nein oben; Sehr wohlhabendes Klientel - die Leute können es sich leisten, ökologisch korrekt und nett zueinander zu sein. // Vorwiegend soziale Kontakte für Familien mit kleinen Kindern. Zusammenarbeit in Arbeitskreisen möglich. // *Vauban ist sozial negativ / unattraktiv: – – - Rücksichtslosigkeit der Bewohner – – - Öko-Egoismus – – - Intoleranz gegenüber nicht-Ökos – – - keine Kirche – – -> Die Bewohner fühlen sich ökologisch mega korrekt, halten viel auf ihre Nachhaltigkeit, sind in den kleinen Dingen des Alltags aber absolut auf die eigenen Vorteile bedacht.* // JUCKS, Kinderabenteuerhof, Spielplätze // Engagement für Demenzkranke – – Hotel geplant, in dem auch Behinderte arbeiten können – – Kommando Rhino wurde geduldet – – Für Kinder ein Paradies // Kinderfreundlichkeit - Bürgerengagement // sehr angenehme, aufgeschlossene, entgegenkommende Mitbürger // engagierter Stadtteilverein, Bürgerhaus 03, Kulturzentrum Diva, Kirchenladen, Quartiersladen und Bio-Supermarkt, Stadtteilstadt, viele Kindergärten, eine Grundschule, genügend Ärzte und eine Apotheke... // Homogene soziale Schicht. – – Aktive Quartiersarbeit (Arbeitskreise) // Fällt mir im Bezug auf andere Freiburger Stadtteile keiner ein. Freiburg ist ansich aber schon auf einem hohen Niveau. // *Sozial hochwertig wegen vielen Kindern und dementsprechend viel Leben auf der Straße natürlich auch wegen der Autofreiheit. Das "sozial Hochwertige" wird allerdings geschmälert durch die Tatsache, dass über die hohen qm-Preise (Kauf und Miete und Sozialmietbindungen laufen jetzt nach 10 Jahren aus ...) eine soziale Selektion statt findet. Das ist ein sehr großer Nachteil des Vauban. Es ist zu akademische geprägt.* // Kinderfreundlichkeit // Bürgerbeteiligung // Intergenerationen, hohe eigenverantwortung, konzentration von Leuten mit einer ähnlichen meinung, unterstützende Nachbarschaft im weiten sinn // *Ich empfinde den Stadtteil Vauban nicht als 'sozial hochwertig', da ich hier zur Miete wohne und an keiner Baugruppe beteiligt war und auch keine Kinder habe.* // man kennt sich – – Um Kinder zu erziehen, benötigt es ein ganzes Dorf. Vauban ist ein Dorf. // Das Vauban bietet zum Teil die sozialen Vorzüge einer Dorfgemeinschaft: Überschaubarkeit, gelebte Nachbarschaft, dadurch vereinfachte Organisation des Familienalltags (gegenseitige Betreuungsmöglichkeiten, Kinder treffen sich auf der Straße...), kurze Wege (genügend Einkaufsmöglichkeiten, um auf wöchentlichen Großeinkauf mit dem Auto verzichten zu können etc.) - andererseits besteht dadurch auch die Gefahr der sozialen Kontrolle bis hin zur Engstirnigkeit (Ökospießertum in Reinkultur...) // *Nachteil, der Stadtteil ist wenig durchmischt, die Familien fast alle im gleichen Alter. – – Sehr viele arbeiten im öffentlichem Dienst.* // viele Leute leben mit offener Haustür. Ich muss nicht mit jedem befreundet sein, aber ich habe eine große Auswahl an Menschen, die auch vor ihrer Haustüre leben wollen. // *Zu viele besserwisserische Akademiker im Vauban, mir fehlt die Durchmischung* // Es gibt viele nette Nachbarn, aber auch wie überall sonst Probleme mit denselben. – – Ideales Viertel für Kinder, obwohl diese manchmal "Narrenfreiheit" haben. // man kennt sich, das Einkaufen ist persönlich und familiär, lebendige Nachbarschaft // Sehr nette alternative Nachbarn, die kein anonymes Wohnen wollen; viele Begegnungsmöglichkeiten beim Spazieren und Einkaufen; attraktive alternative Angebote für Kitas... // Gute nachbarschaftliche Vernetzung, viel bürgerschaftliches Engagement, gegenseitige Hilfe (Kinderbetreuung, ältere Menschen) // Mitgestaltungsmöglichkeiten, Runde Tische, ... // kurze Wege, urban und trotzdem stadtnah, nette Mitbewohner, manchmal allerdings zu sehr mit Heiligenschein // gute Nachbarschaft, Regionalmarkt, Food-coop, viele gute Initiativen, Haus37, Kinderfreundlich, ... // gut funktionierende Nachbarschaft // Kurze Wege zum Einkauf, viele Freizeitangebote, Stadtteilstadt, Möglichkeit zur Mitarbeit im Stadtteil im Stadtteilverein, kinderfreundlich, // Haus 37, Kinderabenteuerhof, KOKO // Gute Nachbarschaft, Hilfs-Netzwerk mit kurzen Wegen,

