Growth Management in the US

Between Theory and Practice

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GROWTH MANAGEMENT IN THE US

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ASHGATE

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List of Abbreviations

ABAG	Association of Bay Area Governments
ACSP	Association of Collegiate Schools of Planning
APA	American Planning Organization
BART	Bay Area Rapid Transit
C/CAG	San Mateo City/County Association of Governments
CEQA	California Environmental Quality Act
COG	Council of Government
GIS	Geographical Information System
HIP	Housing Incentives Program
ISTEA	Intermodal Surface Transportation Efficiency Act
LAFCO	Local Agency Formation Commission
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
SANDAG	San Diego Association of Governments
SCAG	Southern California Association of Governments
TLC	Transportation for Livable Communities Program
TOD	Transit oriented development
UGB	Urban Growth Boundary
ULI	Urban Land Institute
US	United States of America

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Chapter 1

Introduction

Background and Problem Definition

In areas that prosper from economic growth, like the San Francisco Bay Area, the population is likely destined to grow. Yet the combination of economic prosperity and population growth places a pressure on land use. In the US, but not only there, this pressure brings about a sprawling urban development pattern. As extensively explored in scholarly research, sprawl causes negative impacts on the environment and on the quality of life, resulting in, for example, decreased open space and environmental endangerment (Hayden 2002; Zovanyi 1998). At the same time, in areas confronted with urban growth, increasing real estate prices threaten the affordability of housing and commercial space.

Growth management has provoked critique as much as praise since it first emerged as a distinct planning concept in the 1960s. In retrospect, the roots of growth management in the US can be found in the environmental movement (Nelson 1977; Zovanyi 1998; Diamond, Noonan, Patrick 1996). The 20th century saw both an increased ecological consciousness, and, at the same time, the emergence of changes in land use planning related to growth. A variety of approaches to control growth have been cultivated ever since. These have been captured through the notion of 'growth management'.[1]

Many growth management ideas of do not seem to align with the rather growth-promoting planning traditions of the US, however.[2] Development in the US predominantly takes place in greenfield areas at the urban edge. Moreover, planning methods such as zoning and subdivision have supported a sprawling settlement pattern.[3] Further encouraging sprawl are the profit-motivated concerns of developers and landowners, and an institutional and legal framework in the US that has characteristically favored suburban development over rehabilitation of the urban core.

As urban sprawl continues and, in recent years, has drawn increased attention from many planners and government officials, growth management research has expanded in the US. Today, a substantial amount of literature related to the topic is

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1   An in-depth discussion of different growth management definitions is provided in Chapter 2.

2   They will be investigated in further detail in Chapter 2.

3   'Since at least the early 1960s, zoning has been faulted for tolerating, and even fostering, wasteful and unsightly patterns of land use.' (Platt 1996).

available.[4] An examination of this research shows that, for many years, debates have been dominated either by documenting the practical implementation or observing specific aspects of growth management. These investigations are helpful in tracking ever-evolving state and local government approaches to growth management, such as the implementation of urban growth boundaries, the effects of containing growth on housing prices, or smart growth.

As growth management per se represents a conglomerate of different activities, growth management-related research generally seeks to provide an overview of the approaches utilized. A thorough evaluation of growth management programs, on the other hand, is missing. The need for such evaluation is discussed by Carruthers (2002).[5]

In addition, currently available research has predominantly produced a large number of studies that rely on quantitative analysis or standardized surveys.[6] By this means, we now have knowledge about which local jurisdictions are applying what kind of tools. Yet have not gained insight into the ways stakeholders choose their tools, nor of problems they encounter during implementation.

For a profound understanding of growth management, not only a thorough evaluation, but also the connection to planning theoretical aspects is needed. The theoretical basis of city and regional planning is constantly evolving. Likewise, growth management literature has not sufficiently incorporated planning theory considerations. Interestingly, the need for a theoretical reflection of growth management was explicitly stated by a representative of the American Planning Association during a roundtable discussion of the practice-theory gap at the 2004 ACSP congress in Portland, Oregon. So far, however, growth management research has not addressed this issue.

Additional areas in need of further research include the evaluation of growth management based on a qualitative stakeholder-centered method and the incorporation of planning theory discourses.

Dealing with sprawl lies at the heart of city and regional planning in California. Accordingly, growth management is a critical activity in the state. Cities and counties in California have played their part in shaping growth management over time. Since California has no explicit state growth management legislation, growth management

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4   Literature on the procedures of growth management is almost as plentiful as for sprawl. (See for example Brower et al 1989; Daniels 1999; Freilich 1999; Hamill et al 1989; Porter 1986; Porter 1997; Nelson et al 1995; O'Neill 1999; Rothenberg Pack 2002; Stein 1993; Szold and Carbonell 2002; Urban Land Institute 2000).

5   Evaluation was from the very beginning of growth management an issue that should have been performed, but it was never carried out. This becomes clear in one of the first surveys of growth management strategies in California conducted in 1976, which pleads for the evaluation of growth management techniques (Office of Planning and Research Governor's Office 1976).

6   These studies comprise among others Glickfeld and Levine (1992); Landis et al (2002).

strategies has been developed predominantly on the local level and include urban containment, financial incentives, and environmental protection.[7]

Attempts in the San Francisco Bay Area to control urban growth began at a relatively early stage compared to other regions of the US. Thus, a wide range of approaches are demonstrated in the region. Some of the country's earliest growth management experiments occurred in the Bay Area and continue into the present, including the Petaluma Plan (1970s) the city of Mountain View's transit-oriented development approaches (1990s) and the regional planning exercise known as the Smart Growth Strategy Livability Footprint Project' (2000s). The application of a wide range of growth management tools continues[8] and stakeholders in the San Francisco Bay Area have had opportunities to become familiar with various stages of growth management.

Issues in growth management the area has to address are on the one hand economic development and growth pressure, on the other hand, its natural potential such as wetlands and coastal zones is jeopardized. Today, the driving force for growth is the Silicon Valley, the world famous 'spatial symbol' of micro electronics,[9] and the cities surrounding it. Long-term growth pressure, the complexity of land use demands and the continuity and experience of applying a wide variety of growth management approaches make the San Francisco Bay Area an ideal testing ground for an evaluation of growth management. A close examination of the region can provide lessons for other states that, like California, do not have specific programs to regulate growth (Glickfeld and Levine 1992).[10]

An assessment of the Bay Area yields many critical questions, including: How does a planning approach function today, where current planning paradigms require collaboration, complex ways of thinking and dealing with ever-changing knowledge and uncertainties? Which growth management activities have proved to be successful and, which do planning practitioners actually apply? In what ways can planning theory contribute to future-oriented growth management? These questions point to the overarching consideration of this study: Which aspects of growth management prove most applicable to today's multifaceted planning?

Aims and Research Questions

This project is motivated by an attempt to analyze growth management as a tool for controlling land use expansion in the US. My investigation intends to deal with many of the issues mentioned in the previous section, which still appear to be underrepresented in growth management research. In particular, current growth

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7 Findings of a 1994 survey show that one-third of all urban growth boundaries in the US were located in California (Pendall 1994).

8 On the local level, 907 local growth management measures had been enacted by the end of 1988 (Glickfeld and Levine 1992, 5).

9 On the development of Silicon Valley compare Castells and Hall (1996).

10 The majority of US states, 39 in total, can be assigned to this category.

management approaches will be evaluated by means of a qualitative analytical framework derived from planning theoretical considerations. These evaluations are based on in-depth interviews with stakeholders in growth management with the San Francisco Bay Area as the main case study region.

The project is based on the following main objectives:

1. Characterizing the development and the underlying goals of growth management in the US.
2. Analyzing the different growth management strategies and approaches in use and their advantages and disadvantages for usability in practice based on planning theoretical considerations.
3. Defining requirements for future oriented growth management approaches.

The following research questions will set the path for the investigation:

- Which planning theories create the basis for growth management strategies in the US, and to what extent do different planning theories influence planning practice, viewed through the lens of growth management?
- How did the development of growth management in the US occur, and which major trends can be identified over time?
- Which growth management activities are specifically applied in the San Francisco Bay Area?
- Which positive or negative experiences were made concerning the different growth management approaches by relevant stakeholders?
- Which requirements for applying growth management can be formulated, and which aspects should be considered important for future-oriented growth management?

Moreover, the broader context of the project provides a window through which we might gain a better understanding of:

- The relationship between planning theory and planning practice approaches.
- Evaluating different land use planning strategies.
- A changing understanding of planning.

Research Framework and Methodology

The research framework combines a theory-led and practice-oriented approach.

Literature Review

On the basis of an in-depth analysis of literature and planning documents, spatial planning approaches to growth management in the US will be characterized. In

addition to the situation in the US in general, special emphasis will be given to the case study region, the San Francisco Bay Area.

Classification of Growth Management Activities

My theoretical considerations begin with a discussion of the ways planning theories are absorbed into practice. One consideration is that a range of Meta theories results in a multitude of typologies or planning styles. These typologies are utilized to develop a classification of growth management activities, thus attempting to bridge a gap between planning theory and practice. This research framework is kept simple on purpose, as it should be communicated to and discussed with planning practitioners.

Case Study

The research questions posed above require detailed investigations in the US. The case study investigation focuses on the San Francisco Bay Area, shaped as an administrative entity by its nine counties. The empirical work of the project makes use of the experiences of different stakeholders in spatial planning—especially in the sphere of land use. In addition, two San Francisco Bay Area growth management projects will be examined to deepen the empirical analysis. Both projects demonstrate an innovative as well as a comprehensive approach rather than a reliance on one single instrument. The investigation will follow a SWOT analysis to explore the strengths, weaknesses, opportunities and threats, associated with applying these approaches. The classification of growth management activities mentioned above will be utilized for the case study.

Interviews

Interviews with stakeholders in land use and growth management were carried out to obtain information on the modes of application of different growth management activities. In addition, the stakeholders were asked to comment on the different categories of growth management derived from planning theory. The interviews involved practitioners from the planning or community development departments of nine counties as well as from at least one city in these counties. Deliberately, I did not develop a set of comparable criteria to select the cities involved in the investigation. The intent was, rather, to gather insight into the diverse spectrum of growth management practice in the San Francisco Bay Area. I also interviewed environmental and transportation planners, developers, historians, researchers and other practitioners outside local government to broaden the scope of the evaluation, I developed a questionnaire that served as a guideline for the interviews.

Workshop

A workshop was organized to shed light on selected results of the interviews, which is a major milestone of the research project. It focused on the findings of the interviews, which were presented in a summary format. All of the interviewees were invited to participate and share their experiences with growth management in an open discussion.

Policy Recommendations

The empirical component of this analysis culminates in developing a set of policy recommendations for future-oriented growth management. These express different notions of interdependence in growth management.

Project Approach

Based on the reflections mentioned above, this project will be divided into two major parts. Firstly, the project will explore the influence of different planning theories on planning practice with respect to growth management. Secondly, the results of an empirical analysis will be presented with observations regarding the execution of growth management projects in the San Francisco Bay Area, and how future projects can be improved.

The project was conducted in the following phases, which correspond to the chapters in this analysis:

Describe the Development and Approaches to Growth Management (Chapter 2)

To assess growth management strategies in the US   especially from the perspective of a European planning background and with European planners as a target audience   it is important to examine US planning traditions and to describe the role of growth management in this particular context. Motivations for the application of growth management, starting points, milestones and recent developments in growth management will be highlighted in this part of the project. This focus will be on trends in the US in general (for example state growth management programs and 'smart growth') to capture the different notions of growth management in this particular planning realm. Additionally, where appropriate, examples from California will be highlighted.

Define the Theoretical Framework (Chapter 3)

The hypothesis underlying the theoretical considerations of the project is that growth management—perceived as a set of fragmented instruments—has over time been shaped by different theories. These theories are not embedded in a consistent

discussion but, rather, compete with each other. Planning theories have thus brought about different strategies and approaches in planning practice, and these are not always consistent with each other. The metaphor of a 'store' of planning practices is utilized in this respect, where communities mix and match what they consider appropriate for their growth management approach.

The attempt to connect different planning theories in order to overcome fragmentation and thus enhance the performance of planning practice is one of the fundamental considerations of my theoretical approach. Current planning theories will be explored, starting out from a meta theoretical level. To break planning theory down into a more practicable sphere, planning theory typologies will be investigated to develop a research framework and enable the clustering of growth management approaches.

Classify Growth Management Activities (Chapter 4)

This section presents the link between the planning theoretical classification developed in Chapter 3 and the knowledge about growth management from Chapter 2. Moreover, it provides an outline for the empirical component in Chapter 6. As growth management techniques have been applied for decades, a range of approaches (for example growth caps, urban growth boundaries, and new urbanism-related design features)[11] are available for analysis. These approaches will be examined using the theoretical framework developed in Chapter 3.

Characterize Growth Management in California and the San Francisco Bay Area (Chapter 5)

This chapter contains important background information for the empirical component of the project. Here, I will investigate which state growth management laws are in place in California. These regulations have proven to influence local governments' growth strategies to a great extent. In addition, the features of the case study region, its growth patterns, and the development of growth management strategies will be discussed.

Evaluate Growth Management in the San Francisco Bay Area (Chapter 6)

Chapter 6 will display main findings of a stakeholder-centered investigation of growth management in the case study region. In addition to results concerning growth management activities discussed in Chapter 4, this chapter analyzes two growth management projects in place in the Bay Area: Transit-Oriented Development, and the San Francisco Bay Area Livability Footprint Project.

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11 New urbanism is a recent planning concept in the US based on neotraditional design patterns of the urban place. A brief description of the concept of New Urbanism is included in Chapter 4.

From this analysis, requirements for future-oriented growth management will be derived, supplemented by a set of policy options. Key to these requirements and options will be the notion of interdependence in growth management, a principle based on the theoretical considerations in Chapter 3.

Draw Conclusions (Chapter 7)

Based on the findings of previous chapters, the conclusions of my research will be drawn primarily with regard to the different notions of interdependence in growth management: regional interdependence, interdependence between stakeholders, and interdependence in planning theory. Moreover—with future research projects in mind   my investigation will conclude with a discussion of the potential future direction of growth management in the US.

Chapter 2

Growth Management: Background and Development

This chapter will bring us closer to growth management practice. In particular, I will introduce growth management as a set of planning activities embedded in US planning traditions. In doing so, I will describe how it evolved and what the relevant issues are. The explorations are based on a thorough review of US literature dealing with the topics of land use and growth management.

As a first step, a description of specific US land use traditions is provided to investigate how and why growth management developed. Furthermore, the various approaches to growth management have to be considered as embedded in US planning traditions. This tackles a broad range of issues such as market orientation, institutional and legal framework, planning tools, and many more. Two planning characteristics which are both salient and notorious are urban sprawl and its negative effects. It will be observed from various angles and set the stage for characterizing basic land use trends in the US of the past and the present.

Excursion into American Planning Traditions: Reasons for Land Use Expansion in the US

The particular way in which growth management is dealt with must be analyzed within the particular planning context of the US which has generally been an urban growth situation.[1]

Land Use Development in the US from a Historical Perspective

Land use development in the US is best understood as a product of socio-economic development. The complexity of this connection has undergone great shifts, since it is determined by local, regional, state, nationwide, and even global issues.

Urban growth is most directly determined by a growing population. The US has been and still is a country of immigration. It is commonly known that population growth is not evenly spread in the US, rather it tends to follow economic development. The West and South, especially California, Texas and Florida, have been the preferred locations (Porter 1997). However, other regions such as Boise,

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1 Urbanization is related to progress, which is still considered as something positive. Moreover, it is—as mentioned in Chapter 3—part of the concept of modernism.

Idaho, or Las Vegas, Nevada, are currently applying more aggressive marketing strategies to attract people and promote growth.

The development of (new) settlements is part of the American culture and is based on the false impression that developable land is available in unlimited quantities. While there are different settlement patterns in the Western and in the Eastern part of the US,[2] it can be observed that in general urbanization is overtaking about 1 million acres of agricultural land per year (Daniels 2001b). One might assume that this rapid urban growth presented a problem only in the 1950s or 1960s, when the expansion of communities was considered part of economic progress. However, the problem continues today. From 1982 to 1997, urbanized land expanded from approximately 51 million acres to approximately 76 million acres, a 47 per cent increase (Fulton et al 2001). Moreover, the rate of urban land conversion in the US is higher than the increase of population; hence urban density is decreasing (Fulton et al 2001).

Not only is the rapid expansion of urban growth important, but so too is its mode of execution. Sprawl, the auto-oriented suburban development characterized by low density subdivisions on the metropolitan fringe,[3] is the dominant pattern. While sprawling development can also take the shape of commercial strip malls along major roads, sprawl is generally defined as residential development in expanding suburban areas with more than 1500 people per square mile (Daniels 2001).

The American mode of sprawl and suburban development is closely connected to people's housing and living preferences. Since the 1950s, suburbs consisting of single family homes have been the desired location for US American lifestyles. Following this trend, the net in-migration to suburbs between 1985 and 1990 came to 8.3 million people (Stegman 1995). In the poplar imagination, suburbs have been associated with low crime rates, better schools, and fewer ethnic minorities, in contrast to the inner cities. Hayden, however, calls suburban development paradoxical, because a rural lifestyle is idealized, while more and more land is is converted to urban space (Hayden 2002).

Moreover, sprawling development is accompanied by the decline of older urban areas such as inner cities, and suburbs near the inner cities, or 'suburbs of the second and third ring'. Daniels reports that 'many people perceive the countryside as a safer, cleaner, cheaper and more rewarding place to live, compared to the congestion, crime and high property taxes of cities and the monotony and rising taxes of the suburbs' (Daniels 2001). These areas decline as growth bypasses them, leaving the older urban areas in a stage of 'hopelessness' (Porter 1997).

Suburban growth has been going on for decades—therefore not every suburb is alike, and some are more attractive than others. From the 1960s on, economic development followed residential sprawl so that additional building types, such

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2   In 1997, ten of the 15 most densely populated metropolitan regions in the US were located in the Western states California, Nevada and Arizona, while the Northeast and the Midwest are urbanizing large portions of land without a significant increase of population (Fulton et al 2001).

3   This is the condensed version of one of Fulton et al's definitions (Fulton et al 2001, 3).

as 'big box' retail stores, were added to the building stock of single family homes (Hayden 2002). This retail building boom is expecially clear in California. Landis states with regards to the 'Golden state' that the national trend towards suburban business building undermines California's attempts at growth management (Landis 2002).

Today, suburbs are the location of jobs and housing, and their population is steadily becoming more racially and ethnically diverse (Szold 2002). This does not mean, however, that suburbs are vital neighborhoods. Older suburbs are often alienating places to reside, and yet they scarcely sustain affordable housing prices. Suburban living is stretched between different locations for living, working, shopping and recreation. This lack of geographical focus dampens the need for a sense of place in the areas where people actually live (Funders' Network for Smart Growth and Livable Communities 2000). Despite their interdependence, cities and suburbs increasingly differ socioeconomically (Association of Bay Area Governments 1997). The intertwined relation between the inner city and a conglomerate of diverse suburbs indicates that growth management has a regional dimension.

The land use pattern that has been created by sprawling development is well-known. It is characterized by Daniels as follows (Daniels 2001):

1. Single family homes on large lots between 1/4 acre to 10 acres.
2. A separation of living and working spaces.
3. Extensive networks of roads.
4. Shopping malls, office parks, commercial strips, and residential subdivisions.

In sum, (1) this settlement pattern has represented the lifestyle preferred by most US families in the past few decades, and accordingly, (2) suburbs in the US have become the places where most people live and work (Marshall 2000).

Over these same decades, a contradictory development to urban growth has occurred: From 500,000 to 1 million brownfields from industrial and commercial sites lie abandoned. These sites can also be found in the San Francisco Bay Area.[4] In addition to brownfield sites, 10 million housing units are vacant (US Census Bureau 2000). Krieger mentions that 1 in 12 houses is currently vacant in the US (Krieger 2002). This problem is to a wide extent linked to regional US-wide disparities. Metropolitan areas in the so-called 'Rust Belt' like Pittsburgh, Cleveland and Detroit are losing population, while the coastal areas continue to grow. Brownfield spaces are unattractive for developers, since they might be contaminated sites, and decontamination is both costly and time-consuming. The unwillingness to convert brownfields in many parts of the US derives from American planning's reliance

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4   Since the decline of the 'dot com' businesses during the years 2000 and 2001, a large number of office parks have been abandoned. For example, the city of San Jose contains 50,000 vacant office units.

on market mechanisms; this connection is described in greater detail later in this chapter.

In sum, growth continues following the slogan: 'build now, worry later' (1000 friends of Florida 1992, 2). For the state of California, the 2000 Statewide Housing Plan projects that 200,000 new housing units per year will be needed until the year 2020 (California Department of Housing and Community Development 2000).[5] This prediction will have further consequences for the state's development not only in terms of housing, but for the mode in which planning deals with future growth.

Supportive Factors for Growth

Several policies and tendencies have shaped today's sprawling land use pattern in the US. Supportive factors for growth have been—among others—the market orientation of the population, the institutional and legal framework in the US, and the mode of executing planning activities. Many of these factors that have caused tremendous growth effects will be described in the following paragraphs. They help complete the picture of growth-related planning traditions and planning decisions in the US.

Market orientation of the population   While making their lifestyle decisions, Americans are typically focused 'on the house' (Hayden 2002). As land is getting more expensive, real estate property is becoming more valuable as well. Home and property are assets which have to be protected and defended (Silberstein and Maser 2000). In this respect, individual decisions are driven by market forces, and embedded in economic competitiveness—for those who are able to participate in this competition. Property rights obtain an outstanding position in this interplay. Privately owned property is considered to belong in the sphere of personal freedom. This leads to the fact that property rights and land use regulations, the latter being provided by planning, are perceived as contradictory.[6]

In this regard, what planners do or consider relevant in terms of the quality of life of the community as a whole often stands in direct contrast to the property-driven interest of individuals. Hoch addresses the point when he states: 'Landowners usually resent the regulations that reduce their own discretion and favor those that curb the discretion of others. Hence, they respond ambivalently to planning' (Hoch 1994, 9). Herein lay the roots of NIMBYism,[7] a movement which plays a decisive role in US planning.[8]

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5   An urban footprint model developed by University of California, Berkeley, researchers projected a population of 93 million for the state of California in the year 2100 (Landis et al 2003).

6   Meyers mentions landowners' perception of an 'unconstitutional intrusion' of their property rights by growth management regulations (Meyers 1997, 22).

7   NIMBY is an acronymic expression for 'not in my backyard'.

8   Tregoning et al (2002) reveal 'They [the citizens] want to preserve green space, but don't necessarily see how that related to their choice of a house built on former farmland.

Figures regarding homeownership also correspond to the market orientation of the US population. The rate of homeownership increased between 1950 and 1980 from 50 per cent up to 65.6 per cent, and 86 per cent of US adults think homeownership is a worthy personal goal (Stegman 1995). Moreover, the market value of a property is related to its size and location. Homes in the countryside—the suburbs—are considered to have high 'appreciation potential' (Daniels 2001). Among these, in particular single family homes represent an investment which can be increased by selling the old home and buying a newer and bigger one.[9] For this reason, real estate is deemed a predictable investment by many Americans (Silberstein and Maser 2000). Furthermore, the mortgage interest tax deduction and the capital gains exclusion for sale of an owner-occupied home support the role of the single family home as major investment for families (Daniels 2001).

This 'consuming' of buildings and lots creates a demand which spurs the creation of new settlement areas by developers. Their standard model homes, based on the appraisal regulations by the Federal Housing Authority, are easier to build at the urban fringe than in the inner cities (Ben-Joseph 2002).

Moreover, suburban communities are favored by the American tax system: 'Separate jurisdictions eliminate the need to subsidize low-income households, so that taxes can be lowered at the same time that public good provision is increased' (Brueckner 2000).

In terms of growth, all of these aspects work hand in hand, and thus a powerful circle of interests, which are all promoting growth, is created. However, the development is not as smooth as it might appear.

One of the flaws of market based decisions is the fact that they are based on the individual decision-maker. While market forces may be efficient, they support inequality in areas with high housing prices, as they 'simply reflect how much wealth people have' (Metcalf 2003, 2). These 'consumer choices' are not coordinated with each other, and the single decision-maker is not required to take the impacts on the community as a whole into account (Metcalf 2003). The needs of future generations cannot be considered by a market-based approach, since it leaves out environmental and social considerations.[10]

From the perspective of environmental quality, open space benefits such as recreation and agriculture are not considered a monetary loss when land is converted to urban space (Brueckner 2000). For this reason, these assets cannot compete with market issues. In addition, the long term environmental costs related to an environmental quality in decline are not measured (Metcalf 2003).

They push for new roads to relieve traffic, but are surprised and frustrated by the growth that often follows.'

9   Usually the average American household buys and sells 4-5 homes in a lifetime.

10   The need for a more sustainable view of land use planning is discussed by Silberstein and Maser (2000).

Institutional and legal framework   The institutional and legal framework in the US in terms of land use is highly complex. It comprises a conglomerate of sprawl supporting policies. These rely on the belief that urban growth diminishes poverty, lowers unemployment rates, and decreases inequality between the city and its suburb (Rothenberg Pack 2002).

US policies in multiple levels of government that are directly or indirectly related to land use development are also decisive factors in the American growth spiral. First, there is no national planning law in the US. Even so, federal policies in terms of spending and regulation are of strong influence on the territorial allocation of population growth and economic development (Stein 1993).

The development of the interstate highway system and large water projects, which were driven by federal regulations, has been a great influence on growth (Rothenberg Pack 2002). Government support of highways based on the Federal Road Act of the 1920s and the Interstate Highway Act of the 1950s paved the way for suburban sprawl, as they enabled far-flung suburban residents to commute to downtown jobs (Lewyn 2000). Following residential development, retail and businesses spread from the city center, sometimes creating new cities.[11] 75 per cent of employed residents drive alone to work, while most Californians are satisfied with their commute (Public Policy Institute of California in collaboration with the William and Flora Hewlett Foundation, the James Irvine Foundation, the David and Lucile Packard Foundation 2002).

Aside from the overarching federal policy impact, land use planning on the state level differs greatly from state to state. While in some states, California among them, no consistent law on land use regulation or growth management exists, other states such as Maryland have rather elaborated regulations as will be explained later in this chapter.

On the regional level it can be seen that regional planning agencies were common in all US states (albeit sans enforcement power*)* during the 'high tide' of planning until the end of the 1970s. Even after drastic funding cuts in the 1980s, they still exist in metropolitan regions. Their mission lies in providing planning services for local jurisdictions (e.g. the provision of data, carrying out projections, or special studies) (Porter 1997). For this reason, the local level formed by communities and counties retains a dominant role in the development of settlements. The single community, however, is often overextended by land use pressure. Despite this fact, local governments are 'reluctant to cooperate with each other', resulting in uncoordinated land use planning (Daniels 2001, 273). Already by the 1970s Nelson observed 'The decentralization of planning and zoning responsibilities into the hands of many independent communities has created a virtually insuperable obstacle to effective regional planning and coordination' (Nelson 1977).

As mentioned earlier in this chapter, US policy has always acted in favor of homeownership. This policy is supported by the Federal Housing Administration (FHA) mortgage insurance program. This program funded new construction projects

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11 On the edge city phenomenon compare Garreau (1991).

only in so-called 'low-risk areas' from the 1930s on. These 'low-risk' areas were typified by low density, white population and new homes, all the ostensible features of a suburban community (Dougherty 2000). Since subdivisions were funded by programs provided only for housing, housing development was greatly separated from development of retail and office facilities (Duany et al 2000).