Summary: Main benefits are the good neighbourhood, a community-feeling, good access and infrastructure for children and families, proximity of facilities and institutions, the possibility of co-determination and participation, and the solidarity with various social groups. The main criticism is the homogeneous clientel, the lack of a social mix.

AMF Mustersiedlung Floridsdorf

Viele nette Kontakte mit NachbarInnen, gemeinsame Unternehmungen // gemeinsame feste – – menschen mit ähnlichen Interessen – – habe enge Freunde hier gefunden // viele Kommunikationseinrichtungen, – – hohe soziale Kompetenz, die offensichtlich mit dem bewußten Umgang von sanfter Mobilität korreliert, – – Gemeinsamkeitsgefühl; // Hier wohnen viele engagierte, sozial denkende Menschen. // gemeinsame Freizeitgestaltung – – kontaktfreudige Nachbarn – – viele Nachbarn sind Freunde geworden – – man kann sich vieles ausborgen – – // Solidarität und Hilfe untereinander. Gemeinschaftseinrichtungen. Miteinander. Gemeinsame Feste und Veranstaltungen. // gemeinsame Aktivitäten // die Leute kennen sich untereinander, man unternimmt gemeinsam etwas, im Hof kann man immer mit jemanden plaudern, es gibt immer Nachbarn, die die Katze füttern, wenn man auf Urlaub ist oder die sich um die Wohnung kümmern, man passt gegenseitig auf Kinder auf, wenn jemand krank ist, hilft immer wer // sehr gute Nachbarschaft – eigentlich sind wir keine Nachbarinnen mehr sondern eher Freundinnen // kontaktfördernde Architektur // Siedlungsfest, Cafe 1 Euro, Spieleabende, Diaabende... // viele Gemeinschaftseinrichtungen, gute Kommunikation, kinderfreundlich, Veranstaltungen, "jeder kennt jeden" // Bessere Nachbarschaftsbeziehungen/hilfe, verschiedene interne Gruppen (Kinder, Basteln, Tanzen, usw.), Hoffest, Bio-Markt,... // tolerante Leute (leider nicht immer), Biomarkt // Workshops, Fitnesscenter, PC-Räume, Gemeinschaftsraum, etc... // Eingebundenheit in eine Gemeinschaft, viele gemeinsame Aktivitäten möglich, Unterstützung bei fast jedem Alltagsproblemchen wie Arztsuche, Ausborgen, „u.v.a. – – Zugang zu Ressourcen: Es wird vieles – Information, Wissen, Sachgegenstände verschenkt... – – gemeinsame Interessen- Empowerment als BürgerInnen // Gemeinschaftsräume, Arbeitsgruppen, Selbstverwaltung, Cafe Ein Euro, Sozialkontakte // Lebensqualität wie in einem kleinen Dorf // Die vielen jungen Familien mit Kindern und der tagtägliche Austausch gegenseitig, da unsere Kinder hier viele gleichaltrige Kinder gefunden haben. Sie gehen miteinander in die Schule, besuchen dieselbe Klasse und verbringen auch viel Freizeit hier in der Siedlung miteinander.