On the municipal level we find that the scope of development is not blocked by a city's boundaries. Urban margins are to a large extent considered 'flexible'. Annexation was part of a growth-driven policy in particular during the 1970s. Here again, the annexation and growth wave was driven by large central cities in order to expand the tax base (Hoch 1994, 29). As for the annexed land, it generally devolves to urban sprawl.[12] While the central city provides the motor for annexation, the rural population often acts as accomplice, since they demand the expansion of urban infrastructure.[13] Since settlement densities are relatively low and a large amount of unincorporated area still remains, many cities still have large potential to grow.

The American school system also plays a part in creating the suburban lifestyle. The US has rather strict regulations connecting the location of homes to public schools. As inner city neighborhoods decline, middle class families are induced to move to the suburbs to avoid their children being in school with children from the more 'dangerous' neighborhoods of their city (Lewyn 2000).

Planning as zoning   The traditional methods of land use planning in the US are zoning[14] and subdivision. The main purpose of zoning is to protect neighborhoods from nuisances by setting up separated districts for land uses (housing, retail, industry, recreation, etc.). Zoning arose in the US at the beginning of the 20th century to prevent health threats, as huge parts of the population were living in overcrowded cities with poor sanitary standards (Silberstein and Maser 2000). Today, zoning aims at preventing any negative influence on property values in a neighborhood (Nelson, R.H. 1977). Subdivision is a simplified zoning method to divide suburban land into parcels with the purpose of future residential development.[15] Ben-Joseph calls the development of subdivision regulation—supported by federal financial support and mortage insurance—'the most ambitious suburbanization plan in U.S. history' (Ben-Joseph 2002).

The motives for applying this rather simple type of land use control lie in health, safety, and welfare issues, as well as the wish for a homogenous community (Smith

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12 Rusk describes cities' annexation policies as a development policy based on the concept he refers to as 'elastic cities' (Rusk, 1995 second edition).

13 A good example for annexation policy is Matthews' description of the city of San Jose's annexation strategy, which was based on sewer provision for adjacent areas (Matthews 2002).

14 The concept of zoning was imported to the US from Germany at the beginning of the 20th century (Nelson, R.H. 1977).

15 California's State Subdivision Map Act for example requires that subdivision maps for subdivisions with 4 or more parcels and parcel maps for smaller subdivisions are provided by the developer (Pendall 1993).

1993). Zoning and subdivision offer the potential to protect the character of new suburban neighborhoods by keeping out development of higher density, such as apartment buildings. These have even been deemed 'parasitic', since they would not contribute to neighborhood quality and wealth (Nelson, R.H. 1977, 14). This points clearly at another motive, which has been historically promoted by planning instruments: racial segregation. Hoch notes: 'Few members of the planning profession would deny that local public officials have used government zoning and permit approvals to enforce racial segregation' (Hoch 1994, 240).

Moreover, allocating profitable types of land uses is a tool of supporting a community's fiscal strategy. This involves accomodating development that generates high amounts of taxes. In particular, upscale single family homes and non-residential land uses are a valuable source for profits based on taxes (Razin 1998). Nelson observes for Palo Alto, a community located in the San Francisco Bay Area, that 'virtually all development, except perhaps a scietific research park, is likely considered undesirable' (Nelson, R.H. 1977).

It is important to mention that today zoning can also be applied as part of a growth management strategy.[16] More flexible zoning tools were introduced in the 1970s for example with the so called Planned Unit Development (Silberstein and Maser 2000). Mixed use as a specific zoning category, however, did not exist up to the 1990s and it is still rejected by a large part of the public, since mixed use is considered to negatively influence property values.

Due to market orientation, the institutional and legal framework, and zoning— and surely there are many more sprawl supporting aspects than mentioned here—the well known sprawling pattern of cities and land use planning in the US was shaped. This complex conglomerate of regulations and interests promotes the transformation of open space into urban space. In this regard, planners from all over the world often use the term 'Americanization' as a substitute for suburban sprawling cities.

After characterizing the sprawl promoting attributes of planning in the US, a few comments should be made concerning why growth management is considered necessary and by whom.

What are the Reasons to Control Land Use Development?

From Jacobs (1961) to Duany/Plater-Zyberk (2000), much has been written about the negative effects of sprawl, and more contributions will surely be published. A brief description of the reasons to control land use development should also be included in this book. As might be expected, the idea of the 'new frontier' in terms of the availability of land in boundless quantities has its limits. The situation of US cities and their surrounding areas has become aggravated over time. While open space is transformed into urban areas, the quality of urban life is affected by a loss

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16 See Chapter 4.

of recreation space, air pollution, traffic congestion, long commutes to work,[17] a loss of neighborhood and place, and the costs for providing and maintaining low density infrastructure. Moreover, deteriorating inner city areas have been excluded from investment and revitalization. In addition to this anthropocentric view, natural assets are affected as well when sensitive lands like coastal zones, wetlands, mountain ranges, wilderness areas, and endangered species are converted by urban development.

Nevertheless, the impacts of sprawl are perceived in different ways by different stakeholders. The perspective of two major groups, communities and citizens, will be described in the following paragraphs.

Interestingly, from the point of view of the public sector, the key argument to limit growth lies in the cost of maintenance and new construction of infrastructure. The growth driven orientation of the economy with high investments in infrastructure of the post-World War II-era came to an end at the beginning of the 1970s. 'Cities and counties began to see surpluses turn to deficits and growth turn from an economically sound to a debatable financial policy' (Nicholas 1993). The infrastructure in growing communities could no longer be financed by local authorities, as the assistance from the state and the government was diminished.

It is obvious that the capacities of the communities' existing water and sewer systems are limited, yet extensive growth of cities, especially if it takes place in a sprawling manner, is dependent on these basic utilities. The same aspects crop up in the field of transportation infrastructure. Moreover, the quality of life is challenged by rising congestion. In addition to these aspects, social infrastructure is affected. Many schools are overcrowded; 'temporary structure' classrooms are often the rule. The maintenance as well as the extension of these services greatly challenge a community's financial resources. The Maryland Office for Planning makes this clear when defining infrastructure as one of the main goals for its smart growth strategy: 'Save taxpayers from the high cost of building infrastructure to serve development that has spread far from our traditional population centers'(Maryland Office of Planning 2003). The 'limits of growth' become obvious and force communities to find new solutions for handling growth and growth-related problems.

The citizens have to deal with the experienced outcome of the declining services mentioned above, in particular traffic congestion and overcrowded schools. As Nicholas describes it: 'In so many places throughout the country […] infrastructure has not kept pace with growth, and the result has been a loss of community quality and increasing public resentment of and resistance to growth' (Nicholas 1993).

However, the problem stretches beyond issues of infrastructure. Hayden's conclusion addresses this point: 'With each successive generation, and each mile from the inner city to the outer fringe, this [the suburban] lifestyle became less tenable socially, ecologically and physically' (Hayden 2002). People are concerned with changes that arise from new developments and additional residents in their

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17 The problems of car-dependency such as congestion, pollution, climate impacts, and energy consumption are described by Cervero (1996).

community or neighborhood. These conversions are thought to raise safety issues, create traffic congestion, lead to a loss of farms, transform communities from rural to suburban, and change the look of a community in terms of place and building types. For example, in California a majority of the population worries about traffic congestion, affordable housing, and a growing population demanding more development (Public Policy Institute of California in collaboration with the William and Flora Hewlett Foundation, the James Irvine Foundation, the David and Lucile Packard Foundation 2002).

One negative side-effect of urban growth seems to be a motor for citizens' attitude towards sprawl: the harmful effects on the environment, especially the loss of open space. This is not surprising, since the starting point of the growth management movement was concurrent with the nascent ecological movement in the US during the 1970s (Zovanyi 1998). For this reason, environmental aspects in applying growth management strategies are also of interest for the citizens.

The changes in the urban and natural environment generate a conservationist approach towards growth management. The citizens' response to the negative implications of growth by 'pressuring their local governments' leaders to control local growth and development' is referred to by Baldessare and Wilson as the 'growth revolt' in suburban communities (Baldessare and Wilson 1996, 459). The extent of citizen involvement in land use issues has increased significantly all over the US and—despite NIMBY approaches—it might be the foundation for true partnerships for reinstalling social capital (Funders' Network for Smart Growth and Livable Communities 2000).

Starting Points of Growth Management and Important Steps in its Development

Defining Growth Management

In order to deal with a topic as important and as multi-faceted as growth management, we must arrive at an operational definition. There are various definitions of growth management which have changed over time as management approaches have changed, each representing a different epoch and planning philosophy; I will present a select few.[18]

The first definition of growth management is related to California's emerging growth policies of the 1970s.

> Many cities and counties in California are searching for more effective tools to manage urban growth—to time, shape, limit and, in some cases, even halt population expansion. (Office of Planning and Research Governor's Office 1976, 2)

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18 For further growth management definitions see Porter (1997).

The focus of this definition of growth management is driven by procedural planning and systems analysis, as described in Chapter 3. Since it focuses on the local level, growth management is often seen as a rigid set of tools which place boundaries on population. This definition does not include aspects of the nature and quality of new urban growth.

The next definition I selected is more complex. The Encyclopedia of Community Planning and Environmental Management defines growth management as follows:

> Implementation of government regulations that control the type, location, quality, scale, rate, sequence or timing of development. ... Sophisticated growth management systems are closely tied to comprehensive land use plans and specific land use policies. (Schulz 1984)

Like definitions from previous decades, this 1980s definition continues to refer to procedural planning and systems analysis. But it adds the notion of 'quality of development', although the term 'specific land use policies' is very imprecise.

This definition is further supplemented by a 1990s definition from Stein. His perspective on growth management appears influenced by postmodern thought since he links powerful actors and growth management tools:

> It (growth management) involves an ideological commitment on the part of government to create and strengthen institutional mechanisms for effectively using tax, expenditure, and regulatory powers to systematically influence a community's spatial distribution of activities (Stein 1993, vii).

In addition, governance and institutions, and incentives are added to the growth management realm.

Also within the 1990s, we can observe more emphasis on the collaborative and the regional dimension of planning. Porter defines growth management based on Chinitz (Chinitz 1990) as follows:

> A dynamic process in which governments anticipate and seek to accommodate community development in ways that balance competing land use goals and coordinate local with regional interests. (Porter 1997)

The various definitions make clear what growth management is about: regulating and steering land use with a set of tools. However, during shifts in planning over time,[19] growth management has evolved from a singular focus on regulation to a more complex set of activities, which reach beyond a single community and take various stakeholder interests into consideration. This multipolarity recalls the 'store' metaphor introduced in Chapter 3. To ensure open access to this store of planning activities, I will not use the term 'growth management' according to one specific definition, but to a merged notion of all the definitions mentioned above. As such,

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19 Teitz deems evolution one of the key characteristics of US planning (Teitz 1996).

I do not intend to present 'yet another definition', but to approach the topic from a broad angle.

1960s and 1970s: Growth Gets Limited

The development of growth management is marked by several shifts, from urban containment to today's 'smart growth'. In the following paragraphs, I will describe how growth management evolved in the US in general. Several examples, in particular from California, will be highlighted to draw a more complete picture of the case study region, the San Francisco Bay Area.

Growth management emerged as a movement in US planning in the 1960s. Given the problems related with urban sprawl such as environmental degradation and overstretched infrastructure, citizens grew more conscious of their urban and natural environment. Therefore, preserving environmental resources was the overriding concern of many of the first generation growth management programs (Porter 1996).

In the 1960s, the nature of the programs was largely based on procedural planning and systems analysis approaches. Following regulative and quantitative planning modes fashionable at the time, tools such as boundaries, staging and growth caps were applied. These 'first generation' growth regulations were generally implemented in addition to existing planning and zoning regulations (Porter 1997).

In the US, the development of growth management can be divided into programs driven by the initiative of single communities, and those driven by individual states. Prominent examples and starting points of growth management on the local level follow:

- Ramapo, New York (1969): Urban development was divided into land use segments to be realized in a certain order (tiers or staging).[20]
- Boulder, Colorado (1972) and Boca Raton, Florida (1972): Population growth was limited to 40.000 additional housing units.[21]
- Petaluma, California (1972): A growth rate (growth 'cap') of 500 housing units per year was established.[22]

I will now elaborate various examples which can be seen as pioneer attempts at growth management in the US.

The city of *Petaluma* is—by American standards—located within commuting distance to San Francisco and the Silicon Valley (about 65 km). As housing prices

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20 Freilich delivers a detailed description of Ramapo's growth management system (Freilich 1999).

21 For a detailed description of Boca Raton's growth management approach see York (1986). A description of Boulder's example can be found in Danish (1986).

22 More information on Petaluma is provided in the following paragraphs.

were moderate in this rural area during the 1960s and 1970s, and highway accessibility was provided, the development of urban land spread quickly.

Petaluma's general plan of 1962 supported large scale housing areas with low settlement density. Although the total population in 1960 was a total of 15.000 people, between 1968 and 1972 the city population grew by 2000 new inhabitants per year. This development push changed the character and quality of life of the former rural community in a radical way.

The problem peaked when sewage capacity reached its limits. For this reason, in 1972, the community decided to apply a new and quite 'radical' planning instrument: growth management (Salmons 1986, 9).

As one of the first cities to apply growth management activities in the US, Petaluma can look back on a 'parade of systems'. Petaluma's initial growth management concept centers on an urban growth boundary which limited land development to 500 new housing units per year. Those were chosen and controlled by a local committee. The choice was based on the following criteria (ECO Northwest, Inc 1986, 21)

- System of single and multi family housing
- Location in the community
- Supply of infrastructure (water, sewer, school capacities, transport access without major changes to the existing systems)
- Urban design
- Quality of architecture
- Location on the site
- Location of the buildings to each other
- Safety aspects
- Provision and usability of private and public open space
- Provision of walkways and bike paths in accordance with city plans
- Sensible supplements for existing settlements
- Creating housing space according to city objectives (8-12% affordable housing)
- Accordance with the general plan
- Accordance with the environmental plan
- Mandatory environmental impact assessment before the selection process

On this basis, a quantitative project evaluation was conducted, resulting in a ranking of projects. This process would usually last between 6 and 18 months.

Because of this process, the city experienced relatively compact development over time which was compatible with infrastructure aspects. For this reason, it fulfilled the aim of reducing expenses for the community. Despite the inflexibility of the growth cap, the community learned how to choose projects according to how their qualities met both the needs and capacities of the community. Clearly Petaluma did not succumb to uncontrolled expansive development. However, the city created a yearly competition between rivaling projects. This so-called 'beauty contest' has been highly criticized by developers.

Another Californian example from the 1970s is *San Diego*. Inspired by the Ramapo case, the San Diego plan set up three development tiers: an urbanized area (existing urban areas), a planned urbanizing area (where suburban sprawl could take place), and a future urbanizing area (rural area) (Fulton 1993). In addition to the singular tool that other growth management systems were using, San Diego was the first city in California to apply a set of tools: the tier-system was supplemented by financial incentives to encourage infill in urban areas and to spread infrastructure costs to rural areas. As Fulton notes, the city took advantage of the large extension of San Diego's land to create a regional structure, an innovative solution for its time (Fulton 1993).

State growth management programs The evolution of state growth management programs, the so called 'quiet revolution' (Bosselmann and Callies 1971; Weitz 1999) grew out of land use reform to meet environmental protection goals. The regulations are thus in line with citizens' aims regarding growth management. Land use legislation should share authority between state and local governments in order to protect designated areas from growth.

On the state level, Hawaii was the first state to create growth regulation intended to preserve its environmentally sensitive areas. The 1961 statewide planning program set up four zones: urban, rural, agricultural and conservation, with the assumption that development would take place in urban zones. Although land in conservation zones is highly protected, huge portions of land were nevertheless developed with the booming tourism industry (Daniels 2001).

One important example of a state growth management system which has been a role model for other states is the state of *Oregon*. The Oregon program, starting with the legislation approved in 1973, is still considered as one of the most effective programs in implementing growth management in the US (DeGrove and Metzger 1993). Its approach is considered innovative, since it was the first to empower the state to control land use by partially shifting growth-control power from local governments to the state, and by combining different land use approaches (Knaap and Nelson, A.C. 1992).

Oregon's growth management program has its roots in strong environmental concerns that arose during the enormous population growth before 1970[23] (Howe 1993). The growth in population 'had put pressure on the carrying capacity of the environment, on the fiscal capacity of city governments, and on the state's tolerance of new residents' (Knaap and Nelson, A.C. 1992). As local authorities were unable and somewhat unwilling to face the growth challenges on a policy level, the state set up a binding framework to steer growth. It was enforced in 1973 by Senate Bill 100. It is implemented by several entities, such as the Land Conservation and Development Commission (policymaking body), the Department of Land

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23 Oregon's population grew from 1.5 million in 1950 to 2.1 million in 1970 and 2.8 million in 1980.

Conservation and Development (administrative body), and the Land Use Board of Appeals (independent tribunal).

Oregon's program is based on a set of 19 state-wide goals that were defined by public hearings and workshops. While the other objectives are related to land use policies and environmental issues, the primary goal is citizen involvement.[24] This set of policies requires all cities and counties to set up comprehensive plans and regulative tools based on these goals. The state provides funds for plan development, but within the state-wide concept, consistency and coordination between different planning levels (state, county, city) are important.

One key element in Oregon's growth management policy are urban growth boundaries, which have to be defined by each city for a 20 year period. The boundary is related to the projected need of a city for 'urbanization'. This transformation from open space to developed land has to take place in both a directed and cost-effective way. Land outside the boundary is reserved for agricultural and forest uses. In Oregon, the consciousness was there from the beginning that development had to be intensified within the urban areas if the land conservation approach would prove successful.

After a long period of negotiating and compromising, all communities approved cpmprehensive plans. According to Howe (1993), the strong influence by the state is deemed to have had a positive influence on the size of UGBs (smaller because of state involvement) and the number of high density housing units (larger because of state involvement). Oregon's urban growth boundary-policy is based on intergovernmental cooperation in that the boundaries are enforced jointly by local governments and the state (Knaap and Nelson, A.C. 1992).

Of especial importance is the development of the Portland metropolitan area, which is controlled by the Metropolitan Service District, the regional government. It is responsible for defining urban growth boundaries of the region's cities and counties. Within this region, development is combined with a lightrail system. For this reason, Portland can be seen as the pioneer in transit oriented development (Daniels 2001). The city of Portland became famous as it used to be 'the nation's largest area within a long-range urban containment boundary and the only area in the United States with an elected regional government' as well as 'a model of intelligent urban planning' (Philips and Goodstein 2000, 334, 335).

However, despite applying these strategies, the Oregon program offers little room for monitoring and evaluation. The impacts of the program remain unclear, which is problematic, since other states have adopted the Oregon approach or at least parts of it as a role model (Knaap and Nelson, A.C. 1992).

Moreover, the implementation of state law is often controlled by so called 'growth management watchdog groups' (DeGrove and Metzger 1993,15). These private, non-profit organizations—like the 1000 Friends of Oregon, the 1000 Friends

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24 A detailed description of Oregon's growth management system including the 19 goals can be found in Howe (1993).

of Florida, or the 1000 Friends of Maryland—continually evaluate and monitor the application of growth management instruments by local and state jursidictions.

Criticism of Growth Management   From the beginning, growth management was heavily discussed by anti-growth and pro-growth followers. When the growth management movement in city and regional planning started, developers and property owners took a very critical position. For most of them, growth management represented a huge contradiction to their understanding of handling property rights. One popular argument of the time (and which is still raised) is that growth management results in a rise of land prices and housing values.

The first forays into growth management and its attendant instruments took place during the 1960s and 70s. Growth caps and urban growth boundaries were introduced and tested in several communities, but their economic and social consequences were problematic. On the economic front, the growth caps repelled developers, so that other communities who were not using urban growth boundaries won more prestigious developments. In addition, some cities used the instrument to exclude affordable housing for people with lower incomes while promoting elite projects for a richer target group of new citizens. Silberstein and Maser call 'to apply the brakes' to land expansion with the purpose of discrimination against others 'unethical and illegal' (Silberstein and Maser 2000). Once communities realized that many of the these development regulations limited the availability of affordable housing, they adapted their growth management programs (Porter 1997). These new programs require that a certain amount of new development be designated as affordable housing. Developers must support lower-priced units based on the profits out of the market-rate units (Porter 1997).

With the passage of time, it became clear that land use pressure affects not only the central community, but also pushes development towards its boundaries. This effect adds a regional dimension to the concept of growth management. These first regional approaches grew out of environmental regulations to protect highly sensitive areas. For example, the California Coastal Zone Conservation Act, enacted by referendum in 1972, made all developent within a certain range of the coast subject of state permission (Nelson, R. H. 1977).

1980s: Growth Management is Undergoing Changes and Adaptations

Porter describes the beginning years of growth management as 'the great tide of community experimentation with growth management techniques' (Porter 1986, 1), which later slowed appreciably in the 1980s. Up to that point, growth management had been established as a tool of mainstream planning. However, much of the enthusiasm of the beginning years was gone.

Nevertheless, inspired by local experiments, several states took the chance to place growth management on their state planning agendas. They followed the Orgegon approach and established growth management programs. Innes characterizes statewide growth management programs that had been initiated in the 1980s[25] as 'strategies for coordination' overlapping in a multidimensional arena, which were both ambitious and yet inadequately developed (Innes 1992).

Another innovation of the 1980s was the growing involvement of the public in local growth management strategies. Innes observes collaborative approaches like group processes, engaging task forces, and advisory committees, all of which then emerged in planning during that time, and which were also integrated in growth management strategies (Innes 1991 b). Also Knaap and Nelson discuss these strategies when examining Oregon's growth management approach: 'The popular approach to land use politics presumes that the adoption and sustenance of land use policy is influenced by the interests of the local population' (Knaap and Nelson, A.C. 1992). Unlike the regulative strategies of the 1970s, these approaches are embedded in a comprehensive framework to integrate economic, environmental, infrastructure and quality of life aspects (Bollens 1993).

The state examples that were established show a number of similarities which partly derive from the Oregon case. Almost all of them attain a roughly comparable legislative framework with defined objectives, control and steering measures on a local and regional scale, consistency of local and state plan goals, incentives for collaborative approaches, adjustment between state agencies, regional control mechanisms, slight hints of GIS use, and bodies for conflict resolution (Innes 1992).

From an infrastructure point of view, the *Florida* example is particularly salient, since the concurrency or 'pay as you grow'-issue was implemented by Florida state legistation (Stein 1993b; Weitz 1999; Chinitz 1990). The approval of new development is linked to the provision of infrastrucutre in terms of recreation, transportation, sewer, water, solid waste, and drainage. This 'concurrency'-principle enhances infrastructure's role in policy-making. This program was implemented with the 1985 Growth Management Act which aimed at a combination of land use planning and regulation on a state and regional level (1000 Friends of Florida 1992).[26] These dual goals imposed financial problems on Florida's communities, because the tax-base for infrastructure development was scarce. For this reason, 'pay as you grow' was transferred to developers via impact fees (Evers, et al 2000).[27]

Also of interest is the successful case of *Georgia*. Here, a Growth Strategies Commission was established in 1987 as a collaborative exercise of state, city and

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25 Innes' investigation refers to the states Vermont; Florida, New Jersey, Maine, Rhode Island, Georgia.

26 The concurrency approach—based on the experiences made in Florida—is also applied in Oregon (Knaap and Nelson, A.C. 1992).

27 On impact fees see Chapters 4 and 5.

county officials, the private sector, citizens and academics (DeGrove and Metzger 1993; Weitz 1999).

With respect to *California*, the state fell behind in growth management in the 1980s (Fulton 1993), especially when compared to other states' initiatives. Nevertheless, several issues stimulated the creation of local land use controls of different kinds, in what Fulton calls a 'mixed bag of growth management tools' (Fulton 1993, 119). First, the citizens' concern for growth management was awakened. Second, Proposition 13 began the 'fiscalization of land use'. Third, the citizens were enabled to use ballot measures to foster growth management in their communities.[28] These so called 'growth revolt politics' brought about numerous land use regulations by means of local elections (Baldassare and Wilson 1996). However, the ballot-approach to growth management created the problem that growth was shifted from one community or area to another. Fulton states in this regard:

> … the dynamics of local growth management decentralized new housing opportunities even more, and the result was a vast regional imbalance in which many commuters were forced to travel 50 to 70 miles each way to work by car (Fulton 1996).

For the *San Francisco Bay Area*, the 1980s brought about an orientation in planning towards attached housing and rental units, as the recession of the beginning of this decade made single family homes less affordable (Pendall 1993). These economic constraints paved the way for inclusion of higher density on the planners' agenda. Housing affordability emerged as a problem which no longer related only to households considered poor, but also affected the middle-class as well (Duany et al 2000).

Generally speaking, the 1980s set up a framework for managing growth, mainly on state level, but issues like transportation or social equity were still not well integrated in the programs.

1990s: Growth Management Gets Smarter

In the 1990s 'growth mania' was still undamped. Although growth management had been introduced 20 years ago, there were hardly any visible effects. For example, the Urban Land Institute (Anderson and Tregoning 1998) found that 96 per cent of new development took place on undeveloped land in the 1990s. For California, this sprawl is pointed out in a report by the Bank of America, which drew the following conclusions in 1995 (Bank of America et al. 1995):

> Even though the consequences of sprawl have been understood for at least two decades, attempts to combat it have been fragmented and ineffective. The engine of sprawl is fueled by a mix of individual choices, market forces, and government policies, most of which have only become more entrenched over time.

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28 On Proposition 13 and ballot measures see Chapter 5.

Smart growth   Hand in hand with the claim for stronger effectiveness in growth management, another development shift took place within growth management towards its newest and highly celebrated trend, 'smart growth'. This trend can be considered the US approach to sustainable city and regional planning. In the same way that growth management was influenced by the ecological movement in the US, smart growth appeared on the agenda as the sustainability movement gained influence.

The term 'smart growth' was introduced during the 1990s and it is grounded on participation in planning and the rediscovery of a 'small scale'. Comparable trends to smart growth are 'growing smart' which is a registered term of the American Planning Association,[29] and the 'livable communities' movement. Kayden refers to smart growth as one of growth management's 'linguistic predecessors' (Kayden 2002).[30] Unlike Kayden, I do not consider smart growth an independent development; it is more than rhetoric, and it is embedded in the evolutionary process of growth management.

Another aspect shared by sustainable development and smart growth is their reliance on the three principles of economy, environment, and social equity. Compared to previous growth management approaches, the social equity component is added to the concept. However, the difference to sustainability is that smart growth does not adequately consider the requirements of future generations. Unlike sustainable development, growth is still the center of the concept. Zovanyi criticizes the 'pro-growth position' of the growth management movement, and views it as a major obstacle to incorporate ecological sustainability into the set of approaches (Zovanyi 1998, 155).

Other definitions of smart growth have the terms 'diversity, density, design' in common.[31] These aspects point at a different quality of urban development which reaches beyond a focus on regulating growth quantities as done by the earlier growth management approaches such as growth caps, staging, and urban growth boundaries.

Smart growth relies on ten principles which offer a more precise description of its aims (Maryland Department of Planning 2004):[32]

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29 The American Planning Association has developed tools in this regard, for example the Legislative Guidebook (American Planning Association 2002).

30 Other scholars observe 'smart growth is simply the newest adaptation of growth management' (Landis et al 2002, 5).

31 On the different meanings of smart growth compare Nelson, A.C. (2002).

32 Interestingly, the loss of these attributes in US planning was already criticized by Jane Jacobs in her famous 1961 book *The Death and Life of Great American Cities*.

1. Mix land uses
2. Take advantage of existing community assets;
3. Create a range of housing opportunities and choices;
4. Foster 'walkable' close-knit neighborhoods;
5. Promote distinctive, attractive communities with a strong sense of place, including the rehabilitation and use of historic buildings;
6. Preserve open space, farmland, natural beauty, and critical environmental areas;
7. Strengthen and encourage growth in existing communities;
8. Provide a variety of transportation choices;
9. Make development decisions predictable, fair and cost-effective;
10. Encourage citizen and stakeholder participation in development decisions.

Smart growth principles can be applied to policies and projects, as well as to different scales of development (Nelson, A.C. 2002). Participation and collaboration are of special emphasis in the smart growth approach. This is especially required when promoting dense settlement structures (Urban Land Institute 2000). However, the term 'density' seems to have been avoided in the smart growth principles, since higher density is viewed very critically by many citizens, especially NIMBYs.[33] This omission seems to be another strategy to make the concept of smart growth more marketable.[34] However, the principles exist in different versions. The Smart Growth Network for example states as principle number two 'take advantage of compact building design'. This principle comprises a range of density-related policies (Smart Growth Network 2002, 88f).

Because of the many social and political traditions that promote growth and sprawl in the US, the concept of smart growth has many critics. For this reason, it is as important for planners dealing with smart growth not only to present the smart growth principles, but also to provide a definition of what smart growth is not:[35]

- It is not against growth.
- It is not against cars.
- It is not against suburban settlements.
- It does not tell the individual where to live.

Without these addendums, the concept would not be marketable.

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33 Tregoning et al (2002) point out that stronger public involvement of the citizens and understanding for smart growth issues is needed, as NIMBY opposition in public planning meetings is still significant.

34 Danielson and Lang (1998, 20) refer to high density housing as 'the toughest sell in both marketing and policy terms' when it comes to implementing smart growth.

35 The Urban Land Institute (1999) has put together a report specifically dealing with what they call 'myths and facts' of smart growth, with the purpose of dealing with the critique raised against the concept.

As smart growth has gained status of an important movement in US planning,[36] many actors have retained a stake in smart growth:

- On national level: the US Environmental Protection Agency offering information and consulting.
- On the state level: the states, enacting laws on growth management.
- On the local level: the communities and counties, developing innovative approaches to growth management.

Furthermore, there is a multitude of NGOs delivering information and networking about smart growth such as:

- New Partners for Smart Growth Conference (www.outreach.psu.edu/C&I/SmartGrowth)
- National Center for Smart Growth (http://www.smartgrowth.umd.edu)
- Smart Growth Network (www.smartgrowth.org)
- Growing Smart initiative[37]

That smart growth is not an 'ivory tower' concept invented by planners and discussed by planning practitioners becomes obvious in a paper by the National Association of Homebuilders (1999), which aims to explain the concept and show several 'best practice' examples. To quote the brochure, 'The concept of smart growth has exploded into the national consciousness'. This explosion has forced developers to deal with the new planning ideas or to familiarize themselves with them at the very least.

One important example that can be seen as a starting point of the smart growth-movement is Maryland's state legislation for smart growth, which was established in 1997.[38] As Maryland was then at the forefront of the smart growth movement, the legislation was highly recognized by the planning community. Increasing population growth in a small state and the challenge of preserving environmental assets, especially around the Chesapeake Bay, were motivations for this approach. The legislation results in a state program that targets resource conservation, infill development and infrastructure costs in a joint approach (Cohen 2002). The program comprises five strands, which were partly derived from a campaign by the Maryland

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36 At the annual congress of the American Planning Organization in the year 2002, where more than 4000 planning practitioners gathered, about one third of the sessions were dedicated to smart growth.

37 Smart growth's spread into mainstream planning is also promoted by the American Planning Association. This organization, which supports policy-making for and among planning practitioners in the US, initiated the 'Growing Smart' project to promote the modernization of US planning and zoning regulations by developing a legislative Guidebook and course materials for planning schools (Weitz 2001).

38 The phrase 'smart growth' was coined by the media in 1997 to describe Maryland's legislation (Daniels 2001).

Department of Planning to gather ideas from citizens and stakeholders (Cohen 2002):

1. The Smart Growth Areas Act, to steer state funds to both urban areas which are already developed, and to areas which are designated for future growth. This policy is directly related to the efficient distribution of infrastructure costs. Infrastructure is promoted in so-called 'Priority Funding Areas' (PFA), which can be urban areas of a city or county, revitalization areas, or selected enterprise zones. Although these areas are comparable to urban growth boundaries, urban development can take place outside of PFA's, but then it will not receive funding for investments in infrastructure from the state. The state agency responsible for this program is the Department of Planning.

2. The Rural Legacy Act, which supports local authorities and land trusts to purchase land, development rights, and easements in so called 'Rural Legacy Areas'. An application has to be submitted including a description of the Rural Legacy Area and including a Rural Legacy Plan. Conservation of wildlife habitats, forests and open space to be protected from settlement in the form of adjoining greenbelts, blocks or corridors, will be supported by this means. The transfer of development rights from Rural Legacy Areas to support development in Priority Funding Areas is also an option. The state agency responsible for this program is the Department of Agriculture.

3. Brownfield's incentives, like the Brownfields Voluntary Cleanup and Revitalization Incentive Program, encourage the transformation of deteriorated areas by giving loans, grants for the cleaning of contaminations, and tax breaks on property improvements for eligible participants. The state agencies responsible for this program are the Department of Business and Economic Development and the Maryland Department of the Environment.

4. An update of the Job Creation Tax Credits Program by dedicating it to the Priority Funding Areas for smart growth. Designated industries such as manufacturing, biotechnology, and computer programming are eligible for income tax credits when they create new jobs. By this means, economic activity is enhanced in target areas. The state agency responsible for this program is the Department of Business and Economic Development.

5. The live Near Your Work Program to support employees in buying a home near their workplace. In addition to the revitalization aspect, quality of life features are added to the smart growth program, as individual commuting time is shortened. Employers and local governments provide financial aid to support the homebuyers, which can reach $3000. The fact that no measurable radius for the live-work-distance was set up leaves a lot of room for interpretation. Moreover, everyone can win grants, as also no income limits were established. The state agency responsible for this program is the Department of Housing and Community Development.

Modifications to the legislation were made in 2000 and 2001 with a so-called 'Smart Codes' legislation to draft model guidelines for infill development and building rehabilitation, and by a 'Green Print' program to create environmental networks of preserved areas (Daniels 2001).

Despite these innovations, many are concerned that the possibilities of preventing sprawl with Maryland's approach are limited. First, sprawl is funded to a wide extent by private means operating beyond state control (Cohen 2002). Also, the density regulations incorporated in Maryland's programs are deemed too low. The quality aspects of smart growth such as mixed-use, car dependency, and social equity are not provided at the state level, as they should be further specified at the local level. Here, the implementation depends on the single communities' commitment to growth management policies. Lack of commitment could undermine the state's policies.

The Maryland model relies to a great extent on financial incentives. This distinguishes it from its predecessors in other states. Its outline is more complex than the former state approaches, as it targets the inner city as well as its surrounding areas. And, being based *on* implementation by different state agencies, it has the potential to establish consensus among state authorities. Its value lies in the attempt to combine land use patterns, transit, open space aspects, infrastructure costs and the overall quality of life (Daniels 2001).

Maryland's approach also has implications for nation-wide planning in the US (not to be misunderstood as national level planning). The creation of the National Center for Smart Growth at the University of Maryland reveals that growth management as a policy is receiving a higher US-wide recognition.

However, the smart growth movement is also criticized for being not as effective as it could be in steering land use expansion and for its methods of execution. Smart growth as heretofore witnessed is not considered to be sustainable, leaving the concept of smart growth to be a contradiction in itself.[39] Environmental aspects are barely taken into consideration in comparison to monetary issues. Moreover, citizens use many smart growth initiatives to disguise a NIMBY agenda (Szold 2002; Duany et al 2000). NIMBYs work to prevent their neighborhood from incurring any kind of change, including development of a higher density. Tregoning et al (2002, 344) claim in this respect that policy-makers should encourage citizens to engage in YIMBYism—yes, in my backyard—to provide an attitude revolution towards true changes in development patterns.

Szold takes the ambitious planning objectives of smart growth back to the real world with his remark 'we must be prepared for the reality that, however ambitiously conceived, smart growth may remain too elastic and perhaps too naïve to be taken seriously' (Szold 2002). Despite providing the smart growth principles, the nature of smart growth remains imprecise, which is of some concern to decision makers. They 'must learn a new vocabulary and offer more than rhetoric to citizens hungry for strong policy, planning and design solutions' (Szold 2002, 3). Talen (2003) points out that the success of smart growth might be weakened when the measurements for sprawl do not take broader issues of urban and suburban development into consideration.[40] Furthermore, according to Mitchell, smart growth has been too narrowly focused on

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39 Weiskel discusses the contradicting implications of smart growth from an ecological perspective (Weiskel 2002).

40 Currently, the method that is widely applied is measuring housing units per acre.

land use and transportation. It should take advantage of potentials arising from the use of telecommunications networks, such as new building types and development patterns (Mitchell 2002).

The smart growth concept has also been misused to promote a highly controversial development in the inner cities: older single family homes are torn down for new so-called 'monster homes'. Hence, the character of older neighborhoods is completely changed to make room for new oversized housing needs. On the one hand, existing technical and social infrastructure can be re-used; on the other hand, the character of a neighborhood is completely changed. One example is the community Hinsdale, located in the suburbs of Chicago, with a population of 17,000 people. In this city since 1986 1100 huge single family units have been built on the lots of former single family homes, replacing an entire neighborhood. But also in several Maryland counties this development pattern is widely applied (Daniels 2001).

Despite the critique, smart growth might go hand in hand not only with a shift in planning paradigms, but also in society. Krieger mentions in this regard:

> The recognition I consider most essential to future growth management is that today more people than in the 1950s and 1960s seem willing to seek out the virtues of city living, to see places of high human concentration not as congested or dysfunctional but as desirable, enjoyable rather than mandatory, as they were during the Industrial Revolution. (Krieger 2002)

Regional approaches   During the 1990s it became obvious that the local scale is limited when it comes to managing growth. Despite all the local growth management efforts, a regional steering mechanism has to be established. The negative effects of regional polarization were recognized by scholars and practitioners alike, and regional solutions on the scale of metropolitan area arose on the agenda.

Bollens speaks of 'the geographic mismatch between the municipal control of growth and the regional incidence of growth effects' (Bollens 1993). According to DeGrove and Metzger, 'successful growth management also requires coordination among local governments (horizontal consistency) and between state and regional agencies and local governments (vertical consistency)' (DeGrove and Metzger 1993, 4).[41] Orfield (1997) has explored regional coalition building for the Twin City Metropolitan region. Carruthers comes to the conclusion that state and regional governments should obtain a stronger influence when it comes defining to local planning practice (Carruthers 2002):

> Political fragmentation undermines programs' ability to produce their intended outcomes but … state and regional planning frameworks can help to improve this by fostering intergovernmental communication and consistency among local land use plans (Carruthers 2002, 400).

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41 This aspect, which is promoted in states with a state-wide growth management system is absent in California.

Moreover, regional development is investigated in the context of other urban planning demands, for example social equity.[42] Furthermore, neighborhood organizations such as the National Neighborhood Coalition argue in favor of regional solutions to deal with the negative effects of sprawl.[43] This push for regionalism that surpasses even the Portland model has lead to an expansion of regional planning agencies with responsibilities for controlling growth. The merging of local growth control and state land use planning legislation has broadened the power of regional planning organizations (Carruthers 2002).

At the beginning of the 1990s, California was lacking consistent growth policies on state, regional, or local level (Landis 1993). As a result, cities were not considering the impacts of their development on neighboring cities. To deal with this problem, some small efforts were made to use a few non-binding strategies on a regional level.

The *San Diego Association of Governments* (SANDAG) adopted a regional growth management strategy in 1990 (Porter 1997; Carruthers 2002). The program is, as Cervero calls it, a 'Portland-style approach to growth management' (Cervero 1998, 427). This strategy includes a 'self-certification process' carried out every two years. Based on a checklist provided by SANDAG, communities have the possibility to ensure that their plans act in accordance with land use goals on a regional scale (Hollis 1998). Moreover, the city was the first metropolitan area in the US to set up guidelines for transit-oriented development (Cervero 1998). Derived from San Diego's policy, SANDAG provided a region-wide land use distribution strategy with the aim of enlisting other cities for the strategy. The jobs-housing balance[44] was tackled, as well as the usual smart growth suspects mixed use and compact development.

In 2001, the *Association of Bay Area Governments* (ABAG) leaped forward with a more pro-active approach to growth management on a regional scale. ABAG conducted the 'Regional Livability Footprint Project' as a region-wide process to determine where in the San Francisco Bay Area future growth should take place. I will further analyze this approach in Chapter 6.

2000s: The State of Growth Management Today

On the local level, the application of regulative measures, in particular urban growth boundaries, has increased steadily over time (Pendall 1995). A report by Pendall on urban containment policies states that by the year 1995, 34 of 71 (which is 47.9 per cent) of the jurisdictions within the San Francisco Bay Area had implemented urban

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42 Pastor et al (2000) refer to this as equity-oriented regionalism.

43 See for example the report by the National Neighborhood Coalition on 'Neighborhoods, regions, and smart growth' project (2000).

44 Jobs-housing balance is a benchmarking tool to measure trends in the location of jobs and residential uses, which can set standards for policy-making in land use (Cervero 1995; Weitz 2003).

limit lines or designated greenbelts outside settlement areas to limit the extension of developed land. Despite the boom of urban growth boundaries in recent years, they are only applied in certain parts of the US, especially in the West (Pendall et al 2002,7).

On the state level, Tennessee and Virginia are taking on smart growth as well, both developing and/or adapting their existing growth policies according to the smart growth principles. However, by the end of the 1990s, states with established growth management systems remained few. They are Hawaii (1961), Vermont (1970), Florida (1972), Oregon (1973), Georgia (1989), New Jersey (1986), Maine (1988), Rhode Island (1988), Washington (1990), Maryland (1997), Tennessee (1998), and Virginia (1998). The state approaches seem to be highly dependent on existing political constellations (Cohen 2002). This dependency could threaten the consistency of growth management efforts if future governors do not support existing activities.

However, in his analysis of state growth management approaches, Weitz (1999) predicts another development: the 'fourth wave of state growth management approaches' (Weitz 1999, 328). This wave will, on the one hand, continue the evolutionary development of growth management; on the other hand, the implementation of state growth management programs will show greater flexibility in its application, leading—in his opinion—to less consistency and comparability.

Even today, cohesion between states' growth management systems does not occur. Stein mentions that: 'While states have traditionally acted independently in growth management planning, the global economy now creates a strong need for cooperation' (Stein 1993b, 223). In this respect he points to the European Union and its search for political cohesion.[45] Stein furthermore mentions that 'it is difficult for state growth management policies to be effective if they are undermined by federal policies' (Stein 1993b, 223). The sprawl-promoting factors described at the beginning of this chapter remain in place. These federal policies, coupled with high housing prices in metropolitan areas, combine to fuel citizens' willingness to commute long distances.

Despite many local activities and several regional attempts to elaborate growth management programs, there exists a state growth management vacuum in California. From the legal perspective, California does not have a state law mandating growth management. For this reason growth controls are the task of local jurisdictions and special agencies like the 'Local Agency Formation Commission' (LAFCO) which reviews land incorporations and special district developments on the county level. Chapter 5 will take a closer look at the development in California.

Based on previous experiences, the connection of growth management strategies on a regional scale became obvious. Moreover, smart approaches are seeking to incorporate not only regulations, but also aspects related to the quality of urban development. As for the latest development in growth management, smart growth,

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45 Meanwhile the principle was supplemented by territorial cohesion, providing an even stronger focus on regional aspects of regional development.

it has yet to be proved if the concept will be a solution sufficient to solve cities' growth problems. Although smart growth is increasingly refined and widely applied, the next generation of growth management might yet be under way. This could be provided based on the principle of interdependence. A report by the Association of Bay Area Governments already hints at its application:

> Another common theme is the *interdependence* of the strategies discussed. The open space protection strategies will only succeed in promoting smart growth if they are accompanied by infill development. Otherwise, limiting urban growth can push growth to other, perhaps less appropriate locations. (ABAG 2000, iii, emphasis added).

Conclusions

Upon examination of the multitude of sprawl promoting policies and planning practices in the US, the dissatisfaction with the negative effects of urban sprawl has given rise to the evolution of growth management from the 1960s to the present. Starting out with the initiatives of a few local jurisdictions in land use, today growth management has the status of a mainstream planning tool. Porter, who has observed the development of growth management over time, enthusiastically declares growth management 'a positive force for guiding community development rather than a means for restricting growth' (Porter 1997).

It also becomes obvious that the range of activities and the agenda of growth management have been evolving over time. Growth management was invented in the 1960s, and therefore it employs modernist planning ideals fashionable at that time, such as regulation (for example setting up urban growth boundaries), systems analysis approaches (for example linking settlement development to infrastructure requirements). Nevertheless, it has taken on more characteristics since then, adding smart approaches and regional development to the toolbox.

The review of literature on growth management shows that—starting out as a regulative approach—the complexity of activities as well as requirements for growth management have increased through time. In this regard Innes stated in 1993 in terms of state level programs: '…if growth management programs are to be successful, they must be evolutionary and adaptive' (Innes 1992, 30). Knaap and Nelson made similar observations of Oregon's growth management policies: 'the process of planning was modified almost continuously in response to equally continuous social change' (Knaap and Nelson, A.C. 1992). Moreover, he considers land use reforms like involving the states in growth management, is considered a result of the need for 'social pressure for policy change' (Knaap and Nelson, A.C. 1992).

Indeed, communities' experiences have led to modifications and additions of tools and activities. States and regional planning agencies joined the arena of policy-making in growth management. The metaphor of a 'store' of planning practices mentioned in Chapter 3, where communities mix and match what they consider appropriate (or—depending on their knowledge—available) for their growth management approach, seems to generally reflect reality.

Experts generally acknowledge that growth management includes a wide range of tools such as for example urban containment and—as a more recent development—smart growth. Porter points out that 'growth management should be viewed as a community's collection of plans, programs and regulations that will accomplish the community's development objectives' (Porter 1997, 12). Porter also addresses the nature of growth management as a 'grab bag' of different techniques that fails to consider a coordinated or strategic approach (Porter 1997). This brings—again—growth management close to the idea of a 'store'. But is it enough to steer complex land use processes with a fragmented set of tools?

According to Stein (Stein 1993), the evolution of land use controls creates redundancies and contradictions, and it hampers the implementation of growth management. He sees a multidimensional conflict in the adoption of different growth management strategies over time. This conflict might result in the application of new tools without taking into consideration their impact on strategies which are already in place, the contradiction of local policies with state and regional objectives, and the inconsistency of policies of adjacent communities.

Moreover, Porter points out that 'the hallmark of *effective* growth management, however, is that these individual techniques are interlinked and coordinated in a synergistic manner rather than applied incrementally and independently' (Porter 1997, 13). This comment hints at the theoretical concept of interdependence, which I incorporated in this study based on the investigations by Alexander.[46] If and how planning practitioners in the San Francisco Bay Area are applying growth management in an interdependent fashion will be investigated in Chapter 6.

The multitude of growth management approaches shows the complexity and uncertainty of planning processes. It illuminates our society, dealing with rapidly changing conditions and multifaceted demands with a variety of solutions. Fragmentation is enhanced by the fact that activities and techniques vary from city to city, and that effective monitoring and evaluation are lacking.

Despite the fact that growth management activities have evolved over time, observations regarding a lack of coordination and the monitoring of growth management activities have to be taken seriously. The interdependence of different growth management approaches within a community, but also between communities, regions and states, should be applied in a successful way.

The next chapter will deal with planning theories, and thus connect the development of growth management as outlined in this chapter, with the theoretical background of growth management.

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46 The concept of interdependence is introduced in Chapter 3.

Chapter 3

Multiple Theories in the City and Regional Planning 'Store'

> Theories can help us alert us to problems, point us toward strategies of response, remind us of what we care about, or prompt our practical insights into the particular cases we confront (Forester 1989, 12).

Forester's statement captures the reason for my specific approach to planning theories. This approach might seem overly broad, since it focuses not only on an array of theories but also typologies of theories. Yet I chose it deliberately to understand both the processes of planning and the practice of growth management, which are both broad and complex. In this regard planning theory mirrors planning practice the same way practice reflects theory. I will start with two observations:

First, it must be stated that there is not only one planning practice; neither is there only one ideal planning theory. As early as 1979 Hudson claims that each (planning) theory works well on its own, but better performance can be attained by a 'conjunction' of one theory with others. Almost twenty years later, Friedmann makes the comparable observation that planning theory consists of many components. In his attempt to identify what he refers to as 'groups of theorists' he explains: 'These groups should not be taken as alternative to each other or be seen as standing in competition for the one 'true' theory, but rather as highlighting different facets of planning in western democratic societies' (Friedmann 1995, 157).[1] Similarly, Mandelbaum points out that planning practitioners deal with multiple theories: '... we are engaged by a crowded field of theories (and lay theoreticians) entangled in one another and embedded in social relations' (Mandelbaum 1996: XV). Referring to the practice-theory-gap in planning, Schönwandt (2002) notes that an integrated approach towards what he calls 'constructs in planning' is missing, yet it should be provided by planning theory. These ideas can be seen as complementary to Alexander's thoughts on interdependence between planning theories, to which I will refer later in this chapter. The value for this study lies in the hypothesis that the existing fragmentation of planning theories and of practice approaches likewise should be characterized as interdependent rather than competitive.

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1   I will get back to Friedmann's classification of theories later in this chapter.

Secondly, it is important to recognize that the theoretical basis of city and regional planning is not to be viewed as fixed, but constantly evolving.[2] In retrospect, modernity, postmodernism, and communicative action—just to mention a few meta-theories—have influenced the entire range of today's planning theories, and planning practices in the USA and beyond.

Despite this broad array of theories and—as we will see later in the following chapters—practices, a vast portion of the planning theory discourse is carried out without thorough reference to planning practice, and vice versa. In this regard it has to be mentioned that there has never been a 'method' to exchange knowledge between planning theory and practice, so it is largely unclear in what way theory influences planning practice; neither is it clear in what way the obstacles planning practice encounters impact theory.[3] Healey describes this process as such:

> Ideas and issues do filter through to practitioners, via planning education, planning literature and conferences, but in an undisciplined way. Similarly, new problems in practice filter slowly into the consciousness of academics (Healey et al 1982b, 17).

Nevertheless, from the planning practitioner's perspective the diversity of ever-changing planning theoretical discourses is considered a chance to understand the problems planning practice has to face. As one of the few practitioners writing about planning theory, Thompson articulates what theory should offer:

> Theory can be an early warning system preparing planners for new influences. It can also help consider how these new influences can be absorbed into current practice, what the consequences could be, and what alternative responses are available (Thompson 2000, 130).

My theoretical considerations scrutinize the 'absorption' of theories into practice. Today a broad range of theories exists. For this reason I consider it necessary to take a closer look at different theories in order to define the theoretical basis of a project dealing with growth management. This requires exploration of planning history, since past theories still influence certain growth management activities today. (hypothesis 1); and growth management cannot be related to one (meta-) theory, but is influenced by different theories overlapping each other in a more or less fragmented way (hypothesis 2).

These hypotheses rely on the ideas of Healey, which describe the array of planning activities with the metaphor of a store:

> Every field of endeavor has its history of ideas and practices and its traditions of debate. These act as a store of experience, of myths, metaphors and arguments, which those within the field can draw upon in developing their own contributions, either through what

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2   Campbell and Fainstein (2003, 2) speak of a 'continuing evolution of planning theory'.

3   Teitz claims that planning theory's influence should not be underestimated regarding planning practice, since it 'shapes the profession over time in subtle ways' (Teitz 1996, 652).

they do, or through reflecting on the field. This 'store' provides advice, proverbs, recipes and techniques for understanding and acting, and inspiration for ideas to play with and develop (Healey 1997, 7).

This choice of a variety of planning modes, which exist in parallel to each other today, has also been pointed out by Mandelbaum (1996b).[4] Embracing the metaphor of a store, the study's objective is not only to explore growth management as an important tool of city and regional planning in the US, but also to explore the influence of different ideas, or theories, in and of planning and their relations to growth management practice.

Which are the theories that have left their mark on planning? From today's perspective, this question seems too broad to deal with, and I will not make an attempt to answer it fully. However, to develop a research frame for planning instruments derived from planning theory, I consider it relevant to work my way through different levels of detail: from the level of meta-theories, via planning 'typologies' or planning 'styles' to the day-to-day reality of planning activities.

This section will first gloss several 'meta theories' in order to explore the roots of basic discourses about planning in the US. This will help us understand that there is not one single relevant theory for planning, but that many theoretical lines of thought exist in a parallel, partly overlapping mode, all of them influential for planning practice. It will also highlight the way planning theory is articulated—mainly as very specific discourses set in opposition to each other. This can—of course—only be a small insight into planning theory as a multitude of theories in and of planning has been developed over time. As Allmendinger points out, 'it is now a truism to claim that planning is comprised of an eclectic collection of theories' (Allmendinger 2002, 78). Including this plethora of theories is beyond the scope of this study. Instead, emphasis will be given to three meta-theories representing panning theoretical discourses in US planning:[5]

1. Systems analysis and procedural planning;
2. Postmodern thought in planning;
3. Collaborative planning.

These theories will be characterized following a parallel structure in order to glean basic insights for application to this study.

The second part of this chapter will leave the meta-theoretical level and 'unpack' planning theory in the realm between meta-theory and planning practice. This part

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4   'Virtually all human beings and most social systems are capable of employing a variety of planning modes. Faced with a threat or an opportunity, they choose a mode from their repertoire: Here consulting broadly and seeking consensus; there going full speed ahead in pursuit of a grand vision. If one mode fails they are capable of shifting to another.' (Mandelbaum 1996b, 459).

5   In the part that deals with classifications of theories, a broader scope of planning theories will be incorporated.

will discuss planning theory typologies to develop a research framework, which will aid creation of a typology of different growth management approaches. Moreover, this research frame will be simple, as it should be communicated to and discussed with planning practitioners. One consideration is that a range of Meta theories results in a range of typologies or planning styles. The heterogeneity of styles of and in planning can only be understood with reference to a range of meta-theories. Here again, I will not have to start from scratch. Scholars have discussed a multitude of planning typologies since the departure from systems analysis and procedural planning theories as the dominant paradigm.[6] Exploring these typologies will assist me in developing a research frame for growth management.

In the third part of the chapter, the actual research frame for the study of growth management will be conceptualized. This part will function in two ways for the empirical analysis of the study: first it will help create a typology of growth management approaches. Second, it will be put to the test to explore which approaches of the typology are considered relevant for growth management from planning practitioner's viewpoint.

Overview on Different Meta Theories

On the level of meta theories, theories such as modernism, postmodernism, and communicative action—to mention only a few—have influenced today's planning theory and its activities. All of them have their masterminds, followers and critics. Diverse and competing argumentations can even be found within these theories (Allmendinger 1999), which paint a picture that is far from being homogeneous. In the 1980s Healey et al observed, 'In the 1970s we witnessed the rise of a number of competing theoretical positions in the urban and regional planning field with little debate between the positions and with general ignorance on the part of members of any one position of the concerns of any other position.' They refer to this phenomenon as 'theoretical pluralism and collective ignorance' (Healey et al 1982 b, 5). While theoretical pluralism has widened, what about collective ignorance? As both Alexander (2001) and Allmendinger (2002) observe 20 years later, this problem is not yet solved, and will probably never be.