Summary: Main benefits are communal activities, solidarity, and the fact that the residents care about similar things (ecology and social life) and think alike (= 'special client').

Results / Analysis:

The majority of respondents in both projects perceive their neighbourhood as 'particularly social' or 'socially beneficial'. In AMF this share is much higher (90%) than in QV (54%) though. The elaborations of QV-respondents might explain this difference, as they show that people perceive a lack of social cohesion and integration of a broad variety of people. Interesting is, that this homogenous 'clientel' is criticised in QV, while it is appreciated in AMF. In general the social benefits which respondents mention without being given an idea or a list to choose from do all fit into one of the categories that are offered in question No.11.

Q. 11.

Relevance of various aspects «Below is a list of possible aspects of the social environment of QV /MF. For those aspects that you actually perceive in your neighbourhood, please evaluate the importance they have, for you personally. >> How important is the aspect for your quality of life / your well-being in QV / AMF ?» (Original question in German: «Im folgenden sind verschiedene Aspekte des sozialen Umfeldes in Vauban aufgeführt. Für jene Aspekte die Sie in Vauban tatsächlich wahrnehmen, beurteilen Sie bitte deren Wichtigkeit, für Sie ganz persönlich. >> Wie wichtig ist der Aspekt für Ihre Lebensqualität / Ihr Wohlbefinden in Vauban?»)

Health

Security (e.g. street / traffic safety)

Community (e.g. neighbourhood, communal facilities etc.)

Participation / co-determination (participation in development process / in organisation)