The next section will briefly explain important meta theoretical planning discourses and characterize what their specific 'imprint' on planning has been. This will clarify how to conceptualize planning's theoretical influences as well

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6   The development of city and regional planning theories is related to different paradigmatic shifts, or the adaptation of familiar methods and concepts centering on a theoretical school (Kuhn 1970). Although the application of the term 'paradigm' in the strong Kuhnian sense has been criticized according to city and regional planning (Taylor 1999 b), paradigmatic shifts or paradigm breakdowns can be observed. The by far widest-reaching of these shifts is from modernism to the post-modern era. Starting from the 1970s a large number of meta theories have originated, which often compete with one another, and yet all share the urge to break with modernism.

as planning's theoretical interdependence for an empirical study about growth management.

Since the main subject for this paper is growth management, I commence with describing the theoretical roots of growth and growth management, which can to a wide extent be found in systems analysis and procedural planning theory, as we will see later. My exploration will follow postmodern thought in planning theory, followed by collaborative planning in planning theory. I consider both meta theories important since they challenge procedural or 'rational' planning from different angles and seek directly or indirectly alternatives to cope with its limitations. Both of them—although developed by thinkers all over the world—had far-reaching influence on the planning theoretical discussion in the US. Since this project is dealing with a planning approach in the US (growth management), these theories will be the main focus of the theoretical frame I will develop in this chapter.

Systems Analysis and Procedural Approaches in Planning Theory

Time of origin   Planning in terms of modernism can mainly be divided in the following three approaches:

1. Physical planning and urban design: 1950s/ 1980s/ 1990s.
2. Procedural planning: 1960s until 1980s.
3. Systems analysis: 1960s until 1980s.

After the Second World War urban and regional planning was widely affiliated with architecture and physical planning. The development of urban land and transportation should be placed in an orderly fashion. For this reason, the production of 'master-plans' or 'blueprints', which link urban design to functional requirements, was the main target of planning (Taylor 1999). During that period of time, several utopian concepts of ideal cities arose. Interestingly, urban design is nowadays experiencing a revival in US planning embedded in the ideas of 'new urbanism'.

Systems analysis and procedural approaches in planning were generated during the 1960s and 1970s. This period can be seen as a high water mark for planning and also of the planning profession. It represents a departure from the design-oriented view of planning. It had its peak during the 1960s and continued as a hegemonic theory during the 1970s, although its limits became apparent by then and were widely criticized. Fainstein mentions as of the 'rational model' of planning:

> This model has provided a meta theory for planning activity in the decades since the 1960s, incorporating the faith in scientific method that swept through the social sciences during the Cold War Period. (Fainstein 1999: 2).

Masterminds   The systems view of planning was influenced by management procedures from operations research, the emergence of computers, and the ability to process large amounts of data. The incorporation of these business process-related

ideas into the planning realm was promoted by Mc Laughlin (1969) and Chadwick (1971). In parallel, another major theoretical discourse emerged, influenced by decision theory. This centered to a large extent on methods and procedures of planning as explored by Faludi in his 1973 books 'Planning Theory' and 'A Reader in Planning Theory'. Following these considerations, planning theory focused on a methodological or process approach.

Basic message   Systems analysis views cities as complex systems of interconnected parts. Because of this interrelatedness, new developments or changes in one part of a city are affecting other parts of the system as well (Taylor 1999). In contrast to the physical planning view, cities were no longer viewed as static, but as flexible systems, open to and at the same time affected by changes. Moreover, the institutional setting of governmental planning required new skills, in addition to the design component, such as regulation, finance and organization (Hoch 1994, 50). The approaches suggested by planning theory were, however, focused on modeling and simulation, and for this reason, highly mathematical and abstract.

From the perspective of procedural planning theory, planning represents a rational decision-making process. The so-called 'substantive-procedural divide', the theoretical distinction of substance (the objects planners are dealing with) from procedure (the methods of planning) was underlined by Faludi (Faludi 1973a). Focusing on process in order to achieve an optimized outcome in planning characterizes one of the basic considerations of 'modernist' or 'rational' planning theory. The process view of planning was supported by what Taylor calls a 'renewed faith in the application of 'science' to policy-making' (Taylor 1999, 69). Following this path, both the systems approach and the procedural style in planning theory give attention to idealized models of planning situations. In this regard, both approaches apply certain procedures, models, or strategies in order to explore complex processes in a generalized way.

Systems analysis and procedural planning theory were the hegemonic discourses in planning during the 1960s and 1970s. The aim of these approaches was to perceive planning as a 'means to ends' problem-solving process, which should improve planning practice by providing analytical solutions and regulative strategies. This view of planning worked hand in hand with a systems analysis shift in planning, which was inspired by the rationality of computers. Systems analysis influenced planning thought to transfer from the design based product (plan) to planning as a process with different interrelated variables. Computer models and simulations were basic features in this principally methodological approach. This shift in thought can be summarized by the move from 'art' to 'science'. Methods such as policy analysis, forecasting, and cost-benefit-analysis were based on simplified models and methods of ideal planning situations, separated from their context. Since the approaches were highly complex, decision-makers needed the expertise of planners to carry out these methods. The role of planners was viewed as a 'benevolent elite working towards common goals' (Allmendinger 2001, 2). The focus on technocratic solutions is referred to as a 'legacy of the enlightenment' (Allmendinger 2001, 1).

Planning relied to a wide extent on technical solutions and the application of rational decision making. In this regard a planning toolset was formed that was based on quantification and simplified models of planning processes.

Taylor sees the systems and process approach in planning theory as a 'high water-mark of modernist optimism in planning in the post-war era' (Taylor 1999, 60). Modernity can be seen not only as the origin of growth management, but of 20th century planning. In exploring the relation of growth management to systems analysis and procedural planning thought, it is first of all important to look at the relation of growth and modernism. Interestingly, (urban) growth as such is embedded in the concept of modernism. Technology and scientific knowledge, a 'rational' approach, applied by means of planning activities, should lead to progress. Benveniste (2nd edition 1977, IV) highlights the link with economic growth as follows: 'This faith in rationality emerged unquestioned along with faith in modern technological development and economic growth'.

The perception of urban growth is widely interlinked with economic growth. Urban growth means more citizens, or more retail facilities, or more enterprises, which help sustain a community's tax revenues. Indeed urban growth in the form of additional population and business meant growing revenues for communities through income taxes and property taxes. Planning is embedded in this 'positive' worldview, since it has the task to facilitate and accommodate growth. In this regard it must be mentioned that growth management, as it is applied in the US, is not an approach to stop growth, but it is perceived as a means to steer and contain that growth by applying procedural planning tools and systems analysis approaches. It is this worldview that represents the launch of growth management.

Systems analysis and procedural planning picture information as a value-neutral data source which assists them to fulfill an expert role in the planning process. In a modernist planning realm, information is detached from politics.

In addition to procedural 'rationality', planning was focused on comprehensive plans. Although the notion of comprehensiveness per se, trying to bridge sector gaps in an integrative way, is still important in planning; today, the product of this planning style, the comprehensive plan, is widely criticized. Moreover planning processes and instruments were considered value neutral and therefore rarely questioned. The same applied to planning as a profession. The expert role distinguished planners from politicians, citizens and all other actors in the planning process. For this reason, actors in planning were not a focus of planning theory and practice at all. In this regard the 'comprehensive plan' elaborated by planners symbolizes the typical rationalist planning product (Hoch 1994, 32).

Critique   The critique that is raised regarding systems approaches and procedural planning theory is wide-ranging, from the planning context to the expert role of planners and the rational planning process. In its focus on instruments, procedure and methods, these approaches have been criticized to a great extent from all planning theoretical points of view that have been thought of since then. To visualize the

broad spectrum of theories in planning criticizing the 'boundedness'[7] or constraints of systems analysis and procedural approaches in planning see:[8]

- Disjointed incrementalism: Lindblom 1959.
- Action-oriented planning: Friedmann 1973.
- Postmodern thought in planning: Soja 1989, 1996; Flyvbjerg 1998; Allmendinger 2001; Sandercock 1998, 2003.
- Political economy and 'the just city': Fainstein, 1999.
- Collaborative planning: Forester 1989, Innes 1995.
- New Urbanism: Duany et al 2000.

The planning context: :Systems analysis and procedural styles in planning do not take into consideration that modeling planning processes in order to come to ideal means-to ends solutions has its limits in terms of information, values, preferences, time, resources, and planners' skills.[9] Moreover, the environment where planning takes place is characterized by the specific *context* of planning situations. The latter varies to a large extent and forces planning to adapt continuously to different circumstances. This makes the search for an 'ideal' rational solution obsolete. In this regard, systems analysis or procedural approaches have been criticized as being too abstract and without content, since they rather represented 'an extended definition of planning' (Taylor 1999, 96).

From an institutional level, Forester recognizes *complexity* as one of the conditions of planning situations, which do not allow for rational decision-making (Forester 1989, 62). In addition to complexity, Christensen also identifies the *uncertainty* planning has to face as one of rational and systems analysis planning's constraints (Christensen 1985).

The expert role of planners: Rational choice and systems analysis planning was not taking *political aspects* of planning into consideration. Planner's sole reliance on their expert role leads to confusion for planners as well as politicians, since they are widely attached to politics.[10] For this reason, planners should rather face their role as being political (Benveniste, 2nd edition 1977).

Moreover, planning is more than providing the right means to achieve an ideal goal. In seeking truth, regulative, systems- and procedure-oriented approaches do not just produce value-neutral knowledge, but generalized models can also contribute to *manipulating* relevant facts. In this regard, the emphasis of expert knowledge could

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7   The narrow instrumental focus has been referred to as 'bounded' or constraint (Forester 1993 b, 67).

8   These planning theory aspects will be dealt with at different paragraphs in this chapter.

9   Lindblom has critiqued the constraints limiting the reationalist and comprehensive view of planning in his 1959 book 'the science of muddling through'; in contrast he proposes a 'disjointed incremental' view of planning.

10 On the limitations of the expert role of planners compare Benveniste, 2nd edition 1977.

also be used to blend out the concerns of other 'non-experts' in the planning process or disregard them as unsuitable (Hoch 1994, 296).

Furthermore, different and often competing and conflicting interests come into play in planning. The ethical question regarding the role of planners as experts is important in planning processes. Planners can make a decision about who is included and excluded in the planning process, which gives them a certain power and raises questions of legitimization of this role. Aspects of social inclusion, culture, minorities and feminism, which are embraced by later postmodern thinking in planning, were not taken into consideration. Planning experts and other actors or citizens had drifted apart in their worldviews, values, knowledge and the way to understand each other (Friedmann 1973). In this regard, this mode of planning was opposed by citizen groups during the 1960s (Taylor 1999). *Democracy*, as Metcalf states, is one of the reasons for this.

> What had been presented as simply technical work in the public interest turned out to involve subjective values and choices—the designation of winners and losers, the choosing among various possible paths for our society. It has become common sense, that these major decisions require public debate, and that they should be made democratically, rather than being left to the experts (Metcalf 2003, 3).

The rational planning process: The focus was to provide a formal, ideal, or abstract solution apart from planning realities. The process-driven approaches made clear that planning practice was not considered in an adequate way (if at all). Implementation, the 'action' or empirical part of planning did not play a larger role for planning theory (Friedmann 1969; Pressman and Wildavsky 1973; Benveniste 1977). Healey et al show disapproval for the lack of concern for planning practice, which even caused many practitioners to develop an 'anti-theory position' (Healey et al 1982b, 6).

Moreover, the applied set of regulations is criticized as too rigid and inflexible. Ben-Joseph states, that

> The residential environment is being shaped in a major way by standards that no one questions, but that have become part of a rigid framework closed to change.

He gives an explanation for his observation:

> Why has this happened? Mainly because these standards have provided, through the years, an established, publicly approved framework that supposedly shields developers and cities from being liable. (Ben-Joseph 2002, 111)

Conclusions for this study   In the attempt to define a theoretical background for growth management approaches, I acknowledge the fact that urban growth is related to economic growth, which is embedded in the modernist worldview. For this reason, growth has been and still is—especially in the US—widely considered as progress and something worth pursuing. In this regard, growth management does not intend

to stop growth, but it seeks ways of containing it.[11] The first actions of managing or controlling growth were regulative tools, such as growth caps or growth boundaries, which make the relation of growth management and rational planning highly interconnected. We can, however, also trace characteristics of physical planning to the post World War II era, especially in determining how big an ideal city should be.

Despite today's critique of rational choice and systems approaches in planning, the origin of growth management is deeply embedded within this theory. Many of the tools applied in current planning practice are based on modernist ideas of regulation and systems theory, such as the wide-ranging aspect of containing growth by means of urban growth boundaries, or linking the development of settlements with infrastructure systems. The limits of rational choice and systems approaches in planning should, however, be considered. They have to be viewed especially in the context of the 'messiness' of actual planning situations. Schönwandt (2002, 16) refers to the persistence of procedural and systems analysis approaches in planning practice, even as the approaches are being criticized by planning theory as a contradiction that demands resolution. Concerning growth management, it will be important to explore how these instruments are embedded in decision-making processes, and which other tools are applied to complement them. As Beauregard notes: '… rationalist theory is on the wane and must change significantly, specifically by merging with communicative practice in order to remain viable' (Beauregard 1996, 108). We will see in what way the connection of different theoretical ideas is organized in practice.

Postmodern Thought in Planning

Time of origin   Postmodernism in planning emerged during the 1980s as an offspring of the critical theory of postmodernism. The postmodern turn in social sciences was shaped by the French writers Focault, Baudrillard and Lyotard. The rise in postmodernism in planning mirrored the deregulation processes of the 1980s, initiating a process of challenging rational, modernist approaches, as an 'anti-Enlightenment' (Flyvbjerg 1998, 3) movement.

Masterminds   Planning, as a rationalist product, is target of the postmodern critique. In the sphere of postmodernism in planning, Beauregard (1989), Soja (1989; 1996), Sandercock (1998; 2003), Flyvbjerg (1998) and Allmendinger (2001) are among the shapers of this theory.

Basic messages   Today's range of planning theories is characterized by a shift from rational choice and systems approaches in planning toward new ways of thinking inspired by critical social theory. Allmendinger describes this as a 'plethora of

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11 The negative impacts of growth and thus the origins of growth management are explained in Chapter 2.

posts'[12] referring to 'a development of that is significantly different from the original' (Allmendinger 2002, 6;1). Among the 'posts', one specific and widely discussed theory has arisen, which I will refer to as 'postmodern thought in planning'.

Five principles of postmodernism can be traced in planning (Allmendinger 2002, 7)

- Fragmentation, dispersal, and difference.
- The issue of power.
- The role of cultural influences in ordering society.
- The break down of transcendental meaning.
- The discursively created subject.

The overall idea of postmodern thinking in planning is that many facets of planning do not fit into a systematic rationalist framework. The latter is understood as rather idealistic approach. Whereas the focus of rational choice planning was to define 'what should be done' postmodern thinking in planning observes 'what is actually done in real life' (Flyvbjerg 1998, 3). Soja refers to this as 'the radical restructuring of long-established modes of knowledge formation' (Soja 1996, 3).

Postmodernism in planning actively debates conflicting interests that appear in planning processes. As planning approaches are more and more fragmented, complex and uncertain, different actors appear in the planning process with highly disperse interests. For this reason, no ideal solution satisfying every different demand on the planned environment is possible. A few aspects to mention within the postmodern critique of rational planning are that planning processes can easily be biased by the power of a few key players, for the most part politicians. The planning process is to a great extent a decision making process. One has to ask, who makes decisions, and under what circumstances, within a planning process? Politicians rely on the information received by planners, but their decision making process takes place under the pressure of re-election.

Postmodern considerations have created a new understanding of the role of planners from rational experts to one of many actors in a highly uncertain planning process. It can be observed that the notion of planners as technical experts is highly criticized as planners slowly shift to an information resource role. Not one analytical process or one comprehensive plan can deliver a solution, but planners have to weed their way through a multitude of knowledge and options.

Being a legacy of critical (social) theory, postmodernist thought in planning has also put the exclusion of minorities on the agenda of planning. Sandercock's writings have especially scrutinized the difference in form of the multicultural, multiracial, and multiethnic differences and what she refers to as the 'mongrel' aspect of cities (Sandercock 1998; 2003). She describes the 'life and death of modernist planning' (Sandercock 2003, 2) in the search for cities, which are representing, acknowledging

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12 Examples for the current use of the term in planning theory offered by Allmendinger are: 'postmodern, post-structualist and post-positivist'.

and nurturing cultural diversity. Here again, the excluding approach of rationalist planning is criticized but Sandercock fails to offer practicable solutions.

The view of knowledge in postmodern thought in planning theory differs widely from systems analysis and procedural planning knowledge. Postmodern planning attaches a context to all planning knowledge and views it as 'embodied, historically situated, shaped by language, and embedded in power relations' (Sandercock 2003, 73). In this regard, not only the expert's knowledge is valued, but also knowledge held by other stakeholders. The notion of knowledge is expanded to include experience, situation, action, intuition and emotion (Sandercock 2003). Moreover, knowledge and power are highly interlinked in the sense that power steers what kind of information is taken into consideration in planning and in what way it is interpreted (Flyvbjerg 1998).

In sum, postmodernist thinking in planning discusses the images that are created by planning and by different actors in planning to widen the scope of the rationalist planning worldview. In doing so, it has engendered influential images of space and planning such as 'Thirdspace' (Soja 1996), 'City of Quartz' (Davis 1992), or 'Mongrel cities' (Sandercock 2003).[13]

Critique   The critique of postmodern thought in planning theory is difficult to grasp, since its focus is to analyze (rational) planning. Aspects to be criticized should nevertheless be pointed out here. Postmodern thought in planning operates at a very broad and general level. In emphasizing power, fragmentation and difference, it focuses on observing a lack of understanding between interests and groups. This scenario is repeatedly used to question planning situations and especially to scrutinize the failures of systems analysis and procedural approaches in planning (see for example Flyvberg 1998; Soja 1996). In this regard Harper and Stein raise the suspicion that 'There may well be no such thing as postmodernist planning theory; it is possible that the assumptions of postmodernism preclude the development of any coherent theory' (Harper and Stein 1996, 414).

Moreover, the majority of postmodern thought in planning has not offered to provide solutions for dealing with or reacting to the complexity of planning processes from the point of view of planning practice. The fact that postmodern thought in planning rejects possibilities of cross-cultural interpretations, dialogue and consensus enhances this dilemma (Harper and Stein 1996). For this reason, postmodernism in planning theory has proven largely unusable for planning practice.

Conclusions for this study   Finding common ground between postmodern thought in planning and a method-based approach like growth management is not easy. Postmodern thought in planning does criticize systems analysis and rational approaches in planning, and in this respect it rejects the regulative notion of planning.

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13 Interestingly—but not surprisingly—all three thinkers are dealing with or were inspired by explorations of the city of Los Angeles.

Regulation is, however, to a large extent what growth management has done and still does today (as we will see in the following chapters).

As postmodernism is considered to be a theory without practice, which ideas can be used for a study of growth management? The question might fairly be posed whether to incorporate postmodernism in my theoretical frame at all. It is clear that postmodern thought in planning does not offer practical solutions to planning. It does, however, highlight issues planning practice has to deal with in real life. In this regard, first of all it is important to acknowledge fragmentation. This is due to the existing body of planning theories and it should be investigated with the example of growth management practice. Unlike postmodern thought it is not enough for me to mention the spectrum of fragmentation, but to explore it further. Two questions I intend to scrutinize are: how fragmentation occurs in planning, and if planning practitioners are aware of it at all. The problem—and limitation—for postmodernist thought is that growth management as a planning process-problem-solving endeavor is based on a rather regulative toolset that cannot be completely abandoned.

In addition to the general notion of fragmentation, I found inspiration in Sandercock's ideas. In suggesting what she calls a 'hybrid' postmodern planning practice (Sandercock 2003, 5), Sandercock is one of the rare postmodern thinkers to at least consider solutions for planning practice. Her 'mix-and-match'-approach to planning practice seems to overcome some of the narrowly defined theoretical discussions.[14] What she refers to as 'a notion of cross-breeding, mongrelization, hybridity' (Sandercock, 2003, 34) supports my attempt of linking planning practice with different theoretical approaches. Her method outlined in Cosmopolis II, however, remains descriptive, when she mentions a few relatively short case studies or 'best practice examples' to demonstrate how planning could work in a given context. What Sandercock sees as basis for a radical postmodern planning practice—I consider necessary.

Another and nonetheless important idea borrowed from postmodern thought in planning is to go beyond the formalized analysis in planning, and to get a notion of the context, including power structures and institutional settings in which planning and growth management take place in the San Francisco Bay Area.[15]

Collaborative Planning

Time of origin and masterminds　The critical theory of communicative action is a strand of theory which has gained immense popularity in planning during the last two decades. In the planning realm it is known under different monikers such as collaborative planning, discursive planning or communicative planning.

14　Sandercock does not reject modernist planning per se, but embraces it in a more or less sarcastic way: 'Means-ends rationality continues to be a useful concept—especially for building bridges and dams—but we need greater and more explicit reliance on practical wisdom' (Sandercock 2003, 34).

15　This approach can, however, not be claimed exclusively by postmodern thought.

The planning literature of American (Forester 1989, 1999; Innes 1995, 1996) and European (Healey 1997; Sager 1994, 2002b) scholars ushered in this new concept at the end of the 1980s and during the 1990s, with differing variations. Since then it is paving its way into city and regional planning practice. Its roots are based on social structuralization and reorganization embedded in critical social theory, especially the Habermasian idea of communicative action (Habermas 1985). Collaborative planning is further-ranging than the first criticism that rose towards systems approaches and procedural planning theory to be more 'action-oriented' (Friedmann 1973, 1987), since it suggests action in addition to a more democratic style of planning (Taylor 1999).

Basic messages   The collaborative planning strand of theory distinguishes itself from modernist as well as post-modernist thinkers' considerations. It seeks a pragmatic style focusing on planning practice and the interactions practitioners are engaged in. In his attempt to describe the need for collaborative processes, Forester portrays the relation between modernism, postmodernism and collaborative action as follows:

> Planning has sometimes been understood as either as a technical problem-solving endeavor or (somewhat the opposite) as purely as the matter of the hustle, bustle and nastiness of politics. These images of planning have aspects of truth to them—there are often both technical and political dimensions to planners' work- but such stereotypes poorly capture the realities of planning practice (Forester 1989, 4).

The ideas could be interpreted as a missing link in planning between modernist planning techniques, postmodern worldviews and actively involving the broad range of stakeholders. It is its practice-oriented notion that clearly distinguishes communicative action in planning from the post-modernist episteme. Collaborative planning does not neglect the aspect of power in planning situations, but unlike postmodern planning it is relating it to democracy and legitimacy*,* thus giving emphasis to the aspect of ethics in planning situations. In dealing with and negotiating with powerful players in the planning process, collaborative planning suggests that it should be the role of planners to safeguard the interests of less powerful groups, or those with less powerful representatives.

Unlike modernism and postmodernism, collaborative planning 'has a lot of loose ends-so many that other theorists may not recognize it as a theory' (Innes 1995,184). The relation to Habermas' model of communication as an 'ideal speech situation', however, establishes theoretical guiding principles applicable for planning, since communication should be 'true, sincere and legitimate within a given normative context' (Taylor 1999, 124).

Collaborative planning differs from modernist planning because it recognizes that planners' expert knowledge is limited and therefore, this approach deals with the question of legitimacy of planners' status as experts in decision-making processes. Following this line of thought, Forester suggests that planning is context-related and that being rational in planning also requires acting and thinking politically

by responding to the needs of planning practice (Forester 1989, 7). By doing so, the focus on planning processes, which was characteristic for rational choice and systems analysis approaches in planning, can be widened towards implementation (Forester 1989, 157).

To find solutions out of the 'messy', uncertain and complex realities of planning, one must understand planners' actions as communicative. 'Planning is deeply argumentative by its very nature: Planners must routinely argue, practically and politically, about desirable and possible futures.' (Forester 1989, 138). The aim of such a critical theory[16] of planning is a 'political democratization of daily communications' in planning practice (Forester 1989, 21). Moreover, collaborative planning is seeking a 'mutual understanding' between various actors in planning processes (Forester 1989, 144). For this reason, the informal involvements that lie outside of formal procedures have to be considered and incorporated in the decision-making processes.

Communicative action has broadened the role of planning practitioners from that of solely a procedural planner.

> Communicative planning is as well creative and heterogeneous, as it has to adapt to different specific planning situations. It does not have bottom-line prescriptions or simple models for how to proceed, but it has helped students and academics to see planning, and has helped planners to see themselves (Innes 1995, 183).

For this purpose, planning scholars are interpreting planning practice for their studies, since investigations of real-life planning situations can be seen as generators of knowledge.[17]

In addition to systematic models and policy analyses, planners have to act as moderators between different stakeholders. The analytical or methodological approach to planning has shifted from a quantitative to a qualitative mode in the wake of collaborative planning. Planners are challenged to be managers, facilitators of debate and providers of knowledge for the public, interest groups, decision makers, and other professionals involved in the planning task. Planners not only provide 'plans'; they also should actively shape and influence participation. In addition, planners learn from stakeholders' experiences and their knowledge by listening and encouraging storytelling (Forester 1989; Sandercock 2003). One can say that a large amount of knowledge is generated by these multifaceted discourses, which can also help to cope with power relations and conflicts.

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16 Critical theory is a line of thought in social and political sciences challenging existing worldviews. This broad spectrum of theories emerged at the end of the 18th century to question the enlightenment period, especially the capitalist system, and has since given rise to different theoretical schools such as Marxist theory, linguistic theory, gender studies, cultural studies, queer studies, and postmodern theory.

17 See for example the investigations of Hoch (1994), which he bases on Healey's thoughts on methodology.

Planning theorists in line with communicative action observe what practitioners do and reflect critically on these procedures, rather than presenting an 'ideal' process-related solution. In collaborative planning, information is viewed as a source of power just as in postmodernism. This power, however, has to be distributed in a way that supports democratic decision-making. Planning should be a well-informed process and information should be used to foster citizen participation (Forester 1989, 31). The political influence should be understood and the planner's role is to react to misinformation that can occur in planning processes. Knowledge and information should be used as a means to cope with uncertainty in decision-making processes. These contemporary ideas can be seen as influential for this study, as the practice-oriented methodology, which I use for the empirical part, has to be interpreted in this sense.

Although collaborative planning represents a break with the modernist understanding of American planning of the 1950s and 1960s, it doesn't completely reject modernist ideas. Therefore the concept is of interest for exploring the relation between growth management and the changing American understanding of planning.[18] Unlike postmodern planning theory, communicative action in planning does not neglect modernist ideas, but tries to incorporate rational choice and systems analysis planning. Forester suggests that the role of planners as technical analysts should be broadened towards communication. Moreover, Allmendinger offers an interpretation of the relation between Habermasian ideas and modernity, which can also be transferred to the planning sphere:

> According to Habermas (1984, 1987) instrumental rationality has dominated the world of inter-personal communication, which is distorted by power and money. ... But rather than replacing instrumental rationality Habermas seeks to embed it within phenomenology, action theory and argumentative theory, thereby maintaining a 'core' of positivism. (Allmendinger 2002, 17)

In this sense, the theoretical anchor of this book can be understood as a link between rational planning tools and communicative action.

Critique   Collaborative planning is not free of critique. I will try to summarize some of the aspects raised by its opponents. First of all, while systems analysis and rational approaches in planning theory were regarded as overly abstract, the collaborative planning approach is critiqued as overly oriented on specific planning situations. Hopkins discusses the notions of collaborative planning theory from the viewpoint of rational choice and systems analysis in planning. He detects diametric contrasts in the goals of rational comprehensive planning and the ideas of collaborative planning theory. Being anchored in the modernist discussion, he criticizes the collaborative approach as follows: 'Observing talk in relatively well-defined arenas is easier than inferring a great variety of tasks over long periods from observable behaviors'

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18 'Planning in the US is constantly reinventing itself. ... New roles and institutional arrangements keep emerging.' (Innes 1998).

(Hopkins 2001). Observed circumstances are often unique and thus do not qualify for further generalization. Yiftachel and Huxley share similar critiques (2000). Indeed the lack of models is one of the critiques raised according to communicative action in planning, thus problematizing its status as theory.[19] Hopkins does however fail to offer a feasible solution for planning practitioners, who are obviously obliged to make plans and communicate simultaneously.

In spite of Hopkins' argumentation, parallels between collaborative planning and systems analysis/procedural planning theories can be observed. Interestingly, Taylor (1999) defines collaborative planning on the basis of Fainstein (1995) as a procedural theory of planning, as it focuses on processes of negotiation, deliberation and decision-making rather than providing 'real' analysis. Alexander argues against the notion of collaborative planning as procedural (1996). This critique is made even stronger when Fainstein states that the planners' role has become main focus of collaborative planning theory, and 'Both the context in which planners work and the outcome of planning practice fade from view' (Fainstein 1999, 4). Beauregard adds that collaborative planning theorists employ a high level of abstraction and 'they share a reluctance to writing a middle-ground theory that integrates theory and practice' (Beauregard 1996, 109). These argumentations show that the focus of collaborative planning is highly contested.

Moreover, organizing participation should be—as anticipated by collaborative planning theory—a democratic process (Forester 1989, 28). Steering participation is generally a top-down activity: planning practitioners decide whom to include and whom to exclude. Depending on the values and ethical codes of planners, participation can be taken seriously or it can cover up 'business as usual', where the participation of the 'usual suspects' in planning is taken for granted. Given the limited time and financial conditions that constrain planning in the field; 'business as usual' is often the result. Flyvbjerg agrees (1998); he critiques collaborative planning from the viewpoint of postmodern planning when he deems communication a source that sustains interests rather than a path to democratic consensus building. In his opinion, concealed values and existing dependency relations of the participants are likely to overlay discourse ethics. Despite its high affinity to planning practice, scholars argue that collaborative planning remains an idealistic concept, much like systems analysis and procedural planning theory.

Conclusions for this study   The conclusion for this study is that the democratic and inclusive approach suggested by collaborative planning—unlike postmodern planning—offers practical solutions for dealing with different interests in planning, bridging the gap between power relations and stakeholder interests. Moreover, the method to study planning practice as it is suggested by Forester (Forester 1989), can enhance planning research. This method corresponds with my personal experiences

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19 Innes herself tries to avoid the term 'theory' when she speaks of collaborative planning as a paradigm; moreover she does not talk of planning theoretical classifications—as we will see later, but of 'planning styles'.

as a planner and for this reason it will be incorporated in my research to guide me towards a stakeholder-oriented analysis.

The absence or vagueness of collaborate planning theory concerning more concrete analytical aspects in line with its denial of rational choice and systems analysis approaches, however, makes it difficult to build the theoretical background of a study of growth management solely on collaborative planning. Again, a solution is to merge different planning theories.

Conclusions

For the definition of a theoretical frame, I make use of planning theories as a customer of a planning 'store'. Some aspects are useful and I consider them a 'fit', as I mentioned in the interim conclusions in the previous paragraphs. Other aspects are either outdated, like the rigidity of the systems analysis and procedural approach, or they stand too far away from the planning practice shelf to be useful for other purposes.

Some of the meta theories in planning mentioned in this chapter, especially communicative action, claim to bridge the theory-practice gap, which is thought to be a characteristic critique of modernism. At the same time, theoretical discussion since the 1980s has given rise to a multitude of approaches. Postmodern thought in planning theory and collaborative planning are both trying to break with the 'rational' or procedural component in planning.

The critique of rational choice and systems approaches in planning has an extensive literature. In the attempt to dissociate from rationalist thought, the planning theoretical discussions have explored other approaches to planning rather than an attempt to embed instrumental rationality. That modernism, almost a doctrinal planning paradigm at its time, has left a strong mark on planning theory can be evidenced in the large body of planning theory-related literature (postmodern as well as communicative action), which still deals with overcoming systems analysis and procedural thought (for example Innes 1995, 1996; Soja 1996; Allmendinger 2002; Sandercock 2003). Moreover, collaborative planning theories and postmodern thought in planning theories do not argue from the same perspective, but they criticize each others ideas.

Planning practice shows—along with many other approaches—that instrumental rationality, although in contrast to postmodern as well as collaborative arguments, is to a wide extent representative of planning reality. While theorists reject procedural planning styles, procedural approaches remain in planning practice. What has happened? One could argue that planning theory has failed to offer ways to incorporate procedural approaches in planning. This could explain what planning practitioners are struggling with as they carry out their day-to-day activities, as the study will demonstrate in the empirical part. The question that arises in this argumentation is: In what way should practitioners deal with the 'store' of inspiration, ideas and activities in and of planning? In my opinion, the practice-theory gap appears wider than ever.

If we take a closer look at this gap we find that planning theorists are themselves not satisfied with the 'closed-shop' appearance of the different planning theoretical discussions. Soja observes, 'Unfortunately, such categorically postmodernist and modernist responses have dominated and polarized the current literature, leaving little room for alternative views.' (Soja 1996, 4). This view is shared by Allmendinger: 'Post-positivism […] has a suspicion of 'closure' or definition particularly through postmodern social theory', which leads to the 'reluctance to reflect on the landscape in planning theory generally' (Allmendinger 2002, 84). Taylor argues in the same direction, when he discusses procedural planning and postmodernist thought in planning theory and notes there is a 'curious bifurcation in planning theory which has persisted to this day' (Taylor 1999,161). He suggests, however, the possibility of a 'merger' between collaborative planning and procedural planning in a way that a planner can be a skilled expert and successful communicator at the same time. Although the ideas of the technical era are neglected by postmodernist discourses, the activities developed in a rational-modernist sense can still be found in planning practice. In addition it is not clear if and how the alternative approaches correspond with each other (Alexander 2001). Alexander observes the competitiveness of thought between postmodern and collaborative theories (Alexander 2001). Unlike others, he—finally—offers a solution to fill this gap: the principle of interdependence.

I argue in line with the scholars mentioned above that a platform for openness or critical exchange of these theoretical thoughts should be provided. This might be of help for planning practice, and that is—as Forester notes at the beginning of this chapter—what planning theories should be about.

Following these thoughts and based on further explorations in planning theory, this paper is motivated by an attempt to develop a research frame for characterizing growth management strategies. One of the principal challenges will be to find a common denominator in planning theory, which has the potential to serve as a means of merging different planning theories and planning activities.

Responding to complexity with interdependence   All theoretical strands mentioned in the previous argumentation are of relevance for today's planning store. I argue that planning practice would come to an absurd status, if it would—under today's circumstances—rely solely on one strand of thought, either rational, or postmodern, or collaborative. This leads me to explore ways to look at planning practice from a theoretical approach that bridges the worldviews of the theoretical schools in planning mentioned in this chapter.

Planning from the point of view of different theories is characterized by complexity. Complexity can be seen as a common denominator in the procedural, the postmodern, and the collaborative in planning. Rationality was brought about by growing complexity, since planning experts were the ones to control complexity by means of abstracting models and methods. Postmodern thought in planning is inspired by complexity: Here it is interpreted as the initiator of fragmentation and difference, making all searches for solutions obsolete. Further, collaborative planning seeks to cope with complexity by inclusion of stakeholders in planning processes.

Therefore it offers a methodological path to planning, much like rational choice and not much like postmodern thought.

For this reason complexity theory might offer an approach to explore the conjunction of different planning approaches, as it is anticipated in this study. Innes and Booher (1997, 2000a, 2000b) have emphasized the need to view planning situations as complex adaptive systems related to the changing requirements of society towards planning. Therefore they build their explorations of collaborative planning on complexity theory, to 'deal with change and complexity in dialogue'. Yet there is more to complex planning situations than collaboration. Procedural, post-modern, collaborative and many other ideas add to planning situations. Complexity lies in the linking of people, procedures and content, which involves diverse stakeholder groups and decision makers, using planning tools wisely, building on the existing institutional capacity, and applying 'good' urban policies. Planning theoretical ideas as well as planning practice have thus to be viewed as interdependent.

One interpretation of interdependence in planning is offered by Alexander (2001). He refers to the principle of interdependence to attempt to bridge existing gaps in planning theory and practice. In doing so, however, he focuses on postmodern planning and collaborative planning only.

What is the origin of the principle of interdependence and where does it have its anchorpoint in theory? Interdependence is a term developed in the wake of systems theory in the 1970s.[20] In (computer) systems the items are connected in an interdependent way. Systems theory is however very static and technocratic, and widely oversimplifies real-world processes, which makes it hardly applicable for urban development (although it was widely praised during its time). For this reason, a more contemporary approach taking fragmented activities, multiple actors, uncertainty and change within society into consideration has to be applied. Complexity theory, a more evolutionary approach to systems theory, seems to be the more appropriate context for explaining interdependence in this regard. Complexity theory was developed by the physical sciences during the 1980s. In addition to that, complexity theory is considered to be of help for understanding the processes within social systems (Capra 2002). Complex systems are adaptive and of emerging character. Following the thoughts of complexity theory, Innes and Booher define cities as 'living organisms functioning as complex adaptive systems' (Innes and Booher 2000a). Interdependence is considered a relation between actors, creating 'network power' (Innes and Booher 2000b). The focus of Innes and Booher, however, concentrates wholly on collaborative action and as such leaves out the rational notions of planning, which still exist in practice.[21]

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20 The term interdependence is also widely used by economic theory, explaining the relations of different nations in a global context.

21 Innes and Booher are quoted frequently here because there is a lack of research regarding complexity theory in relation to planning theory. To shed light on this research gap, the Association of European Schools of Planning (AESOP) has established a new thematic group 'planning and complexity' in the year 2005.

Based on systems theory thinking, Hopkins comments on the rational side of interdependence while referring to plans. He states that plans can support interdependent decision-making in planning. In this regard, plans are tools that support complex planning situations, which Hopkins refers to as systems. Planning in complex systems requires actions to be interdependent, as 'actions you choose to take will affect where you end up and thus will affect the results from other actions you may take in the future' (Hopkins 2001,17). It means 'the value of the outcome of one action depends on another action and vice versa' (Hopkins 2001, 27). Moreover, it implies that actions cannot be seen as separated and it considers effects of combinations of actions. Hopkins' view of interdependence as such is not too far from that of Innes and Booher. Yet he distinguishes his work clearly from collaborative planning, which is a disconnect that unfortunately does not correspond with my view of interdependence.

My understanding of interdependence is characterized by the connection of different planning theories to different activities of planning practice and by observing their interactions with each other. It embraces the metaphor of a 'store' of planning theories, methods and practice, and it is based on the idea that multiple theories and multiple practices exist not just in parallel to each other, but in an overlapping, even cross-influencing mode.

Interdependence lies at the heart of complexity in planning, as it acknowledges the existence of numerous requirements in planning from visions to actions. It is clear that interdependence represents a counterpart to fragmentation. A fragmented set of planning tools and methodologies leads to confusion in planning processes, because, if the existing connections of the planning activities and their interactions are not considered thoroughly, the outcome might be counterproductive.

For planning practice, this means developing a new interdependent view of planning. Hopefully, this will offer the chance to openly access Healey's planning theory 'store'-metaphor. However, this view of interdependence should cultivate more than the 'store' metaphor, since planners that acquire ideas and methodologies consider the effects and relations of their 'purchases', be it rational plan making or collaborative workshops.

What does interdependence not include? I distinguish interdependence from comprehensiveness. Comprehensive planning is related to the notion of plan-making. Hopkins defines comprehensive planning in his book about plans in terms of space (entire community), function (different aspects of government activities) and time (long-range time-frame) (Hopkins 2001). Comprehensive planning tells us, however, nothing about theories or tools. Porter distinguishes growth management from comprehensive planning, as it incorporates all the attributes of comprehensive planning which comprise planning and regulation tools, but takes on a more proactive approach (Porter 1996). This proactive approach is not unique for growth management, but it is the zeitgeist of planning in general, which reaches beyond plans to cultivate action, participation, knowledge exchange and implementation.

To sum up the argumentation so far, the study will make use of several ideas from the planning theory 'store' for my own considerations for exploring the subject of growth management:

1. Overall structure:
The 'store'-idea is used as a powerful metaphor, which is derived from Healey's post-positivist ideas. In containing both planning theory thoughts and planning practice activities it should be considered as open, constantly evolving, messy, uncertain, and complex.

2. Systems analysis and procedural planning theory:
Despite all its flaws, systems analysis and procedural planning should be embedded in discussions of planning theory, because they are still intertwined with planning practice. This is particularly true for growth management, a planning approach created during the hegemonic period of systems analysis and procedural planning theories.

3. Postmodern thought in planning theory:
The aspect of fragmentation of planning styles (in theory and practice) are the starting point to consider a classification of different theories. This relies—among other thoughts—on Allmendinger's considerations regarding post-positivist approaches. Moreover, the fragmentation of activities will be explored further in the empirical part of the project.

4. Collaborative planning:
The empirical part uses the methodology of interviewing planning practitioners; this methodology is strongly influenced by Forester's ideas about collaborative approaches and studies of planning practice.

5. Knowledge and information as common denominator:
In addition to the meta theories, special attention is given here to the role of knowledge and information. Although not a theory per se, knowledge and information can be recognized as a common denominator in many of the discourses about systems analysis and procedural planning, postmodern thought in planning theory and collaborative planning theory.

6. Interdependence as a means of merging planning theories and activities in planning practice:
The notion of interdependence, which is inspired by Alexander's observations of collaborative planning and postmodern planning, will be explored, providing the basis for the research framework.

This multitude of considerations from different theoretical viewpoints makes the study a procedural, post-modern and collaborative endeavor. The attempt to incorporate

different theories, including rational choice and systems theory approaches, leads me to consider it as interdependent.

Developing a Theoretical Frame for Investigating Growth Management Activities

The purpose of this section is to gain further knowledge about the possibilities of exploring different planning theory approaches in planning practice in a way that is interdependent. As we have learned, different (fragmented) theories have shaped the currently existing set of planning approaches over time. For this reason, a theoretical frame for different growth management approaches could help to provide a classification of these planning approaches. Ideally this classification would be based on a set of different planning theories.

There is a multitude of literature clustering and discussing planning theories and planning techniques. One investigation has the purpose of grouping activities for further studies (IOER to classify planning practice approaches). Most literature has the purpose of underpinning one specific planning theory (Innes argues from a collaborative planning viewpoint; Alexander observes postmodern and collaborative discussions from a rationalist-procedural planning perspective; Allmendinger offers a post-positivist typology; Fainstein links her arguments to a post-Marxist political-economy approach with what she calls the 'just city'). Some studies are clearly based on one another (for example Allmendinger's considerations are based on Yiftachel's thoughts, and to some extent Fainstein's ideas), others have been developed embedded in practice-oriented discourses (for example IOER's context is to apply sustainability in planning practice). All of them show to some extent overlap in referring to communicative action, post-positivism or rationalist ideas. Taken together they span a wide range of planning theory thinking.

In order to define a research framework for growth management based on interdependence, I first gloss a selection of planning theoretical classifications. Then I will introduce and explain my own typology of planning theoretical thought.

Healey, McDougall, Thomas (1982)

By the time Healey et al's book was written, the peak of systems analysis and procedural planning theory had passed, and planning theorists were searching for alternative ideas. Although Healey et al's typology-approach can after more than 20 years no longer be considered as contemporary, its value lies in the fact that it is one of the first classifications to draw a map of planning theory outside of rationalist-modernist thought, and, that it tried to find a platform, a 'common ground' for the new ways of planning theoretical thought to interact and exchange with each other. 'Our concern is to re-establish critical communication, as an aid to sharpen

theoretical focus of existing positions and encouraging theoretical development'
(Healey et al 1982b, 6).

Interestingly, at that time, modernism still played a central role in planning
theory.[22] What is referred to as 'procedural planning theory' is either viewed as a
starting point of new theoretical positions such as social planning and advocacy
planning, implementation and policy, and incrementalism, or opposed by approaches
like political economy, new humanism, and pragmatism (Healey at al. 1982b, 7;
compare also the post-positivist comments in Allmendinger 2002). All these
theoretical positions are described in their relation to procedural planning theory as
alternatives, or critique.

Procedural planning theory has been described in previous paragraphs. The other
planning theoretical approaches I choose, collaborative planning and postmodern
thought in planning were not yet identifiable as planning theories at the time Healey
et al's book was published, since they had not yet been sufficiently elaborated to
reach that status.

The emerging theories described by Healey et al. are the offspring of a learning
process out of systems analysis and procedural planning theory. All of them focus
on a stronger engagement in planning practice, which employs a different view of
planning than procedural theory. Lindblom's (1959) theory of incrementalism is in
line with implementation or 'action'-oriented theories as suggested by Friedmann
(1969, 1973). Pragmatism seems to offer a complete departure from theory while
concentrating on 'getting things done' in practice. Another wave of theories adds
the notion of content to the planning process by putting emphasis on values and
stakeholders, which had not been provided by systems analysis and procedural
planning theory. For instance, Healey et al highlight social planning and advocacy
planning, where planners act in favor of specific interests. Marxist theory focuses on
planning as a state activity supporting working class interests and as an intervention
in capitalist (market-driven) interests. Another more radical strand of theory, new
humanism, is based on idealized interaction and individual self-learning among
societal groups.

Conclusions for this study   The intention of Healey et al's piece is to call for
an exchange of ideas among different theories in this moment of departure from
modernist thought:

> Having argued against a new theory hegemony in planning, the position paper puts forward
> simple procedural rules. The aim of this is to create and sustain critical communication
> between those who do not necessarily agree about theory but recognize they are working
> in the same field (Healey et al. 1982a, 2).

Already at this point it becomes obvious that planning theory and planning as such is
constantly developing; this may lead to further confusion in planning practice. It also

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22 Compare the figure in Healey et al (1982b, 7).

seems clear that there will not be a powerful hegemonic planning theory like systems analysis and procedural approaches in past planning theory.

Friedmann (1987)

Friedmann offers a structured view of what he calls the 'terrain of planning theory' (Friedmann 1987, vii). His own work is embedded in an action-oriented approach towards planning. From a planning history perspective, he examines and characterizes planning traditions such as social reform, policy analysis, social learning and social mobilization.

In Friedmann's view, social reform is a method seeking to institutionalize planning practice, while planning is viewed as a task of the state, which must be improved. Policy analysis is embedded in the worldview of systems analysis and procedural approaches in planning and offers a fairly simplified model of decision-making in an 'ideal' planning process. Social learning is a rather pragmatic approach emphasizing 'learning by doing' (Friedmann 1987, 81). In this case knowledge is not derived from expertise, but from experience and practice. Social mobilization is distinguished from the schools heretofore mentioned by its 'bottom-up'-view of planning. Social movements, which lie at its heart, are influenced by Marxism, utopianism and anarchism.

Having dealt with these planning traditions, Friedmann lays the cornerstone for a new (or then emerging) approach: radical planning. This action-oriented way of theorizing focuses on the 'political community', the citizens and their actions 'from below' (Friedmann 1987, 314). It serves the broader purpose of social transformation, and thus emphasizes self-empowerment and self-reliance in planning. It is a planning theory of struggle, contradictions and of merging, or—as Friedmann puts it—'an amalgam of analysis, social vision, and hard strategic thinking' all of them based on practical experience (Friedmann 1987, 389)

Conclusions for this study   Friedmann's attempt in exploring the roots and the approaches in planning theory from engineering sciences to sociological thinking makes clear that there is no homogeneous body of planning theories, but a broad and multifaceted bundle of thought that is becoming more complex through time. Moreover the different notions the 'knowledge' factor can have (from technical expertise to learning by doing and many more) are of interest for this study. The attempt to merge planning theory and planning practice is also a worthwhile thought to consider for developing a framework to analyze growth management.

Yiftachel (1989)

In addressing the fact that 'an alarming gulf has been created between theory and practice' (Yiftachel 1989, 23) Yiftachel identifies three strands of planning theory that according to his observations developed in a parallel mode: analytical approaches, urban form approaches and procedural approaches. He bases these strands on what

he calls fundamental questions facing urban land use planners: 'what is planning?' is tackling analytical aspects, 'what is a good urban plan?' deals with urban form aspects, and 'what is a good planning process?' comprises procedures.

Conclusions for this study   Although Allmendinger has critiqued Yiftachel's typology for being too linear and 'teleological' (Allmendinger 2002, 90) and because of the persistence of the substantial-procedural divide in his argumentation, it contains several thoughts that are of interest for this study. First of all Yiftachel acknowledges that the three strands of theory can be seen as complementary ideas rather than competing ones. This is a thought that corresponds with my approach towards interdependence in planning theory.

Also of interest is the very fact that he breaks down the substantive component of planning theory into two strands by distinguishing urban form and content. This adds the design component as an equally important strand to the substantial-procedural divide. Since design has been rediscovered by planning discourses in the US in recent years, especially embedded in a movement referred to as 'new urbanism', these considerations will be explored in my research.

Fainstein (1999)

With the 'communicative model', the 'new urbanism' and the 'just city', Fainstein explores three very different approaches to planning theory in terms of their contributions to improving the quality of human life (Fainstein 1999).

Since she critiques systems analysis and procedural planning theory, she ignores these planning theoretical thoughts in her classification, although she acknowledges that there are still 'defenders' of this line of thought (Fainstein 1999, 1). For this reason, she concentrates on what she refers to as 'post-positivist' approaches. She does, however, clearly separate them from postmodernist ideas, which in her opinion often remain neglecting current planning practice.

> Although strategic and substantive issues separate the three schools of thought described
> here, they share an optimism that had been largely lacking in previous decades. Sustaining
> this optimism depends on translating it into practice. (Fainstein 1999, 19)

Fainstein's argumentation is not a value-free discourse about three strands of planning theory. Her thoughts are anchored in a post-Marxist political economy approach, which favors the 'just city' theory. The other two strands of planning theory are critiqued, deconstructed and generally displayed as unpractical.[23]

Conclusions for this study   The post-positivist direction outlined here seems to be suitable to support rather practicable planning solutions, since planning practice is viewed as one central aspect of the investigations: '… each [type] points to a to a

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23 I allow myself to make use of some of Fainstein's critique in the chapter about collaborative planning theory.

distinctive path for both planning thought and planning practice' (Fainstein 1999, 1). The conclusion for this study is that the link between the bandwidth of the existing growth management tools, which have been developed under the influence of rationalist planning, and Fainstein's post-positivist scenario, should be explored. Interestingly, Fainstein buttresses my argument about the fragmented link between planning theories and planning practice when she observes:

> Differences among the types reflect the enduring tension within planning thought between a focus on the planning process and an emphasis on desirable outcomes. In the recent past neither tendency has fully dominated, as theoretical orientations toward process and outcome have respectively affected different aspects of practice. (Fainstein 1999, 2)

Her critique of collaborative and New Urbanist thoughts in planning theory, two strands which experience enormous popularity in the US planning practice, piques my interest as a researcher and encourages me to incorporate the critiques into my research frame. However, it is difficult to find growth management approaches which clearly correspond with the idea(l) of the just city. The just city reaches beyond collaborative planning in its attempt to involve stakeholder groups in a more radical, advocacational style. Although critiqued by Fainstein, collaborative planning with its democratic values seems the appropriate medium to respond to the requirements on participation based on the just-city theory.[24]

Institute of Ecological and Regional Development (1999)

The approach developed by the Institute of Ecological and Regional Development (IOER) does not quite fit into the line of grand theoretical thinkers stated in this chapter. Rather, it is a classification of planning activities that has been developed in 1999 as a pragmatic by-product for the project 'local and regional planning instruments for sustainable regional development'. It can be seen as one of the starting points of my considerations on typologies of planning activities. The complexity of planning systems in different European countries provides the backdrop of IOER's project. This complexity deserves a view of planning that not only relies on the modernist approach focused on plans and plan-making based on normative regulations as the major task, but also one that connects to the creation and implementation of multilayered planning and development processes. The project group developed a classification of planning activities into the following categories: formal instruments, informal instruments, incentives, and information-oriented instruments.

Formal planning instruments are binding regulations, which are based on legislation. They are grounded on an organizational framework within the political-administrative system. Hence, they support the implementation of planning objectives and normative regulations. As such they are part of the normative aspect in planning processes and enable planning to be of binding character.

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24 Even if I fail to understand the just city concept in this respect at all, there seems to be no alternative approach to do so, nor does Fainstein offer one.

So called 'informal planning instruments' incorporate ideas of collaborative planning. They support decision-making within the planning process and provide for a flexible and consensus-oriented implementation of planning goals. The main features of informal planning instruments are their process-oriented character, which is based on public participation and project implementation. These instruments focus on the search for joint solutions by various state, local, or private actors.

Planning decisions are also strongly influenced by incentives. Embedding incentives in a coordinated way in planning processes can foster the implementation of planning goals. Furthermore, they support the need to enhance the effectiveness in planning by means of providing financial stimuli.

The role of information-oriented instruments in planning processes is growing. Of special note is the use of Geographic Information Systems (GIS) in supporting communication processes and the monitoring of plan implementation. In addition, information-oriented instruments use data more efficiently, which can enhance the knowledge base in planning processes.

The idea of 'informality' in planning is the result of postmodern thought in planning in Germany during or since the 1980s, searching for alternative approaches to procedural planning and comprehensive plans. Here, the implementation of traditional (formal) planning styles had proven to be rather unsuccessful by that time, and planners were searching for alternatives to the systems analysis and technical schemes. For this reason, several pragmatic alternatives have responded to the challenge. In particular the 'planning through projects'-approach culminated as a new planning methodology at the International Building Exhibition (IBA) in Emscher Park. Ganser (1991) labeled this planning style 'perspective incrementalism' in contrast to the notion of 'disjointed incrementalism' or 'muddling through' (Lindblom 1959) as earlier noted.

In order to achieve consistency, this planning style clusters a number of decentralized projects among one particular future-oriented aim, thus achieving a coherent regional development perspective. High political visibility, the opportunity to concentrate major investments, and innovative structures of cooperation all clustered to make the IBA project successful. With its uniqueness and context-dependency as major strengths, however, it appears difficult to achieve similar momentum with other initiatives (Siebel 1998). IBA can nevertheless be viewed as one of the first attempts to initiate a more recent discourse about strategic planning in Europe.[25]

Conclusions for this study   The value for this study is that IOER's approach is one of the few classifications of planning theoretical ideas that have been directly linked to an exploration of planning practice.

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25 The body of literature around strategic planning in Europe is growing, compare among others: Albrechts (2001), Salet and Faludi (2000), Healey (1995; 2004).

Moreover, it can be observed that the European approaches have thus far not reached current American planning theory discourses.[26] One might speculate if the latter lack either a perspective or a strategic notion. The incorporation of future orientation into US planning practice will be part of the investigation in the empirical cases of this project.