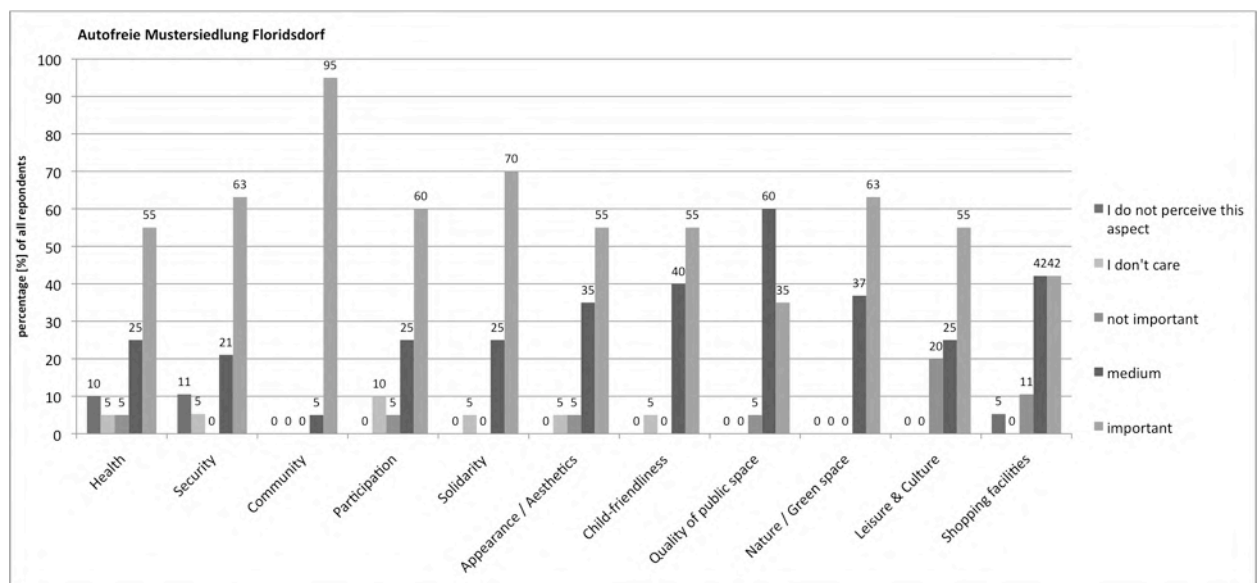
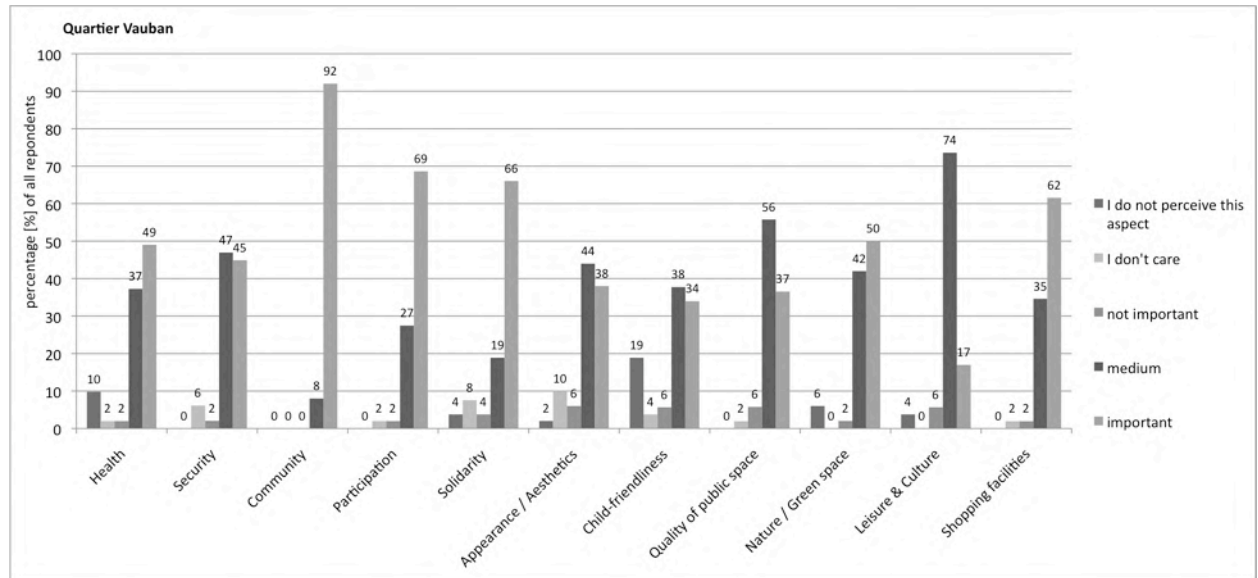
Solidarity (e.g. social equity, fairness etc.)

Physical appearance, aesthetics, architecture etc.
 Child-friendliness
 The quality of public space
 Nature and green space
 Leisure and culture (offer, facilities, events...)
 Shopping facilities

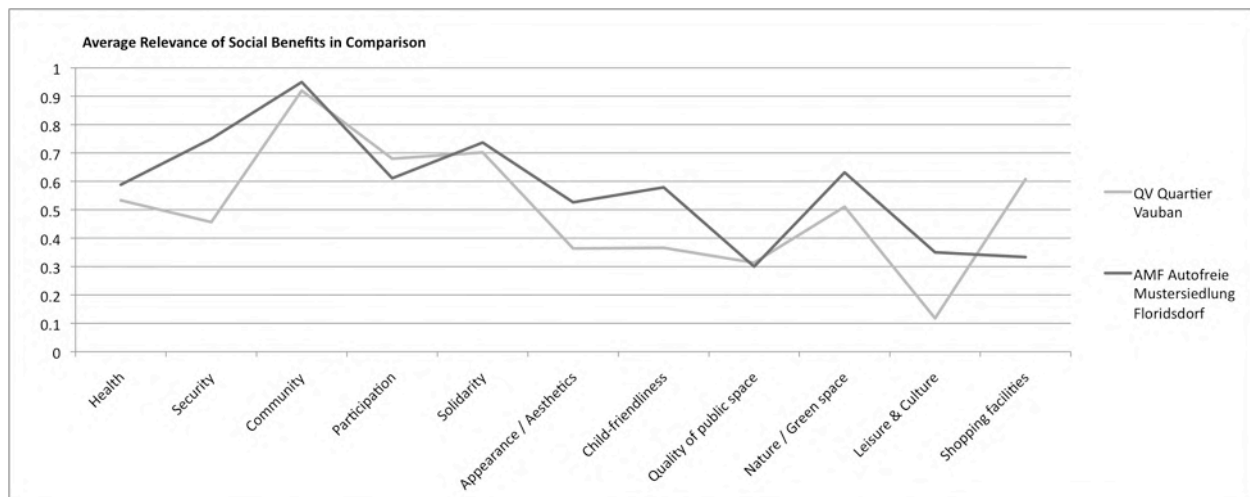
Scale for rating: (no multiple selection possible)