Innes and Booher (2000b)

Innes and Booher introduce a typology of what they call 'planning styles', which are based on planning theory considerations (Innes and Booher 2000 b). They distinguish between the rationalist/technical style, planning through political influence, advocacy planning, and collaborative planning.[27] They see the rationalist model as an ideal-world approach, which is highly technical, and at the same time fails to take diverse interests into consideration. Political planning is characterized by decision-making processes, which are biased by a few elite key players. Advocacy planning, a highly popular planning style in the US, brings many people to the table in order to lobby for one specific interest. Environmental groups are referred to as one prominent example for the advocacy planning style (Innes and Booher 2000 b). Collaborative planning aims at creating a self-sustained network of actors, representing diverse interests.

Conclusions for this study   The distinction between the rationalist approach and collaborative planning seems helpful for the study of growth management activities, since they give rise to techniques which planning practitioners apply in their everyday work. Planning through political influence and advocacy planning seem more intertwined, as advocacy groups represent a strong power that can influence political decision-making. Innes and Booher acknowledge an overlapping of these planning styles, yet focus in their research on the collaborative approach. My argumentation goes beyond that by stating that planning practice must countenance all of the planning styles mentioned above.

Alexander (2001)

In this classification, Alexander primarily deals with collaborative planning theory and postmodern thought in planning theory. He takes one step beyond a description by developing a 'synthesizing framework' based on the principle of interdependence. This is an attempt to describe Habermasian communicative action and Focauldian

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26 For the strategic planning discussion today, it can almost be disregarded that in the 1980 there was a discussion on strategic planning in the US.

27 The four planning styles were further refined by Innes and Gruber (2001), when they distinguish technical bureaucratic planning, political influence, social movement, and collaborative planning.

strategic rationality as complementary approaches, which have to be linked.[28] In so doing, Alexander goes even further than Healy's 'store'-metaphor mentioned at the beginning of this chapter.

Although his paper basically centers on the postmodern—collaborative debate he clearly points out that these two paradigms are not sufficient to solve the multifaceted tasks in planning practice: 'Neither the realist Focauldian nor the idealist Habermasian can ignore the existence of instrumental-functional interdependence' (Alexander 2001, 317). Instrumental-functional interdependence is rooted in modernist planning traditions, which has brought about planning processes and organizational structures.

Conclusions for this study The conclusion for this study—based on Alexander's observations—is that planning practitioners have to mix the bits and pieces of activities, communication and strategic negotiation in terms of the specific planning situations. Interdependence, or the merging and mixing of different planning theories might be the future of planning theory, if planning theory aims at being able to keep pace with planning practice.

Schönwandt (2002)

Another interesting contribution to planning theoretical classifications from the German literature comes from Schönwandt (2002). He distinguishes 7 models which have been basic planning theoretical focuses of discussion since the 1960s: rational planning, advocacy planning, (neo)Marxist planning, social justice planning, social learning and communicative action, radical planning, and liberal planning.

Most of these approaches have been briefly characterized in previous parts of this chapter. The term 'liberal planning', however, needs additional clarification, since it is a new expression added by Schönwandt to the discussion of the other models of 'liberal planning' more customarily included in discussions of planning theory. In this theoretical view, which can also be referred to as 'laissez-faire', planning is reduced to a minimum range of activities. The followers of this model argue in favor of the regulative economic forces of a free market, where property rights, personal freedom and the maximization of personal wealth lead to certain decisions which should—in theory—have the power to act as planning substitutes.

He observes overlap and evolution among all of these models, and points out that all of them have their role in today's planning practice. His intention is, however, to provide an integrated approach for these theoretical thoughts, which he calls a third

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28 Alexander has studied different lines of planning theory in his previous publications in search of alternatives to procedural planning theory. Here, he refers to interdependence, but more specifically to what he calls a 'contingency theory for planning' (Alexander 1996). In these publications he strongly argues in favor of procedural planning, the strand of theory he once helped to develop. For this study, I chose to refer to his latest publication, since it can be assumed that further considerations might have added to the theoretical discussion by the year 2001.

generation of planning theory (Schönwandt 2002, 30). His structuring of planning activities is guided by a set of questions that planning practitioners should make use of in their work (Schönwandt 2002,162ff).

- Questions dealing with the planning problem (for example what is the problem situation, which aspects should be changed by means of planning?) Questions dealing with planning terminologies (for example, which are the central planning terminologies used to characterize the problem, and how can their consistency throughout the process be maintained?)
- Questions dealing with constructs in planning (for example which terminologies, propositions, contexts and theories are of relevance, and how are they interpreted?)
- Questions dealing with explanations of the mechanisms linking causes and effects (for example which mechanisms are effective within a specific planning situation, and vice versa, which mechanisms should be applied?
- Questions dealing with planning rules (methods) (for example which planning rules should be applied to deal with the planning problem, and which interactions occur between these rules?)

Conclusions for this study   Useful for this study is the acknowledgement of a parallel mode of planning styles and the attempt to provide integration among these, which aims at offering support for planning practice. Also of interest is the provision of a systematic approach, even though it is to a wide extent defined by a specific planning context.

Allmendinger (2002)

Allmendinger's typology of planning theory is the most recent attempt to classify planning theories. His post-positivist approach seeks to overcome the procedural-substantive divide, specifically the discussion of theories in planning and of planning, by claiming a 'more normative dimension that diffuses such a duality' (Allmendinger 2002, 83) and interlinks facts and values. The explorations—like most of the others mentioned above—display the fragmentation and complexity of contemporary planning theory. Allmendinger does arrange approaches to classifying planning theory in chronological order, such as Yiftachel (1989) and Friedman (1987), since planning in practice and theory follows the 'store'-metaphor of choosing ideas that might fit one specific situation at one specific location or underpin one specific argumentation.

His typology distinguishes five groups of theories (Allmendinger 2002, 89ff.): framing theories, social scientific philosophy, social theory, exogenous theory and indigenous planning theory. Framing theories are described as epistemologies, discourses, world-views and paradigms. Modernism and postmodernism belong in this category. Exogenous theories influence space and policy-making processes, while emphasizing one relevant aspect of society. Allmendinger places theories of

democracy, cognitive psychology, regime and regulation theory, implementation theory, central-local relations, and nationalism in this theory 'store'. Social theory has had a strong influence on planning theory. In this regard Allmendinger particularly highlights critical theory, structuration theory, genealogy and archaeology, and rational choice theory. Social scientific philosophy includes broader categories such as positivism, falsification, realism, and idealism. Social theories are closely related to these philosophical considerations. The fifth type of theory is what Allmendinger refers to as indigenous planning theory. Also in this category a mix of approaches can be found including Marxism, advocacy, systems, rational comprehensive, design, collaborative, and neo-pragmatic theories. These theoretical streams are influenced by various ideas from other types, but their specific contextual frame related to space, time and institutional settings also places them in a category of Allmendinger's typology.

Allmendinger's distinction as such is simple and leaves much room to classify the existing body of theories and probably also future ideas to come. It shows at the same time great complexity, as the typology helps—almost like genealogy—to display historic development of and influences on existing (indigenous) planning *theories*. This explains, for example, why collaborative planning overlaps all of the categories mentioned above through a large number of their sub-groups. Yet it is this complexity that makes the typology not easily usable for a classification of approaches in planning practice, a methodology that I intend to explore further. In search for a link to planning practice one might rather focus on the fifth category 'indigenous planning theory', which would however leave out other approaches.

Conclusions for this study   Several ideas of Allmendinger's typology-approach are nevertheless useful for this study. One of Allmendinger's observations is the closed-shop tendency of postmodern planning theory. This is—as mentioned above—one of the considerations which inspire my endeavor of tracing planning theoretical influences in growth management practice. Such is the attempt to overcome Yiftachel's limited view to relate theories to a certain period of time in the 20th century. As Allmendinger shows, theoretical thoughts can be traced back to ancient times, but they can also be re-invented in contemporary times. His outreach from a postmodernist/critical theory perspective towards modernism and consensus building at the same time is also of importance for framing the notion of interdependence in planning practice and theory.

Conclusions: Setting up the Theoretical Frame

Analyses of planning theory clearly reveal a picture as multifaceted as the tasks planning practitioners have to face in everyday planning. To summarize the argument so far, existing meta theories offer divergent, often contrary approaches to handle tasks, as many of these do not take other options into consideration that might bridge instrumental gaps, fill conceptual holes, and enhance planning practice.

The many typologies that have been developed in planning theory give me the opportunity to reflect on a large number of already existing typologies, and to develop a 'mix and match'-classification of planning approaches that, hopefully, offers a connection to growth management practice and thus widens the planning 'store'. As mentioned at the beginning of this chapter, the attempt to connect different planning theories in order to overcome fragmentation and thus enhance the performance of planning practice is one of the basic considerations of my theoretical approach.

We also learned at the beginning of this chapter that there is no specific way to describe how theories influence planning practice. Here it has to be noted that I do not claim that every growth management activity relates to one specific planning theory. This would be too simplified a view. Referring to the imprecise and mysterious process of how planning theories find their way into planning practice mentioned earlier in this chapter, instead I attempt to search for patterns, traces or similarities between theory and practice. For this reason one requirement is that the framework should be 'kept simple', so that it may be easily being communicated to stakeholders in practice.

Further exploration demonstrates that growth management has been grouped into categories before, but as there has not been a theoretical discussion in terms of growth management approaches, the categories were more or less intuitive relying on perceived objectives of growth management.[29] Based on the investigation of planning theories, an approach of clustering growth management activities will be developed and applied in this study, as outlined by the following paragraphs. This clustering comprises the following aspects:

1. Regulation oriented: Setting limits for growth/preserving space
2. Incentive oriented: Fostering decisions
3. Design oriented: Shaping the urban environment
4. Collaboration oriented: Involving stakeholders
5. Information oriented: Providing knowledge

As a multitude of approaches is used to manage growth, only a selected number of these tools can be presented and included in the study. They represent, however, a selection of means which have been used at the beginning of growth management as well as newer developments. Along with a brief description of the categories, these real-world growth management approaches will be linked to the typology.[30]

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29 For example, Porter distinguishes different growth management techniques, such as community expansion, natural resources, community infrastructure, quality of community life, economic opportunities and social equity (in one category!), and regional and state guidance (Porter 1997).

30 The selection of growth management activities is based on a literature review of growth management practice in the US with special emphasis on practice in California; they will be further explained in Chapter 4.

Regulation oriented   Modernist concepts, especially procedural and systems analysis aspects of planning can be identified in a large number of planning approaches. Especially in growth management the regulative ideas of setting limits for growth and preserving open space are characteristic expressions of this worldview, which is today—as we have learned earlier in this chapter—highly criticized.

In the growth management discussion, regulations obtain their own definition as '… the specific controls applied to different types of development activities to regulate their impacts' (1000 Friends of Florida 1992). This unspecific definition indeed stimulates the suspicion of fragmentation. The growth management activities referred to under the strand 'regulation oriented' are to a great extent part of traditional planning in the sense of 'plan making', as they are directly dealing with land issues. Methods to be explored in this strand are: urban growth boundaries, urban development tiers, mixed use, coordinated infrastructure planning, and protected space outside of settlement areas.

Incentive oriented   Incentives in growth management are grounded on the idea that traditional plans have to be accompanied by monetary mechanisms to support the implementation of planning goals. This is especially the case in a market oriented planning realm like the US. For this reason, a large number of growth management tools can be found in this category. However, they are applied on a voluntary basis, so that there is no guarantee, that existing tools will be applied. This uncertainty of the incentive-approach is a main difference between regulatory instruments such as urban growth boundarties, and the incentives category. Growth management incentives that will be investigated in this paper are tax benefits, purchase of development rights, density incentives such as building advantages, and joint use of taxes.[31]

Design oriented   This strand will be chosen based on Yiftachel's and Fainstein's typologies. It corresponds with the observation of the revival of design by means of the 'new urbanism'[32]-movement in US planning. Cunningham speaks even of a new 'restorative-development megatrend' (Cunningham 2003, 2). Design aspects are not as elaborated in planning theory such as regulation or collaboration, but there certainly exists an epistemic community around the topic of new urbanism, which might bestow upon 'design' the status of a new paradigm in US planning.

The link to growth management is derived from the observation that growth has the potential to change the character of a community and thus affects citizens' perception of the quality of life. Design as a concept of shaping growth has found its way into planning in recent years by redevelopment and downtown revitalization projects, where taking the surrounding neighborhood into consideration is a key issue. Design is imminent in the planning process since it adds an aesthetic component to

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31 As we will see in Chapter 4, the use of tax incentives by developers or landowners takes place on a voluntary basis.

32 On the principles of New Urbanism see Duany et al 2000; Leccese, McCormick 2000.

the functional realm and can have significant effect on the quality of place. In this respect, design is becoming a more important feature in the discussions about how development should be managed in the US. The 'new urbanism'-movement, which is a label for neighborhood design that draws inspiration from traditional city planning, was created in this regard. Small scale orientation, sense of place, and—where possible—transit orientation characterize this approach that has become popular across the US. Consequently, new urbanism will be investigated in its relation to growth management.

Collaboration oriented   Collaboration will be investigated in the practice- and 'action'-oriented sense explored by Innes and Booher. The general question is in what way stakeholders are involved in planning processes. The methodologies may comprise small-scale approaches from stakeholder involvement to the scale of collaborative programs. Moreover, inter-local cooperation will be explicitly explored in the frame of the strand 'collaboration oriented'.

Collaboration oriented approaches will also be viewed as tools to sustain aspects of democracy, ethics and legitimacy in the planning process. They are the only means planners have to 'watch over' power and equity issues. In this regard, it will be observed if they take Fainstein's 'just city'-approach (Fainstein 1999) into consideration.

Information oriented   As one concept related to be analyzed for the theoretical framework, the idea of the information society will be used. Planning does not work without information. It is notable that Innes, one of the leaders of collaborative planning, gives an explanation for the necessity of integration knowledge into planning versus the rational approach for the state of planning theory at the beginning of the 1990s:

> The standard model of using quantitative and scientific information for 'rational' calculation by experts and formal choice by decision makers does not deal well with questions such as the effect of unique qualities of individual contexts and communities, with qualitative issues such as values, nor with intuitive and 'how to' knowledge. … As the positivist view of knowledge, on which this standard model is based, is challenged by a phenomenological view (Bernstein 1976), we begin to develop corresponding alternative models for how to link knowledge and action. (Innes 1991 b, 16)

The provision of knowledge has become a powerful tool in planning. According to Innes

> Growth management 'presents a particularly challenging task of linking knowledge and action. It requires many kinds of knowledge—from facts and predictions about growth patterns and relationships among activities, to knowledge of interests and values of players and practical understandings of how things work. The knowledge must, moreover, help to change the behavior of a wide variety of players. The task is particularly problematic because the issues at stake—property rights, land use control, quality of life—have important symbolic and emotional meanings in the U.S. (Innes 1991 b, 16).

The importance of information technology as a paradigm is expressed by Castells. He refers to the Internet as the main tool causing an 'information technology revolution' (Castells, 2000: 28). In planning, information technology has a special role with the use of Geographical Information Systems. Castells claims that new information technologies should not only be seen as applicative tools, but as parts of development processes.

Starting point for the strand information oriented is Castells' technological interpretation of information and considerations made by IOER. Both refer to the use of GIS in planning. For this reason the approach to be explored is GIS supported land use monitoring systems.

I acknowledge that the classification as outlined above has its flaws starting with the decision to incorporate a selected range of planning theories on the meta-level up to the subjective clustering of planning approaches. Moreover I must admit that shifts in consistency occur, especially where theory is broken down to growth management practice, and thus it offers room for critique. However, the very subjective arrangement relies on my practical experiences as a planner and consultant and my observations of practice as a researcher.

As I consider it too ambitious an endeavor to link every growth management approach to a specific theoretical school, let alone to discover which planning activity would count as growth management, I will deal with a selected number of growth management approaches to be presented in the next chapter.

Closer examination uncovers the 'store'-idea of planning as not homogeneous or well-organized. Instead it can be characterized as something that is 'messy'—in planning terms, fragmented and highly disconnected, even comprising competing theoretical discussions. The need to provide integrated solutions for planning practice is, however, persistent. The crucial question regarding growth management is: How does a planning task—procedural by nature—function today, where current planning paradigms require collaboration, complex ways of thinking and dealing with ever-changing knowledge and uncertainties? Which growth management activities have been proven to be successful and, which do planning practitioners prefer? These considerations lead to the question: Which aspects should planning practitioners take into consideration in order to deal with today's multifaceted planning sphere with the example of growth management? These issues will be dealt with in the empirical part of this paper, when the attempt is made to unleash interdependence into growth management practice.

Linking Theory to Action: Classifying Growth Management Activities in line with the Theoretical Framework

This chapter links the planning theoretical classification of Chapter 3 with the knowledge about growth management developed in Chapters 2 and 1 respectively. Moreover, this chapter establishes an outline for the empirical part in Chapter 6. In this phase of the project, it is necessary to ask what the growth management approaches currently in use in US planning practice are, and how they operate? For this reason, the main purpose of this chapter is to classify growth management activities according to the theoretical framework elaborated in Chapter 3, and to describe these activities in further detail.

As for the choice of growth management activities, I will give an overview on the spectrum of approaches that are currently applied in the US. Due to the fragmented nature of growth management activities as investigated in Chapter 2, the instruments characterized here are not in use in all parts of the US, but often only in several communities, counties or states. Nevertheless, they represent 'state of the art' growth management according to the literature investigated. Still, growth management is not a homogeneous approach, as Innes reports from the perspective of collaborative planning:

> Because growth management is so complex and involves so many actors, actions and places, no one set of experts can design a successful program nor can any state impose an effective program from the top down (Innes 1996b, 164).

In the interest of coherence, only a limited number of activities can be explored in this study. I will investigate a representative selection of tools that have been used since the beginning of growth management as well as newer developments.

The following summary of the classification of growth management I will deal with in this chapter will provide a better overview.

1. Regulation oriented: Setting limits for growth/preserving space.
   - Urban growth boundaries.
   - Urban development tiers.
   - Coordinated infrastructure planning.
   - Growth caps.

- Preserving space outside of settlement areas.
- New generation zoning and mixed use.
2. Incentive oriented: Fostering decisions
   - Tax benefits.
   - Purchase or transfer of development rights.
   - Density incentives (Building advantages, impact fees).
3. Design oriented: Shaping the urban environment
   - New urbanism.
4. Collaboration oriented: Involving stakeholders Stakeholder involvement
   - Inter-jurisdictional and regional cooperation (for example tax-base sharing).
5. Information oriented: Providing knowledge
   - Land use monitoring systems (GIS supported).

Regulation Oriented: Setting Limits for Growth/Preserving Space

In the theoretical part of this chapter, the term 'regulation oriented' was introduced based on procedural planning and systems analysis in planning theory. This view of planning was in fashion until the 1980s, but is now highly criticized. Still, regulative approaches remain a key element in growth management today. We also learned in Chapter 2 that regulations are defined as '… the specific controls applied to different types of development activities to regulate their impacts' (1000 Friends of Florida 1992).

The growth management activities referred to in this chapter have, to a great extent, been starting points, or pioneer approaches, of the growth management movement from the 1960s on. For this reason, they can be seen as part of more traditional planning approaches.

Urban Growth Boundaries

Urban growth boundaries are among the most famous growth management tools, as they belong to the category of pioneer approaches in growth management. They represent a limit line between urbanized land and undeveloped land. By this means, they accommodate growth within the urban area within a specific period of time. Daniels describes the philosophy that forms the basis of urban growth boundaries:

> Some kind of demarcation line is therefore necessary to determinate where the encouragement of development should stop, and the retention of farm, ranch, and forest lands continue (Daniels 2001).

The development of a city's housing, office space, retail space and infrastructure occurs within a growth boundary. Therefore, a compact settlement structure is supported,

which in turn encourages lower infrastructure costs.[1] Urban growth boundaries are rarely permanent or static lines. Usually, they are set up for a period of 20 years, so that they may be adapted to future growth needs later. This adaptation usually dictates an extension of the line to accommodate larger portions of development.

Since urban growth boundaries are easy to implement compared to raising taxes or tolls (Brueckner 2000), they are one of the key tools in growth management. In 1997, they received national recognition with the Model State Statutes for Planning and Zoning Reform by the American Planning Association. This organization recommends that communities should establish urban growth boundaries in order to achieve more compact and effective urban development (Ding et al 1999).

The most prominent example for growth boundaries is the state of Oregon, where by way of the 1973 land use act urban growth boundaries were enacted for cities and their adjacent counties.[2] However, the experiences with Oregon's urban growth boundaries showed that it is hard to predict how much growth can be accommodated within a boundary in a 20 year period, since the boundary might turn out either too small or too big to prevent sprawling development (Knaap and Nelson 1992).

Urban Development Tiers

Urban development tiers provide more detail about the timing of new development than urban growth boundaries. They direct urban growth to specific areas, usually located at the urban fringe, in line with particular development stages over a period of time. By this means, new development areas are put into a certain order. Development tiers offer a combination of accommodating infrastructure services, new development, and open space worth protecting (Pendall 2002, 25). These parcels are sometimes referred to as 'targeted development areas', which can be designated within a jurisdiction's comprehensive plan and zoning ordinances. Like urban growth boundaries, urban development tiers are among the first forays into growth management in the US.

Coordinated Infrastructure Planning

Infrastructure costs are an important motivation for communities to apply growth management strategies, as described in Chapter 2. Pendall observes that

> Every metropolitan area in the United States is shaped by the way its public infrastructure is financed and by the timing and geographical sequencing by which that public infrastructure is built (Pendall et al 2002, 5).

Coordinated infrastructure planning is directly targeting these aspects.

To achieve coordinated infrastructure planning, boundaries are created to define where public services will be provided within a certain time frame. So called urban

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1 On the link of infrastructure and growth management see Chapter 2.
2 See Chapter 2 for Oregon's state growth management policies.

service areas are designed to accommodate urban growth related to the water and sewer systems. While determining where development should take place, the service area also fulfills the goal of preservation of land outside the service area (e.g. agricultural land or open space, by protecting it from development. By this means, the edges of the urban land to be developed are defined. Urban service areas can be compared to an urban growth boundary approach and to urban development tiers, but their emphasis is on infrastructure in particular.

Growth Caps

Restricting the amount of growth that can occur in a community is one of the oldest growth management tools in use. For example, growth caps were applied in the city of Petaluma, as described in Chapter 2. They restrict the number of either development permits or of population growth within a certain time period, usually per year. Indeed, they are among the strictest tools in land use regulation. They are quite effective as a policy, but they lack a connection to quality-related aspects of land use. Moreover, growth caps have been heavily criticized for contributing to rising housing prices in metropolitan regions (Landis et al 2002). And, if one community enforces a growth cap, the neighboring communities might face enhanced development pressure.

Preserving Space Outside of Settlement Areas

Preserving space can be seen as a supplemental approach to the growth-limiting methods described above, by creating limits from the outside of settlement structures. Either natural habitats or agricultural areas at the urban fringe are protected against urban development. Land is usually purchased to create a greenbelt, or simply to keep space open from settlement.

Land Trusts play an important role in carrying out these conservation efforts. In California, Coastal Zone Protection does its share in protecting the space outside a city's boundary, as we will see in Chapter 5. Strong motivation to preserve farmland comes from the citizens. Preserved space is an oft-used indicator of a community's quality of life. However, the very fact that preserved farmland areas have been created might also attract future growth to the urban fringe (Morrow-Jones et al 2004).

New Generation Zoning and Mixed Use

As described in Chapter 2, traditional zoning is one of the facilitators of urban sprawl. The method of zoning can be modified, however, in a way that provides more flexible solutions on a development site.

The various techniques have a more compact distribution of units and land uses in common. In this respect, zoning becomes a growth management activity.

Despite its intention to separate land uses, zoning can also be handled as a tool of combining different land uses which are compatible with one another. This technique of *'mixed use' zoning* promotes a combination of housing, offices, and retail stores

in one development. It can be strictly defined for certain areas or single buildings. Using this tool, residential areas with single family homes separated from jobs and retail facilities can be avoided in order to create more vibrant neighborhoods instead of sterile bedroom communities. For this reason, mixed use is an important tool of the smart growth movement[3] and of new urbanism.[4]

One variation of new generation zoning is *cluster zoning*. This activity groups conglomerates of housing units together in order to leave a larger amount of open space on the development site. The undeveloped space can remain open space or agricultural land, or it can be dedicated as public space for recreation or civic functions. Cluster zoning can thus contribute to the neighborhood character of a community. Furthermore, the clustered units offer the possibility of different housing types aside from the single family home.

The method of *performance zoning* links possible impacts of new development on the community to the approval process (Silberstein and Maser 2000). So-called performance standards enact specific guidelines to evaluate the impact of new development with regard to traffic, water or sewer systems. This approach is related to single projects, and—if their impacts are too high—it could result in a growth cap for specific areas.

Finally, *special zoning districts* can be created to shape development in existing neighborhoods. For example these special zoning districts might preserve the character of historic downtown areas while incorporating new infill development. In California, these districts are popular under the term 'specific plan' (Porter 1997).[5]

Incentive Oriented: Fostering Decisions

As defined in Chapter 2, incentives in urban land use control are grounded in the idea that traditional plans have to be accompanied by financial mechanisms in order to support the implementation of planning goals. It should be pointed out that the financial aspects are of special importance in a market oriented planning realm like the United States.[6] For this reason, incentives are widely used to achieve growth management. Incentives are, however, a planning tool which is based on voluntary agreements and negotiation. Unlike urban growth boundaries, which represent a quite strict regulative tool, there is no application guarantee when it comes to incentives in growth management.

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3 On a more detailed description of the smart growth movement see Chapter 2.

4 New urbanism views mixed use as a corner store for the development of neighborhoods (Duany et al 2000); see also the descriptions in this chapter.

5 Specific plans are also a tool to ensure the compliance of development with environmental standards in order to secure the development process, in particular to keep it from litigation (Teitz 1996).

6 See Chapter 2.

Tax Benefits

Discounts on the assessment of property taxes can be used to sustain either open space or agricultural and forestal land uses as well as enhance inner city development.

Conservation easements are used as voluntary legal agreements between private landowners and land trusts to dedicate land to specific uses. Landowners might receive federal tax breaks under these regulations (American Farmland Trust 1997). This tool is especially used to protect farmland. By this means, landowners are encouraged to maintain land in agricultural use, and not sell it to developers who would convert it to urban land uses. In return, landowners receive tax breaks. An example of a tax benefit is the so called Williamson Act, a tool that is described in Chapter 5, which is used in California. The problem with incentives as the Williamson Act is that tax advantages are only a small compensation compared to the funds offered by developers for purchasing the land (Daniels 2001 b).

Interestingly, tax benefits can also support inner city revitalization projects. Here, the land price can be 'frozen' at a price related to the pre-development phase, and there is no property tax increase during the development phase. This way, development costs are kept low, and inner city development gets more attractive. This is again a growth management tool, which tries to steer development to areas that are already urbanized.

Purchase or Transfer of Development Rights

Development rights programs are based on the fact that property owners have certain rights. For example, they may use, lease, sell, construct buildings on the property. The right to develop land can either be purchased or transferred to a place that is more appropriate for urban development (Hamill 1989, 66). This approach is useful, when certain locations should be protected from development because of their ecological, agricultural or historical value, or when purchase of the land with all the related property rights would be to expensive for the authority, or is not required by the owner, as is often the case for farmland.