Important / Medium / Not important / I don't care / I do not perceive this aspect in QV/AMF /
 no answer

Results



Average of Relevance



The diagram above shows an average of relevance of the different aspects. For its calculation it is simply assumed that 'not important' is a rate of -1, 'medium' is a rate of 0, and 'important' is a rate of +1. Each rating is multiplied with the number of times it was rated. Then the sum of the 3 results is divided by the total number of ratings ('I don't care' or 'unperceived'-ratings excluded.). This average is useful to avoid a limited interest in the 'important'-rate. The average relativates the 'important'-rate by taking into account whether the remaining ratings go mainly to 'medium' or mainly to 'not important'.

Q. 12.

Follow-up question: Additional aspects? **«If there is an important aspect / social benefit missing from that list, please name it.»** → text input (Original question in German: «Falls auf dieser Liste wichtige soziale Vorteile fehlen, bitte nennen Sie diese.»)

Additional aspects, QV Quartier Vauban → text input:

Bürgerinitiierte Baugemeinschaften strahlen in das Quartier aus - fast alle, die sich im Stadtteil engagieren, wohnen in Baugemeinschaften. // Punkt Solidarität bezieht sich nicht auf das Wohnprojekt SUSI und die Wagenburg. // Hier spielen die Punkte eine große Rolle. Aber diese Gruppen sind inzwischen eine geduldete Minderheit. Dass es einem im Vauban nicht besonders gefallen könnte, kommt in diesem Fragebogen gar nicht in betracht. -> schlecht designte Studie // Grundschule und Kitas vor Ort. // mehr ältere Menschen wäre besser // Sie fragen immer wieder dasselbe und ich antworte immer wieder dasselbe: urban und stadtnah

Summary: The main argument is again the lack of social mix and solidarity with various social groups.

Additional aspects, AMF Mustersiedlung Floridsdorf → text input:

freundliche, umgängliche MitbewohnerInnen - wichtig - - unterschiedliche Nationalitäten - wichtig // Fahrradfreundlich, Nähe zum Erholungsgebiet Alte Donau und Donauinsel // Tierfreundlichkeit

Summary: (There is no real argument additional to the categories above.)

Results / Analysis:

By far the most important social benefits in both project seems to be 'community (e.g. neighbourhood, communal facilities etc.)' rated as being 'important' by 92% of the respondents in QV and 95% in AMF. Moreover this point was not once rated as 'unperceived' or 'I don't care' or 'not important'. The average relevance (see diagram) shows the same importance of community.

According to the average relevance, the second most important social benefit is 'solidarity (e.g. social equity, fairness etc.)'. As the aspect does not indicate 'social mix', it is probably understood as solidarity amongst the existing project-population, which is certainly the case, considering the high rate of communal activity and infrastructure and well-rated neighbourhood.

However, this does not touch the issue of solidarity amongst broader groups of society, which could be welcomed and included in the project, but in fact are not, which has been criticised throughout the survey (particularly for QV).

'Participation / co-determination (participation in development process / in organisation)' is rated similarly high in average. In QV the 'important'-rate is even a bit higher than solidarity, while in AMF it is below solidarity, and has similar 'important'-rates than security, nature/green space, and quality of public space/aesthetics.

The main differences between QV and AMF become apparent when looking at the average relevance (table xy). 'Security (e.g. street / traffic safety)', 'Child-friendliness' and 'Physical appearance, aesthetics, architecture etc.' are rated less important in QV than in AMF. This is probably due to the fact, that QV is not really carfree, and as long as there are some cars still around, this is a danger for residents, particularly for children, and furthermore it is disturbing the eye. Surprising is that 'Nature and green space' and 'Leisure and culture (offer, facilities, events...)' are also perceived as less important in QV than in AMF. From participant observation and from several sources it becomes obvious, that there is more generous green space and a broader variety of cultural offers in QV than in AMF. However, the green space might be conceived as less relevant in QV, because it bordered by nature and forest anyhow, and the leisure might be more relevant for AMF-respondents because they have their generous communal facilities in mind. What is very obvious though is the rating for 'Shopping facilities', which is much higher in QV, simply because there are shopping facilities, and in AMF there are none. These shopping facilities are highly appreciated by the QV-respondents, and rate similarly high than solidarity and participation.

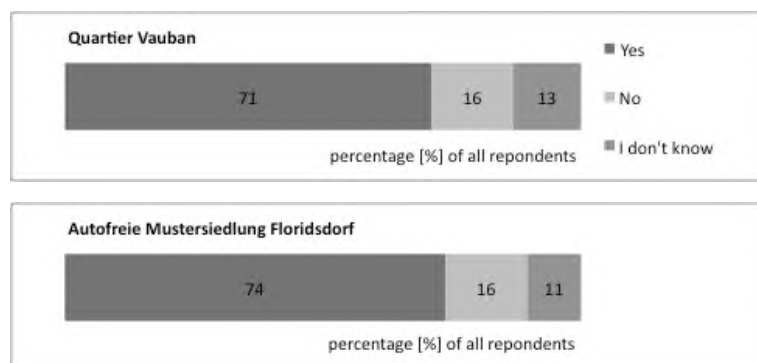
The lowest ratings in AMF – apart from 'Shopping facilities' – is 'The quality of public space'. This does not necessarily mean that the public space is not perceived as having high quality. All it shows is that this quality – whether perceived or not – seems not that relevant to the respondents. None of the respondents did not perceive the quality of public space at all, and the strong 'medium'-rating proves that it is even perceived as a positive aspect, just not as much as others.

The lowest rating in QV is the aspect 'Leisure and culture (offer, facilities, events...)'. This is surprising, and an explanation has yet to be found.

Q. 13.

Social because carfree? (Question only for people who answered question No. 9 « Do you consider QV / AMF as being particularly social?» with 'Yes' or 'I can't judge') **«Do you think, these social benefits are caused or strengthened by the fact, that the area is carfree?»** (Original question in German: «Glauben Sie, dass die genannten sozialen Vorzüge dadurch ausgelöst oder verstärkt werden, dass das Quartier weitgehend autofrei ist?»)