Purchase of development rights is a voluntary instrument based on the exchange of money for a highly restricted use of the property. Usually, the one-time payment comprises the difference between the value of the property gained by development and the land value based on the present land use (Daniels 2001b).

Agricultural land adjacent to a growth boundary of a city is an especial target for future development. By purchasing development rights, a community limits the use of the property by the landowner (Daniels 2001b). This can also encourage infill development within a city. By means of special service districts (e.g. open space districts) local governments are enabled to purchase development rights, which are designated as easements for the preservation of open space.

As development rights can be purchased either for a certain period or perpetually, the limitation to a time period might encourage speculation as it could 'subsidize a landowner's holding costs while the land value ripens for development' (Daniels

2001b). According to Daniels (Daniels 2001b) development rights purchase programs had been carried out by 15 states and several counties and municipalities in the US by 1998.

Via a transfer of development rights program, a landowner can sell the right to develop the land (American Farmland Trust 1997). This development right is transferred to a specific area, where the density of the new development will be increased based on the purchased development right.

Transfers of development rights are a flexible tool, as they can be applied for urban redevelopment, preservation of existing neighborhoods, habitat protection, the preservation of agricultural land or open space. Such transfers can contribute to the preservation of large areas, when the development rights of contiguous parcels under different ownership are combined. It is even used, although in a limited way, on a regional level in New Jersey's pinelands and New York's Long Island (American Farmland Trust 1997).

Usually, the purchase of development rights is easier to carry out than the transfer of development rights. The purchase is targeted on one area only, while the transfer has to deal with at least two areas. Another problem is that zoning regulations in the target area can be undermined by the transfer policy. Transfer of development rights involve the private market, as the transactions are handled between landowners and developers (American Farmland Trust 1997). For this reason, the extent to which transfers of development rights are being used is dependent on the demand of the market. In areas with high real estate prices and high taxes, they provide an effective economic incentive.

Ideally, a development rights program is accompanied by urban growth boundaries to avoid that urban growth will surround the preserved land and thus undermine the growth management strategy.

Density Incentives (Building Advantages, Impact Fees)[7]

While raising allowable density levels is an effective growth management tool, it is not very popular. High density housing is especially stigmatized (Danielson and Lang 1998), as citizens associate it with social problem areas, poverty, and high crime rates.

By means of density incentives, local jurisdictions are able to guide development to specific locations in order to support infill development or redevelopment. In these areas, a higher density of buildings is allowed by means of rezoning to allocate new development. While developers can enhance their profit with additional units per lot, vice versa, they have to support public services on site, for example

- Allow and finance road improvements, like pedestrian walkways or bicycle trails.

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7   The approaches shown here are usually carried out by means of zoning. As they clearly belong in the incentive-category, they will be described here, not as part of 'new generation zoning'.

- Provide additional landscaping.
- Apply certain design features.
- Follow specific environmental standards.
- Dedicate land as recreational facilities with public access, like playgrounds or parks.

This 'incentive-zoning'-procedure, however, will only be used if the developer benefits from the approach in financial terms (Silberstein and Maser 2000). Building at a higher density is especially an attractive incentive when land prices are high.

Another approach is to charge impact fees—sometimes referred to as development fees—for new development. This tool transfers infrastructure costs for water, sewer, roads, schools and other facilities that would be generated by new development to the developer. By this means, the expenses are collected when development occurs, and not burdened on the current residents' taxes (Porter 1997). The approval of the development proposal by the community binds the developer to pay or provide for these services (Kayden 2002). This results to a great extent in higher density, as the building costs are raised (Carruthers 2002). Nelson mentioned that already by the 1970s that 'developers will not engage in unwarranted 'leapfrogging', and other activities that unnecessarily boost public-service-installation costs, if it is at their own expense' (Nelson, R.H. 1977). Moreover, impact fees from different development areas can be pooled to give the community the opportunity to finance larger infrastructure projects (Porter 1997).

Design Oriented: Shaping the Urban Environment

As shown in Chapter 2, growth changes the character of a community and thus affects citizens' quality of life. Design is becoming a more important feature in the discussions about how development should take place in the US. To establish design guidelines is of special relevance regarding infill and redevelopment. This is the reason why design review procedures are carried out to support the development of downtown areas, historic neighborhoods, and mixed-use projects (Porter 1997). Thus, design as a concept of shaping growth has found its way into US planning mainly by redevelopment and downtown revitalization projects.

Design adds an aesthetic component to the functional realm of planning, and it can have significant effects on the quality of place. Since incorporating design in new development differs from the regulative growth management approaches of the 1970s, Porter entitles it the 'soft side of growth management' (Porter 1997, 173). The role of design will be investigated in this project using the frame of new urbanism.

New Urbanism

The 'new urbanism'[8] movement is a label for neighborhood design that draws inspiration from traditional city planning. Small scale orientation, sense of place, and—where possible—transit orientation characterize this approach that has become popular all over the US.

New urbanism, which is postulated by the Congress of the New Urbanism, proposes a new quality of urban design as well as higher density. It comprises a multitude of factors that can be achieved in terms of new development like:[9]

- Provide zero lot lines to cluster housing units around private driveways, which are shared by pedestrians and cars.
- Create the feel of wider living space with open floor plans.
- Integrate open space into the development and provide public open space.
- Diversify architectural form.

New urbanism aims at development that takes the human scale into consideration. The idea is to design development to capture a sense of the village. Several developments should be incorporated as a conglomerate of 'interconnected villages, or mixed-use, high-density, pedestrian-friendly, human-scale centers' (Silberstein and Maser 2000). From a design perspective, new urbanism embraces neo-traditional planning in a 'late 19th century American small town'-manner (Teitz 1996, 662). It is even deemed to be part of a new 'restorative–development megatrend' (Cunningham 2003, 2). This concept might be easy to 'sell' to citizens, but the multiple layers of a city as a whole are not considered. Calthorpe and Fulton mention in this regard that the disconnected view of planning should be replaced by the view of metropolitan regions as 'a series of interconnected places' or a 'regional city' (Calthorpe and Fulton 2001).

From the viewpoint of new urbanism, design seems to be more important than quality of life issues. Many of the new developments emphasize a façade towards the street, while service areas are provided in an alley at the rear of the lot. This double-accessibility policy cuts off a large amount of private or public space, seals open space, and leads to enhanced infrastructure costs.

Collaboration Oriented: Involving Stakeholders

Dealing with collaboration in growth management is—compared with regulation—a newer approach. The involvement of stakeholders will be key aspect in the

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8 On the principles of new urbanism see Duany et al (2000); Leccese and McCormick (2000).

9 These aspects are derived from Ben-Joseph (2002); more features of new urbanism development can be found in Duany et al (2000).

investigations regarding these activities. Moreover, notions of democracy, ethics and legitimacy in the planning process will be incorporated by means of collaboration.

Stakeholder Involvement

The knowledge that planners obtain is often systematic, scientific and based on research. The citizens' knowledge is less structured, based on personal experience, and emotionally driven. These layers of knowledge might represent different, often conflicting interests and values. To bridge these different types of knowledge is a task planners should be able to master (Silberstein, J. Maser, C. 2000). In this respect, it becomes important to look for common ground in an open planning process.

Consensus building is an important feature in today's planning. Growth management comprises a huge spectrum of development decisions, which have to be discussed with neighborhood groups at the least, but sometimes also community-wide or region-wide. However, many local citizen activist groups (which are threatened by the idea of new growth in their neighborhood or community) often oppose specific growth management projects rigorously (Reed 1997). Planners often react to these aspects without being able to communicate their overall growth management policy.

Moreover, to ensure democracy in planning processes, the social equity component should be taken into consideration by planning practitioners. What started out as advocacy planning has raised awareness of the requirements of minorities in planning processes throughout the US, especially in metropolitan regions (Deakin 1999).

Broad collaboration between planning practitioners and citizens about growth management is thus necessary to identify similar goals, interests, and solutions. Local workshops with stakeholder groups have the potential to provide identity and create a sense for the shape of urban developments, especially those of higher density. They are a tool quite frequently applied in planning practice today, and also in growth management.

This approach, however, does not seem to be sufficient to respond to the citizens' needs to be involved. Ben-Joseph states that 'designers and planners need to communicate better the changes they envision, in order for the layperson to adequately understand how these changes will affect their lives' (Ben-Joseph 2002). This share of knowledge should have the task of providing citizens with objective knowledge about planning processes in an unmanipulative way. Reed mentions the 100 friends of Oregon and New Jersey Future movements as positive examples of citizen groups engaging in the implementation of broader growth management policy issues instead of piecemeal 'battles' over isolated projects (Reed 1997). The requirement for more consistent collaboration is there, and in Chapter 6 will investigate whether collaboration is applied in the San Francisco Bay Area.

Inter-jurisdictional and regional cooperation

As the scope of sprawl does not take administrative boundaries into consideration, inter-jurisdictional cooperation is essential when it comes to growth management. While the local level has to ensure the implementation and application of growth management activities, on a higher level in the planning system (either state or regional levels) formulating policies, setting up guidelines, collecting best practice examples, and acting as moderators could be the tasks to support local decision making.

Most local jurisdictions in the US can make use of cooperation agreements with other local governments or agencies. Inter-local cooperation can take place on an informal basis by meeting groups and roundtable sessions, and be more formalized through signed agreements and contracts (Porter 1997).

A very strong tool for inter-local cooperation is tax base sharing. Tax revenues can be used jointly by local jurisdictions to prevent competition regarding new commercial and retail facilities, which are land uses that usually generate high taxes (Razin 1998). This method can be applied according to inter-local retail facilities, but it is also possible that communities trade tax revenues with other incentives.

Another possibility is tax-base sharing on a regional basis, where local sales- and property-taxes are collected in a region-wide pool and distributed through a cooperative network by means of certain jointly developed standards (Porter 1996; Calthorpe and Fulton 2001). Orfield (1998) has explored regional tax-base sharing, and suggests several of his ideas to the San Francisco Bay Area. He views the method of tax-base sharing on a regional scale as useful in handling sprawl, fiscal zoning, and in general the competition of communities for tax base, which could benefit 70% of the San Francisco Bay Area's residents. Also, tax base sharing could be applied for property tax and sales tax on a regional scale.

Although tax-base sharing is classified here as cooperation oriented growth management tool, it might as well represent an incentive.

Information Oriented: Providing Knowledge

Information oriented tools serve the purpose of providing knowledge. The central question here is which possibilities can information technology offer for growth management. In particular, the use of Geographical Information Systems (GIS) might support decision making processes in planning. With the category 'information oriented' I will investigate GIS supported land use monitoring systems. Compared to the traditional growth management activities, findings on these relatively new methods are scarce.

Land Use Monitoring Systems (GIS Supported)

The occurrence of urban growth is not only measurable, but it can be monitored and analyzed as a tool to enhance land use policy making (Knaap 2001). Hand in hand with technological development, the monitoring of land markets is deemed 'an emerging subfield of urban growth management' (Knaap 2001, xvii).

Land use monitoring systems have the capacity to provide integrated transportation and land use models (Conder 2001). By this means, they can support policies related to the creation or extension of urban growth boundaries, development capacities, and infrastructure investments. A multilayered GIS system can be utilized to monitor for example vacancies, urban development activities, densities, and infill capacities (Conder 2001).

One example dealing with a GIS based land use projection refers to the Central Valley, a region adjacent to the San Francisco Bay Area, which is increasingly affected by the Bay Area's urban growth. A study for the American Farmland Trust (1995) carried out by Muller and Bradshaw projects urban growth on a regional scale for the period until 2040 based on a trend scenario. The investigation displays the possibilities a GIS based projection tool can offer. In particular, with the scenarios 'compact growth' and 'low density', the study demonstrates that GIS can be used to support growth management policies.

Conclusions

The detailed description of growth management activities as provided within this chapter shows once more that a very broad range of approaches has been implemented throughout forty years of growth management application in the US.

The mostly community-based approaches do not appear as a consistent set of growth management, but a fragmented range of instruments. One might surmise that most of the activities were developed when communities were deliberately trying to deal with planning practice in various ways. Indeed, they seem to demonstrate shifts of development in growth management, but not an overall approach that is somewhat interdependent.

Today, regulation oriented approaches are based on the understanding that traditional growth management has to be accompanied by incentives, stakeholder collaboration and the provision of knowledge. The investigation of this chapter was primarily based on a review of literature dealing with a single approach to growth management, be it for example urban growth boundaries, taxes, or farmland protection. Interestingly, only a very few comments in the literature dealing with the growth management activities hint at their interconnectedness. For example, it is sometimes mentioned that one approach should be accompanied by one or more other tools. However, how this interaction should work is not clearly expressed. For this reason, the literature review does not display satisfying information about

the interdependence of growth management activities, nor does it provide critical insight in the application process.

This chapter underpins that the metaphor of a 'store' with planning activities, as introduced in Chapter 3, where practitioners choose from a wide variety of tools, is reality in growth management. The question remains, how could interdependence in growth management be provided?

In Chapter 6, the empirical part of this project will take a closer look at growth management practice and carry out an evaluation of growth management in the San Francisco Bay Area. The tools described in this chapter, which are grouped following the theoretical classification of Chapter 3, will be investigated from the point of view of growth management practice. This will, hopefully, shed light on the application of the growth management 'store' and thus help formulate the requirements of interdependence in growth management.

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Managing Growth in California and Dealing with Growth in the San Francisco Bay Area

This chapter focuses on growth management in the San Francisco Bay Area and thus introduces the empirical part of the project.

First, I will review the literature to determine which set of laws is in place in California on the state level. These regulations have proven to greatly influence local governments' growth strategies. The first part of the chapter will deal with this set of rules.

In the second part of the chapter, I will introduce the case study region, the San Francisco Bay Area, and describe its growth patterns and the development of growth management strategies.

Regulations and Planning Laws in California Influencing Growth Management

The State of California has not developed a legal basis for growth management like other US states such as Oregon, Florida, or Maryland.[1] Deakin describes the situation of state agency planning in California as 'limited and uncoordinated', and notes that support for inter-jurisdictional cooperation is insufficient (Deakin 1990). According to Fulton, the set of legal regulations in California 'seeks to minimize state interference and maximize local authority' (Fulton 1993). The state has thus taken a decidedly decentralized approach, which ascribes growth management tasks to counties and cities. However, several rules are in place, which have the potential to influence growth management processes in California. Examination of these rules yields insight into California's complex system of growth management. For this reason, these rules are necessary to understand growth management practice in the San Francisco Bay Area.

When introducing these legal regulations, I will attempt to provide a link with the classification of growth management tools developed in Chapter 3 and described in Chapter 4. Some of the activities fit the classification perfectly (for example Williamson Act, LAFCO regulations, California Coastal Act), but others belong to

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1   See Chapter 2 on the development of specific state legislation in terms of growth management.

more than one category (for example Assembly Bill 857, Redevelopment Law), and still others show only slight affiliation with a category (for example General Plan Law, CEQA regulations). Despite the list provided here, it is necessary to mention that this list is not complete; more regulations with influence on growth management are in place in California, or are currently being developed. The set of laws described here comprises the ones I consider most important after reviewing literature on the topic and interviewing stakeholders in growth management.

Classification: Regulation Oriented: Setting Limits for Growth/Preserving Space

Activity: Coordinated infrastructure planning

Local Agency Formation Commissions (LAFCO) In 1963, state legislation created local agency formation commissions (LAFCO) in each county. They were designated to control annexations of cities as well as special districts (school, fire, sewer, water). According to this legislation, a city or a district may provide new or extended services outside its jurisdictional boundaries only if it first requests and receives written approval from LAFCO. The so-called 'sphere of influence' marks the area of the potential growth of a city beyond service boundaries.

The Cortese-Knox-Hertzberg Local Government Reorganization Act marked a significant reform of LAFCO policies in a step towards more coordinated planning. One of the purposes of LAFCO commissions is 'discouraging urban sprawl, preserving open space and prime agricultural lands, efficiently providing government services, and the encouragement of the orderly formation and development of local agencies based upon local conditions and circumstances' (Government Code Section 56301).

LAFCOs have the power to establish their own policies, and that allows county policies to differ in their stringency (American Farmland Trust 1997).

Activity: Preserving space outside of settlement areas

California Coastal Act (1976)   The state of California applies an active approach of managing growth in environmentally sensitive areas. The California Coastal Act restricts growth along California's coast. The California Coastal Commission was established by voter initiative in 1972 and was made permanent by the Legislature in 1976 with the Coastal Act. The Commission is the lead agency responsible for carrying out California's federally approved coastal management program, which is based on the Federal Coastal Zone Management Act (1971). For the area of the San Francisco Bay, the San Francisco Bay Conservation and Development Commission has this authority.

Under the regulations of the Coastal Act, the Coastal Commission reviews and approves comprehensive plans[2] developed by local authorities. Their proposed

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2   See also the characterization of General Plans in this section.

development has to be consistent with the plan; otherwise additional permission is needed (Glickfeld and Levine 1992). The Coastal Commission also oversees the development of state and federal agencies. Although they are enacted only in coastal areas, the Coastal regulations have influenced growth management in many other areas in California.

Activity: Preserving space outside of settlement areas

California Environmental Quality Act (CEQA)   To implement federal law,[3] the CEQA was established in 1970. It requires public agencies to evaluate the environmental impact of their actions before approving plans and policies, or committing to a course of action for a project. In this regard, it is a necessary tool to inform the public about potential environmental effects and to identify ways to reduce impacts as well as to offer alternatives to the project.

New proposed urban development often has implications on the environment. Consequently, environmental impact analysis under the CEQA is required for certain projects, which results in an environmental impact report (EIR*)*. Despite its protective approach towards the environment, the CEQA process is considered overly complex, causing delays in the planning process, and requiring large expenditures for consulting (Urban Land Institute 2002). Development projects are likely to require approval processes lasting one year when EIRs are necessary (Pendall 1993). Pendall's study reveals that the CEQA 'is used … as a political, legal and fiscal tool, not as a mechanism for predicting and providing mitigation for environmental damage' (Pendall 1993). For this reason, planners believe the CEQA to be the 'most abused legal tool', as it is a preferred mechanism to take legal action against development plans. Using legal action, NIMBYs can misuse the CEQA to arbitrarily block promising projects.

Activity: New generation zoning

General Plan Law and the Housing Element   Comprehensive plans—sometimes referred to as general plans or master plans—are widely-used instruments of land use regulation by local jurisdictions in the US. These plans offer a long-range perspective for community development normally by providing general objectives and policies.

Since 1971, local governments in California have been required to adopt a general plan for the development of the city or county. On one hand, general plan requirements set up by the state are highly extensive (Fulton 1993); on the other hand they greatly strengthen local planning powers, since they become a de facto '… constitution for all future development within a city' (Fulton 1993, cit. after O'Loane v. O'Rourke 1965). General plan requirements shape future zoning regulations.

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3   1969's National Environmental Policy Act (NEPA).

These plans have given cities and counties the ability to experiment with growth management tools.

The State of California faces high growth pressure regarding housing and jobs. Providing affordable housing remains a daunting challenge. One of the seven mandated elements of the general plan is the housing element.[4] Local governments have been obliged to estimate their local housing need since 1981 according to state statutes (Connerly and Muller 1993). The housing element is based on the principle of 'fair share' planning, as it aims to provide housing which is affordable for low- and moderate-income households.[5] The state Department of Housing and Community Development monitors the housing elements of local general plans according to their compliance with state law. However, there are no substantial penalties if the housing goals are not met by the municipalities. Without enforcement, not all local governments fulfill this claim (Pendall 1993; Fulton 1993).[6]

As for the Bay Area, housing projections are provided by the state and distributed to ABAG as a regional authority in a top-down approach. These numbers are distributed to cities and counties according to population and employment trends. Cities and counties have to fulfill the housing element based on a five-year period by designating an appropriate number of sites in their general plan (Pendall 1993). In this way, housing should be accommodated within already existing urban areas.

Despite the fact that the housing element law explicitly notes that communities can redesignate property to a more intense land use category and increase the allowed density within one or more categories, it cannot be considered a growth management law. Its focus is housing production, and thus ignores job growth. But the housing element does criticize the communities' growth management policies by stating

> the excessive cost of the state's housing supply is partially caused by activities and policies of many local governments that limit the approval of housing, increase the cost of land for housing, and require that high fees and exactions be paid by producers of housing'. (Government Code Section 65589.5 (2))

Another tool provided by general plan law is the specific plan-approach. This enables local governments to coordinate the general plan's broader policies and the requirements to an individual development proposal. This coordination provides developers with some amount of certainty about the outcome of their project proposals (Pendall 1993). By combining zoning, detailed development standards and other regulations in one document, they are used to apply growth management strategies.

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4 The other general plan elements are: land use, circulation, conservation, open space, noise and safety.

5 Other states that have enacted housing element laws are New Jersey, Florida, and Vermont (Connerly and Muller 1993).

6 Fair share housing legislation is also established in Oregon and New Jersey as a response to affordable housing problems (Daniels 2001).

Activity: New generation zoning; preserving space outside of settlement areas

Assembly Bill 857   Assembly Bill 857 sets up state goals and priorities in terms of land use. The new law, effective since January 2003, is deemed one of the 'most important growth policy changes in California during the last decade' (Fulton 2003). AB 857 establishes the following three planning priorities for the state:

- Promote infill development.
- Protect the most valuable natural and agricultural resources.
- Encourage efficient development patterns to the extent infill development is not possible.

Moreover, a conflict resolution process has to be developed to handle policy conflicts between state agency plans and state infrastructure projects. A comparable process has to be implemented when local land use projects and state agency projects collide.

   Assembly Bill 857 is considered as a necessary and important step towards growth management on the state level in California.

Classification: Regulation Oriented: Setting Limits for Growth/Preserving Space; Incentive Oriented: Fostering Decisions

Activity: New generation zoning; tax benefits

Redevelopment Law   California Community Redevelopment Law enables every city and county to create a redevelopment agency, which aims at eliminating blight in designated redevelopment project areas. These project areas contain a physical or economic blight which cannot be handled by private means alone. They are created after a wide-ranging process including blight surveys, economic analysis, environmental issues, citizen participation, and the implementation of a redevelopment plan.

   The redevelopment agency has the right to acquire and dispose of property to facilitate projects, to construct infrastructure, and to collect a so called 'tax increment' to service debt. The tax increment is created as follows: the property tax of the redevelopment area is frozen based on the initial year of the project; the taxes derived from annual increases during the years following accrue to the redevelopment agency. This tax increment is used for funding parts of the redevelopment activities.

   Developers usually benefit from redevelopment agencies, as low-interest loans are provided for pre-development costs. Moreover, the agency has to set aside 20% of the annual tax increment for affordable housing. Redevelopment law offers a powerful tool to promote infill development for cities and counties, which makes it highly effective for growth management.

Classification: Incentive Oriented: Fostering Decisions

Activity: Tax benefits

California Land Conservation Act (Williamson Act)   Agriculture is traditionally an important part of California's economy. However, its role and space are shrinking constantly. The Williamson Act is a tool directly related to growth management. Implemented in 1965, it enables governments, usually counties, to enter into contracts with private landowners for the purpose of restricting changes to agricultural lands or related open spaces. In return, farmers receive property tax benefits, as tax assessments are based upon their actual use (farming and open space uses) and not to the potential market value of the land. By this means, a conversion to urban uses is discouraged.

The basis is a contract, which is automatically renewed unless either party files for non-renewal. The term for a contract is a minimum of 10 years up to a maximum of 20 years. Moreover, the counties have to designate a so called 'agricultural preserve' of a minimum size of 100 acres (exclusive agricultural zoning) to define the scope of the contracts. Only farms located within the preserve are eligible for a Williamson Act contract. As these contracts limit the counties' tax revenues, the state reimburses the counties with a certain percentage of the tax loss.

The Williamson Act is widely accepted by farmers as it enables them to continue to cultivate their land without having to face incompatible urban uses. Meanwhile, more than 60 per cent of the state's 30 million acres of farm and ranch land are protected under the Williamson Act. The San Francisco Bay Area also accepts the act. Here, all counties except San Francisco County have contracted with landowners under the Williamson Act.

From a planning point of view, the Williamson Act is deemed unique in comparison to other state's farmland protection procedures, as it merges a planning and zoning tool with a property tax policy and an open space conservation policy (Gamper 2003).

Proposition 13   In 1978 Proposition 13 was passed by California voters to reduce property tax revenues. Before the proposition was in place, property taxes were so high that many people were not able to purchase homes because of the potential tax burden. With Proposition 13, property tax rates are capped at one percent, and growth in property tax revenues is capped at two percent per annum. Property value is reassessed only when a property changes ownership. Proposition 13 is deemed to be the most rigorous limitation on property taxes in the US (Ladd 1998). While the regulation is protecting the homeowners' overall income, the communities' property tax revenue has plummeted. Therefore, creating new housing is no longer attractive to local governments, as it produces the attendant costs of new parks, schools, and recreation facilities. Before implementing Proposition 13, taxation made new housing a desirable land use for communities, as tax revenues were high. This is no longer the case.

One could assume that—in favor of growth management—Proposition 13 prevents cities and counties from sprawling. This might be the case for residential land use, as Proposition 13 has a chilling effect on expansion of infrastructure. Glickfeld and Levine go so far as to call this 'California's de facto state growth policy' (Glickfeld and Levine 1992, 28). However, today communities are competing to accommodate auto malls and so called 'big box' retail facilities in order to generate greater sales taxes. This development supports regional disparities. The desired facilities are easier to realize in new 'virgin' suburbs with a large amount of development space available and fewer extant businesses than in mature ones which might require the new retailers to locate their business in redevelopment areas. Fulton states

> The impact of Proposition 13 and other fiscal problems encourage these [California's] cities to engage in 'fiscal zoning' and lure auto dealers, shopping centers, and hotels inside their borders, while political sensitivity behooves them to find ways to shove housing and traffic problems onto their neighbors. (Fulton 1993, 114)

This problem is commonly known as the 'fiscalization of land use' meaning that public finance regulations influence land use decisions of communities in a negative way (Wassmer 2002; Razin 1998; Urban Land Institute 2002). A broad exploration of the fiscalization issue was accomplished by Ladd (Ladd 1998). She concludes that land use regulation is widely used in the US to support fiscal goals.

In addition, redevelopment agencies[7] are applied as a tool of coping with the impacts of Proposition 13, as they act as advocates of specific developments to support the economic development of the entire city (Pendall 1993).

Classification: Collaboration Oriented: Involving Stakeholders

Activity: Collaborative planning

Referendum and Initiative (ballot measures)   Planning in California is to a great extent based on 'citizen enforcement' (Fulton 1993). The implementation of planning laws—except the Housing Element Law—is not monitored by a state agency. Instead citizens are responsible for monitoring the implementation. Their instruments of influence are—aside from litigation—referendums[8] and initiatives[9] in ballot measures.

To place measures on the ballot by initiative processes is part of direct democracy. These measures are an important instrument for creating or changing statutes and amending the California Constitution. The use of ballot measures targeting land use issues has expanded since the beginning of the 1990s, enhanced by grassroots activists that have formed statewide networks (Glickfeld and Levine 1992). Chinitz notes for the year 1990 that 'the November ballot has been crowded with referenda

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7 See also in this chapter.
8 Elected officials place a measure on the ballot before the voters.
9 Voters collect signatures to place a measure on the ballot.

to somehow 'limit' or 'control' or 'plan' for, or 'charge' for growth' (Chinitz 1990, 4). In the wake of growth management, ballot measures are, for example, used by citizens as a tool for downsizing high density projects within the development phase.[10] The initiative process is criticized as a planning tool, because it does not offer the opportunity for compromise. Neither public discussion nor debate takes place (Metcalf, 2003). As these projects are most often infill projects in existing neighborhoods, ballot votes can undermine a city's growth management policy.