Possible responses: Yes / No / I don't know / no answer



Follow-up question: Why? **Elaboration:** (optional) → text input

QV Quartier Vauban

Man trifft sich, unterhält sich ohne Lärmbelästigung, ich komme mir oft wie auf dem Dorf vor, obwohl das der am meisten verdichtete Stadtteil Freiburgs ist. Nicht auszudenken, wenn jeder hier vor seinem Haus ein Auto stehen und damit zur Arbeit, zum Einkauf, zum Sport fahren würde und zurück. // Nicht ausgelöst, aber verstärkt. Viele Autofreiparteine verlangen nach kurzen Wegen, gegenseitiger Unterstützung und anderer Lebens-Kultur. Autofrei wird aber immer weniger wichtig (wegen Bequemlichkeit und Zuzug von 2.Generation), das führt zu erheblichen, negativen Veränderungen. Derzeit dafür keine Lösungen in Sicht. // Leben im öffentlichen Raum ist erst dadurch richtig möglich. Keine Sorge, dass Kinder totgefahren werden. Treffpunkte auf Straße (Spiele, kommunikative Zusammenkünfte, etc.) Spontanes Miteinander // Mein Eindruck ist, dass das Verkehrskonzept zum einem zum gemeinsamen Nachdenken anregt, und auch Räume im öffentlichen Leben schafft, die sonst eher zugeparkt sind. So habe ich auch im Erdgeschoss in der Regel freie Sicht auf meine Nachbarhäuser, und ein lebendiges Straßenleben // mehr Platz auf der Straße, kurze Wege ohne Auto und dadurch Kontaktmöglichkeiten, schöneres Ambiente des Stadtteils // Autofreikonzept zieht spezielle Menschen an, die alternativ und engagiert sind, und fördert so eine allgemeine Kultur; – – Neben dem Autofreikonzept halte ich ebenso wichtig und zentral für die sozialen Vorzüge, dass es keine privaten Einzelkäufer gab und gibt, sondern sich lediglich Genossenschaften oder Baugruppen um Grundstücke bewerben durften -> das hatte einen großen Einfluss auf die Projekte und die Art der Menschen, die im Vauban wohnen // Ich gehe hier von einem indirekten bzw. vermittelten Einfluss aus: Weil die Menschen, die autofreies bzw. reduziertes Wohnen schätzen, in der Regel auch sozial und ökologisch engagiert sind, gibt es hier Zusammenhänge. // Autos dominieren und zerstören durch Lärm, Platzbedarf das Leben. Autos sind unvereinbar mit Kindern, Fußgängern, Radfahrern -sie drängen alles andere an den Rand. Das Leben in einem Viertel, in dem die Autos nicht die ersten Geige spielen (es gibt immer noch zu viele) ist ein ganz anderes // man kann so ungestört im Aussenraum sein.

Summary in categories:

Urban design: Density & short distances 3; More public space & more activity 5; Aesthetics 2;

Mobility: Safety 1; Community 2; Clientel 3

AMF Mustersiedlung Floridsdorf

Umwelt- und soziales Bewusstsein der Menschen hier // gemeinsame Interessen // siehe vorstehende Begründung bzgl. Korrelation v. soz. Kompetenz und Vernunft hinsichtl. MIV // viele Menschen mit ähnlichen Lebenszielen wohnen nahe beisammen // Zum einen ist die Siedlung ja nicht 100%ig autofrei - einige MitbewohnerInnen haben sehr wohl Autos. Auf andere Namen angemeldet usw. – – Zum anderen glaube ich, dass sich in einer solchen "alternativen" Siedlung zum großen Teil nur eine gewisse Schicht von Menschen ansiedelt. Es sind glaube ich genau diese Menschen, die diese sozialen Vorzüge auslösen bzw. verstärken. Aber eben nicht die Tatsache, dass die Siedlung offiziell autofrei ist. – – // es ist die gemeinsame Verantwortung, die irgendwie spürbar ist, dass jeder weiß, er muss auch zum Funktionieren, zum Wohlbefinden, zur Sauberkeit,... beitragen // es sind meistens die "gutmenschen" die autofrei sind und hier eingezogen sind. bei uns gibts ja auch die "normalis" die widerrechtlich ein Auto haben (es tut leider von den Verantwortlichen keiner etwas dagegen), aber die kennen wir nicht näher und die tragen auch nichts zur Gemeinschaft bei! // generell weniger materiell bzw. an Demonstration von Status interessierte BewohnerInnen // nicht durchgängig, aber doch viele gemeinsame Anknüpfungspunkte, Interessen, Haltungen - fördert den Austausch. - gemeinsame "Vision" – – auch gemeinsam innovative Projekte sind möglich // allg. Bewusstsein f. Lebensqualität // Vor allem durch die vielen Gemeinschaftseinrichtungen hier in der Siedlung, die ohne die Autofreiheit nicht realisierbar gewesen wären.

Summary in categories:

Density & short distances 1; More resources (space & money) for communal facilities 1; Clientel 10

Results / Analysis:

The responses are very similar for both projects, with over 70% 'yes', precisely 16% 'no' and a little over 10% of respondents being undecided or unsure. The respondents' explanations for how carfreeness might cause or strengthen social benefits, can be distinguished by the issues of mobility and of urban design. According to the QV-respondents a reduction of car-traffic and new forms of mobility do not only increase street-safety, but they also increase the opportunities and reasons for social contact. The main explanation in QV however lies in the new urban form that results from carfreeness. Car-reduction opens up room for more public space, and public space with more activity, which – along with short distances and dense living – allow more social contact and a better feeling of community.

AMF-respondents also mention the new urban form as an explanation, because it is dense and because it opens up space for communal facilities. But the essential explanation for the social benefits in AMF (in fact mentioned spontaneously by over half of the respondents) is the fact, that the carfree concept attracts a 'special clientel', and this clientel is more willing to invest in social sustainability and to take care of the community etc.

Curriculum Vitae

Personalien

Sabeth Tödtli

Gratstrasse 3, CH-8143 Uetliberg, 079 484 97 36

Geboren am 7. April 1984 in Zürich

Heimatort: Altstätten SG, Schweiz

Ausbildung

7 Jahre Rudolf-Steiner-Schule Sihlau, Adliswil ZH, 1990-1997

2 Jahre Sekundarschule, Horgen ZH, 1997-1999

4 Jahre Kantonsschule Enge, Zürich, 1999-2003

- Maturarbeit 2003: "Zürich West – Sulzer-Escher Wyss - vom Industriequartier zum Trendquartier"

Architektur-Studium, ETH Zürich, 2004-2008, Abschluss: Bachelor of Science (BSc ETH)

- Glasgow (University of Strathclyde), Schottland, Erasmus-Austauschsemester, 2007

4Cities Unica Euromaster in Urban Studies, 2009-2011, 2-year interdisciplinary joint venture programme (Info: www.4cities.eu), Abschluss: Master of Arts (MA)

- Brüssel (Vrije Universiteit Brussel & Université Libre de Bruxelles), 1 Semester
- Wien (Universität Wien), Österreich, 1 Semester
- Budapest (Hungarian Academy of Sciences), Blockseminar
- Kopenhagen (Københavns Universitet), 1 Semester
- Madrid (Universidad Complutense & Universidad Autónoma de Madrid), 1 Semester

Studiumsrelevante Projekte:

- 1. Preis bei der ETH 'ecoworks' Initiative für das Projekt 'Eat less CO₂', 2008
- 'INEX Sustainability Challenge', 1-semesteriges Seminar zu vielfältigen Themen der nachhaltigen Entwicklung, 2010 in Wien
- Mitarbeit bei einem Projekt zur Aufwertung der Gumpendorfer Strasse in Wien, 2010
- Masterarbeit: "The Social Benefits of car-free living environment" (Arbeitstitel), 2011

Anstellungen

Praktikum bei der RZU (Regionalplanung Zürich und Umgebung), 2004, 6 Monate

Inhaltliche Arbeit für die Website www.energie-effizienz.ch (nicht online), 2007, 3 Monate

Praktikum im Architekturbüro Meyer und Gessler Architektinnen, 2008, 6 Monate

(Projektbeispiel: http://www.amjgs.ch/praxis/im_bueel_glarus/studie)

Projektleitung, Sanierung und Aufstockung dreier Mehrfamilienhäuser in Opfikon, für Meyer und Gessler Architektinnen, 2008-2009, 1 Jahr

(Siehe: http://www.amjgs.ch/praxis/rosenstrasse_opfikon)