Activity: Inter-jurisdictional and regional cooperation

Regional Councils of Government   Regional councils of government derive their power from federal law. They are agencies governed by elected representatives of local governments responsible for planning services of regional concern, which can range from providing statistical data to monitoring local planning activities (Porter 1997). California's Councils of Government (COGs) are created by agreements of city council members and county supervisors in specific geographic regions in California.[11] Their purpose is policy making on a regional scale. They investigate the interaction of policy areas in one subject matter and/or its impact upon other regional issues. Moreover, state law requires them to allocate regional housing needs for all cities and counties within its boundaries. In addition to that, COGs also have state and federal responsibilities.

A vast number of COGs exists in California. Thirty of them are represented by the California Association of Councils of Governments. Among them are the agencies for the large metropolitan areas: Association of Bay Area Governments (ABAG), San Diego Association of Governments (SANDAG), and Southern California Association of Governments (SCAG).

Councils of Government often represent Metropolitan Planning Organizations (MPOs).[12] These are provided with competencies in the sphere of transportation under the federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, and its successor legislation, the Transportation Equity Act for the 21st Century (TEA-21). ISTEA regulation significantly increases the decision-making power of MPOs (Deakin and Goldman 2000). In this regard, they function as the regional transportation planning authority, which includes the preparation of long

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10 As developers are aware of this tendency, many project proposals encompass a higher density than envisaged, so that the end product—after downsizing—will be what has been the actual target (Pendall 1993).

11 Most of this information is drawn from California Council of Governments: What is CALCOG, available on the World Wide Web, access 30.1.2004 [http://www.calcog.org].

12 The creation of MPOs has its origin in the 1962 Federal Aid Highway Act, which provides regions with a population over 50,000 a veto right towards federal highway projects (Deakin and Goldman 2000)

range transportation programs and the allocation of state and federal funds for transportation related measures.[13]

ISTEA also requires the implementation of transportation alternatives to highways by jurisdictions receiving federal transportation funding (Pickrell 1998). Herein lies the contribution of ISTEA regulation to land use issues, especially transit oriented development. Under ISTEA law, these activities have to be carried out as a collaborative inter-agency process. In California, competencies in this decision-making process do not rely solely on MPOs, but state law partially charges county agencies with this decision-making process (Deakin and Goldman 2000).

A major weakness of COGs is their lack of government authority, as they rely on the willingness of local jurisdictions to implement their policy recommendations. Hoch comments: 'The voluntary nature of most COGs meant that the land use disputes and fiscal mismatches between different local governments could not be addressed without one or more parties defecting' (Hoch 1994, 34). They do, however, offer an institutional realm for regional cooperation.

Moreover, for the purpose of growth management, COGs respectively MPOs are considered too dominated by the political interests of growth friendly suburbs, which is counterproductive for planning on a metropolitan scale (Orfield 1998).

In sum, it becomes apparent that a legal and regulative basis in California exists, which influences local governments in their approach to growth problems. As with most regulations, Deakin's statement mentioned at the beginning of this chapter is still applicable. Growth management related law disperses power to different agencies in California. The law increases fragmentation of power, but it operates at various levels, and includes a choice of categories of growth management tools, from regulation to other approaches. However, its focus is clearly on the regulative side, with the range of activities concentrating on preservation, taxes, and zoning. Fragmentation is particularly evident in relation to citizen involvement. Ballot measures are a strong tool for enforcing citizen recommendations in growth management. However, they operate disconnected from other tools, and therefore do not represent collaborative planning. The question is, can these myriad tools form a coherent strategy, or is it counterproductive for California's authorities on state, regional and local levels not to have one consistent growth management law?

The next chapter will characterize the growth related development in the San Francisco Bay Area.

Land Use and Growth Patterns in the San Francisco Bay Area

Because all these regulations are in place statewide, they are in force in the San Francisco Bay Area's growth management. This part will briefly introduce main

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13 In the San Francisco Bay Area, the competencies of COG and of MPO are divided between the Association of Bay Area Governments (ABAG) representing the COG, and the Metropolitan Transportation Commission (MTC), representing the MPO, although attempts are being made to merge the two bodies.

features and characteristics of the region, characterize why and how sprawl took place, and how the growth management movement started in this specific region.

The San Francisco Bay Area: Main Features

The San Francisco Bay Area as I will refer to it throughout this book is the geographic region shaped around the San Francisco Bay. The region is defined as the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma, all of them linked to the Bay. The Bay Area is composed of more than 100 cities, with more than 7 million people, on a territory of about 7,400 square miles (Urban Ecology 1996).

The general land development trends which occur in the US, as I described them in Chapter 2, also hold true for the San Francisco Bay Area; however, the scale of urban growth is significantly larger in this region. This growth is related to the area's job opportunities, which attract migrants not only from the US, but from all over the world. Creative and innovative economic potential has always been concentrated in the region, creating a vital job market.

Economic development underwent a transition in the 20th century from manufacturing to information and services.[14] The Bay Area's economic development began with agriculture, followed by aerospace industries during the 1960s and 1970s, followed by semiconductor production beginning in the 1970s, and software development and biotechnology since the 1990s. As an effect of several economic booms and busts,[15] many old industrial spaces are awaiting their revitalization.

The technology-related growth that brought wealth to the region during the last 30 years is due to Silicon Valley's research and development competence. This region mainly comprises cities in Santa Clara County and San Mateo County, and it can be described as the present economic growth core of the Bay Area. Between the years 1990 and 2000 for instance, Silicon Valley's number of residents increased by 36 percent due to 250,000 new jobs created between 1994 and 2000 (Urban Land Institute 2000).

The area is not only attractive in terms of its job market, but also because of the mild climate throughout the year. A large variety of natural and recreational sites offer year-round outdoor activities. Moreover, the Bay forms a large natural landmark, which provides significant identity and orientation for the Bay Area's residents (see Figure 6.1). The diverse population creates vibrant neighbourhoods, nurtures culture and the arts, and has been the source of political movements. The world-famous Universities Berkeley and Stanford attract researchers and students, causing a 'brain drain' phenomenon in other countries. Tourists from all over the world visit San Francisco and the surrounding areas such as the Wine Country.[16]

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14 In general, the manufacturing sector is deemed a promoter of the urban sprawl-related settlement pattern (Sassen 2nd edition 2000).

15 The most recent downturn is the bust of the dot-com industries in the year 2001.

16 For a more detailed description of the region's assets see Urban Ecology (1996).
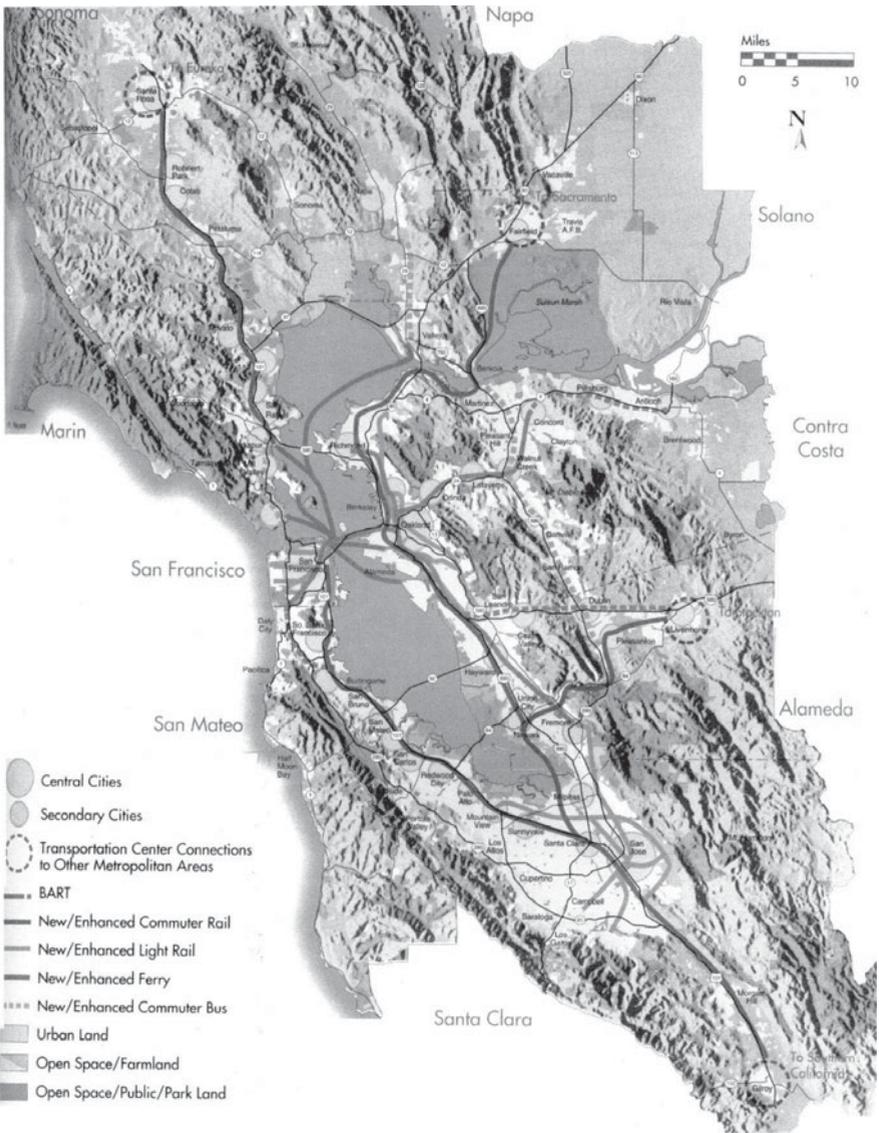
Figure 5.1   San Francisco Bay Area
Source: Urban Ecology 1996, 89.

The Cause: Dimensions of Growth

Population growth seems to be a steady development in the San Francisco Bay Area. From 1980 to 1990, the area's population grew by 16.6 per cent, to about 5.5 million residents. During the same period, urbanized land expanded by 12.1 per cent (Orfield 1998, 36). The vast portion of this growth occurred in areas at the north eastern fringe of the Bay Area, in the counties Contra Costa, Alameda, and Solano. While the overall density of Bay Area development had increased, cities located in the East Bay, in particular the city Antioch, were growing in a low density mode.[17]

Urban land will continue to grow in the San Francisco Bay Area, making growth management a permanent task. Until the year 2020 the following growth trends are projected for this region (Association of Bay Area Governments 2002):

- 1 million new jobs,
- 1 million new inhabitants,
- 265.000 daily in-commuters in the region,
- an increase of congestion about 150 per cent,
- an expansion of the settlement area about up to 33.600 ha.

Cities in the Bay Area are diverse as well. First of all, there is no single large city. While the three largest cities, San Francisco, Oakland and San Jose represent the cornerstones of the region, the area incorporates metropolitan, suburban and rural places. San Francisco is the historic center of the region, but development has spread out from San Francisco into northern, western and southern suburbs, since the 1950s following the north-south and westbound highway system.

Job growth in the suburbs, especially in the southern region of Silicon Valley, has promoted the creation of growth poles as large as the city of San Jose. Matthews introduces the city of San Jose as an example of Postwar sprawl in California. Due to the stronger pro-growth policies in the 1950s and 1960s, San Jose expanded its population of 95,000 in 1950 to 910,000 inhabitants in 2000. This was possible only by extension of the city's territory from 17 square miles to 174 square miles (Matthews 2002). Today, the agglomeration is the third largest city in California, after Los Angeles and San Diego.

In terms of suburban development, the Association of Bay Area Governments divides the settlements of the region into urban cores (San Francisco and Oakland), inner suburbs developed between 1900 and 1940 along streetcars and railroads (for example, San Mateo, Mountain View), suburbs developed between 1940 and 1980 (for example large areas of San Jose), which form the largest portion of the Bay Area's settlements, and outer suburbs, developed from 1980 on (ABAG 1997).

Since the region has grown so quickly, especially the axis of cities formed along Silicon Valley represents one huge and rather unspecified suburban area. Starting

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17 Antioch's population density dropped from 3,324 persons per square mile to 2,500 persons per square mile (Orfield 1998, 37).

in the south with San Jose, the cities Sunnyvale, Mountain View, Palo Alto, Menlo Park, Redwood City, San Mateo, Burlingame, Millbrae, and so on up to the city of San Francisco create one gigantic suburb that is divided by municipal boundaries. Each city contains a small downtown core; each displays almost identical housing areas, high tech parks and retail malls. Marshall refers to this as 'the deconstructed city' where the pointed quote 'there is, generally speaking, no 'there' there' (Marshall 2000, 65) becomes reality.

This band of cities is connected by Interstate Highway 101, Caltrain, and El Camino Real, the latter being the historic route established to link the Spanish missions (Marshall 2000, 69). Fragmentation seems to be the common denominator for these cities, yet the area as a whole functions as a city, a place where people live, work, shop, and recreate, despite the fact that most of it lacks a sense of place. Although this sprawling region functions as a whole, the cities are spearheaded by the city of San Francisco, which forms a counterpart to the uniform settlement in the suburban valley, mainly by its contained urban area, with a downtown financial center at the core. On the eastern side of the Bay, an urban arterial quite similar in its appearance to El Camino Real, the San Pablo Corridor, connects the areas of the cities Union City, Hayward, San Leandro, Oakland, Emeryville, Berkeley, El Cerrito, Richmond, San Pablo, and Hercules.

The Problem: Urban Sprawl

By 2000, the increase of housing units was not able to keep pace with job growth (ABAG 2000). Due to a prospering economy and population growth, housing costs are among the highest in the US. Available development space in the region is not unlimited. There are both natural and man-made restrictions to growth. The area is bounded by the Pacific Ocean, the San Francisco Bay, protected coastal zones, and high quality agricultural farmland.

Development of high-end jobs in Silicon Valley has fuelled housing prices. The region has become unaffordable for employees with service-related jobs. (Danielsen and Lang 1998). Because of high housing prices and the sprawl-promoting factors described in Chapter 2, the population's willingness to commute long distances appears to be unlimited. Every year, the workforce of the San Francisco Bay Area chooses residences ever farther from their jobs.

While from the 1950s until the 1980s development mainly took place in the Bay Area's cities and counties, in recent years, commuters have discovered cities located in the Central Valley, for example Modesto, Merced, and Stockton, as new suburbs. In the 1990s the American Farmland Trust investigated the growth projections for the counties of the Central Valley, and they found that continuing low-density growth would have alarming impacts on agriculture, threatening the valley's economic basis (American Farmland Trust 1995). Likewise in the San Francisco Bay Area, land use conflicts occur as competition between high quality agricultural land and urban development, with the latter likely to succeed.

On another front, the gap between central city poverty and suburban wealth increases every year. Especially challenged are the cities Oakland and San Francisco, but also smaller cities such as Richmond and San Pablo (Orfield 1998). Social equity is thus on the agenda of growth management in the San Francisco Bay Area (Association of Bay Area Governments 2000).

Looking at the negative side-effects of sprawl, high housing costs, sprawling development, traffic congestion, social polarization and the loss of open space and natural habitats are massive threats to the quality of life in the area. The non profit organization Urban Ecology calls these tendencies, quite cynically, 'trouble in paradise' (Urban Ecology 1996, 13).

The Solution: Growth Management in the San Francisco Bay Area

The conflicts related to sprawl, the location of jobs, transformation of former rural or agricultural places to suburbs, and the conversion of high quality natural landscapes of the coastal areas all brought growth management to the Bay Area earlier than in most urban regions in the US.

I mentioned one of the first examples for growth management on the city scale in the US, the city of Petaluma, in Chapter 2. Other cities such as San Jose were soon to follow this example. In general, a strong motivation for growth management was generated by the environmental movement. Coastal protection was fostered by the Bay Conservation and Development Commission.[18] Due to the complexity a metropolitan area has to face in terms of land use, ideas pointing to a more regional approach in growth management were implemented during the 1990s.[19] Smart growth and mixed use projects, often carried out as infill development on abandoned sites, are salient in many locations (Association of Bay Area Governments 2002). In fact, predictions demonstrate that the potential for infill housing in the San Francisco Bay Area could serve a range of 70 to 125 percent of housing needs for a period of 20 years (Landis 2001).

Since I will explicitly reflect on the path of growth management in the San Francisco Bay Area in Chapter 6, I will not dedicate this chapter to describe growth regulations in detail. It is important to mention, though, that the area was undergoing the same evolutionary shifts in growth management as they are described in general for the US in Chapter 2.

Conclusions

As for growth management tools on the state level in *California*, they show both diversity and fragmentation. Many regulations are in place, which should complement communities in their growth management efforts. They show various shifts over

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18 This regulation was dealt with earlier in this chapter.

19 On regional development related to the San Francisco Bay Area compare among others Orfield 1998; Deakin and Goldman 2000; Calthorpe and Fulton 2001.

time, from 'traditional' instruments to more advanced approaches. The question is, does the coordination work, or will many of the efforts lead to counterproductive results, or do the regulations applied by communities and counties undermine each other? The need for a coordinated approach of growth management in California was already obvious in 1976, when a report by the State of California's Office for Planning and Research claimed:

> It must be noted that a growth management program should not be conceived merely as a bundle of techniques individually designed to treat the symptoms of the complex problems of growth; it should be designed as a systematic strategy which related policies to implementation. (State of California—Office of Planning and Research 1976, 11)

Taking into account all the features the *San Francisco Bay Area* shows, with great employment opportunities, skyrocketing housing prices, world-class universities, a diverse population, famous landmarks, and urban sprawl, the region appears a microcosm of diversity and exaggeration in almost all imaginable terms.

Both the history of sprawling land use and more recent trends reveal that growth management has been necessary in the past. The task of sustaining a high quality of life will only increase in difficulty.

A 1997 study by the Association of Bay Area Governments (ABAG) claims that suburbs and inner cities have to be viewed as interdependent. The study suggests several policy options for a better region-wide coordination of development. Although many of them focus on economic prosperity of the region, some of them clearly point to infrastructure issues, regional collaboration, and tax incentives (ABAG 1997, 56f). This study provides a link to growth management, although it does not clearly specify an action frame to implement the wish-list.

The next chapter will deal with an evaluation of growth management practice in the region presented in this chapter, the San Francisco Bay Area.

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Chapter 6

Applying Growth Management Activities in the San Francisco Bay Area —Experiences and Examples

One important aim of this project is to assess the underlying goals of growth management, and to analyze the different strategies and activities in planning practice in the San Francisco Bay Area. In order to deal with these research questions appropriately, it is necessary to perform a detailed investigation of this region.

Research Methodology for the Case Study Region

This chapter provides a more detailed description of the case study approach than delivered in Chapter 1.

To investigate growth management and its application in practice, I developed a multi-phase research program. The overall approach corresponds with my theoretical considerations outlined in Chapter 3, in particular the classification of growth management activities, and the conclusions regarding interdependence. As already explained there, I do not intend to follow a path based on an ideal methodology; neither will I carry out a systems analysis, nor a quantitative approach.[1]

To assay planning tools, as represented by growth management,[2] I consider it necessary to leave room for a broader, more flexible evaluation that is based on experiences and examples derived from stakeholders in growth management of the case study region, the San Francisco Bay Area. My stakeholder-based approach is a qualitative one, mainly inspired by Forester's (1989, 1999) ideas on collaboration. Growth management will thus be explored from the perspective of both the actors who carry out these tasks and other stakeholders who are involved in growth management practice.

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1 Any reader who expects quantitative results or measurable links between causes and effects of growth management should refer to example Brower et al (1989); Daniels (1999); Freilich (1999); Hamill et al (1989); Porter (1986); Porter (1997); Nelson, A.C. et al (1995); O'Neill (1999); Rothenberg Pack (2002); Stein (1993); Szold and Carbonell (2002); Urban Land Institute (2000); see also Chapter 1.

2 This was demonstrated in Chapters 2, 4, and 5.

Combining the two realms, the planning theory considerations and the stakeholders' experiences, are—as earlier mentioned—both rather new approaches in growth management research.

In this regard, in the *first phase*, interviews with stakeholders in land use and growth management were carried out to obtain information on the modes of application of different growth management activities. In addition, the stakeholders were also asked to comment on the different categories of growth management.

Moreover, in the *second phase*, two examples of growth management practice in the San Francisco Bay Area were analyzed to gather in-depth knowledge about the advantages and disadvantages of these activities. The two examples I chose can be described as 'state of the art' growth management as it is currently applied in the US. The examples 'Transit Oriented Development' and 'San Francisco Bay Area Livability Footprint Project' were selected.

After the *third phase* of analyzing and interpreting the results of the interviews, the *fourth phase* of the case studies was comprised of a workshop to shed light on selected results of the interviews. I consider this workshop a major milestone of the research project. It focused on the findings of the interviews, which were presented in a summary format. All of the interviewees were invited to participate and share their experiences with growth management in an open discussion.[3]

The *fifth phase* was dedicated to synthesizing the findings and drawing conclusions. Here, I developed a set of policy recommendations based on different notions of interdependence in growth management.

Minutes of committee meetings, as well as the participation at meetings such as the Smart Growth Working Group, organized by ABAG, and the San Francisco Bay Area Alliance for Sustainable Development, a multi-actor forum on regional development, were leveraged to gather additional information for all phases mentioned.

The interview format requires additional explanation. During the year 2003, I carried out a set of in-depth interviews in the San Francisco Bay Area to analyze growth management practice. The interviews involved practitioners from the planning or community development departments of nine counties as well as from at least one city in these counties. The counties have responsibilities for land use regulations in the unincorporated areas,[4] which makes them important planning entities, as they are directly affected by land use decisions on a multi-jurisdictional level.

Deliberately, I selected the cities to be involved in the investigation not based on standardized criteria of population size nor location within the Bay Area. The intent was to gather insight into the diverse spectrum of growth management practice in the San Francisco Bay Area, a region that—as examined in Chapters 3 and 5—has a long-standing history with growth management practice. For this reason, the examples included large cities (San Jose) vs. small cities (Emeryville), rural centers (Fairfield)

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3   The workshop took place at the University of California at Berkeley's Faculty Club, 19th September 2003; 20 of the stakeholders were able to participate.

4   Unincorporated areas are settlement areas which do not belong to a city and are thus assigned to county administrations.

vs. cities oriented towards metropolitan areas (Walnut Creek), global cities (San Francisco) vs. suburban centers (Redwood City, San Rafael), and cities with long ranging experience with growth management (Petaluma) vs. cities with recently recognized growth management efforts (Mountain View, San Mateo). In addition, I interviewed stakeholders from different spheres such as environment, transportation, development, history, and research to broaden the scope of the evaluation.

To prepare for the interviews, I developed a questionnaire which served as a guideline for discussion. The questions were divided into

A) General aspects of growth management.
   These questions deal with the legal and regulative framework of growth management, its acceptance, general problems and aims.
B) Implementation aspects of growth management in cities and regions.
   This includes an investigation of the spectrum of growth management activities, and represents the closest link to the theoretical considerations of this paper. It aims at evaluating the growth management activities introduced in Chapter 4. Moreover, it confronts stakeholders in growth management with the theoretical classification developed in Chapter 3.
C) Growth management examples.
   Part C displays an investigation of two examples, the 'Transit Oriented Development' and the 'San Francisco Bay Area Livability Footprints Project', which are both considered state of the art growth management in the San Francisco Bay Area. Both are smart growth approaches comprised of multiple tools. The investigation will follow a SWOT analysis[5] to explore the strengths, weaknesses, opportunities and threats associated with applying these approaches.

The questionnaire for all the interviews follows the same structure (see Table 6.1). However, I allowed slight modifications, if it was required during the course of the individual interview situation.

Despite the fact that representatives of all counties were involved, the results cannot be viewed as representative for the entire San Francisco Bay Area. They exemplify a small number of the cities and organizations involved in growth management. However, they do offer an in-depth look at the application practice of growth management activities and stakeholders' experiences with the processes and problems of growth management. The interview format was time-consuming, yet it facilitated the following steps:

• To clarify the context of growth management activities.
• To receive direct feedback on specific questions.
• To obtain additional information and views on growth management aspects which were introduced by the interviewees.

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5   SWOT is the acronym for 'Strengths, Weaknesses, Opportunities, Threats'.

Table 6.1   Questions for the interviews

A: General aspects regarding growth management
1.   Which legal or administrative changes should be made with regard to growth management (on national, state, county, local level)?
2.   Which funds and/or incentives should be provided and by whom?
3.   To what extent is growth management accepted by the public?
4.   Which problems of sprawling land use are not solved by existing growth management activities?
5.   Which aims are fundamental when it comes to using growth management activities (for example economic: infrastructure costs, environmental: preserving open space)?
6.   Are environmental aspects relevant for using growth management activities? If yes, which features?
B: Aspects regarding the implementation of growth management activities
7.   Since when are growth management activities in use in the city/county/Bay Area?
8.   Which of the activities in list 1 (see Appendix to Table 1) are or have been in use in the San Francisco Bay Area?
9.   Which of these activities have mainly been applied, which have been applied only scarcely? And, what is their relevance?
10. Which other growth management activities have been applied?
11. Which groups of activities (compare list 2, see Appendix to Table 1) are most appropriate for achieving growth management?
12. Which problems, conflicts and conflict resolutions can be identified when applying growth management activities?
13. Which activities (according to list 1 or others) should be changed, which are unnecessary, or inflexible?
14. In which areas of growth management are activities missing?
C: Aspects regarding growth management examples
C 1: Aspects regarding transit oriented development
• What are the strengths of the concept?
• What are the weaknesses of the concept?
• Which opportunities can be identified?
• Which threats can be identified?
C 2: Aspects regarding the San Francisco Bay Area smart growth strategy: livability footprint project
• What are the strengths of the concept?
• What are the weaknesses of the concept?
• Which opportunities can be identified?
• Which threats can be identified?

Appendix to Table 1

List 1: Growth management activities specifically investigated in the project

1. Urban Growth Boundaries (UGB)
2. Urban development tiers
3. Coordinated infrastructure planning
4. Growth caps
5. Preserving space outside of settlement areas
6. New generation zoning and mixed use
7. Tax benefits
8. Purchase or transfer of development rights
9. Density incentives (Building advantages, impact fees)
10. New urbanism
11. Stakeholder involvement
12. Inter-jurisdictional and regional cooperation (for example tax base sharing)
13. Land use monitoring systems (GIS supported)

List 2: Groups of growth management activities classified in the theoretical frame

1. Regulation oriented: Setting limits for growth/preserving space
2. Incentive oriented: Fostering decisions
3. Design oriented: Shaping the urban environment
4. Collaboration oriented: Involving stakeholders
5. Information oriented: Providing knowledge

Stakeholders' Experiences with Growth Management

The results of the interviews are summarized in this section, following the structure of the questions introduced in the previous section. Where appropriate, I added additional information, which could be gathered at the workshop.

A: General Aspects Regarding Growth Management

1. Which legal or administrative changes should be made according to growth management (on national, state, county, local level)?

The answers to this question concentrated on two issues, (1) the scope of sprawl on a regional scale, and (2) the role of the State of California.

The scope of sprawl on a regional scale: Most of the interviewees stated that administrative boundaries, either of cities, counties, or of the nine county San Francisco Bay Area, do not represent planning concerns that support growth management. The interviewees demand a balance between urban centers and the use of land in a broader region-wide sense.

Moreover, the administrative scope of the San Francisco Bay Area should be reviewed. As huge portions of development are sprawling into several counties of the Central Valley,[6] a larger Bay Area region should be considered. In addition to that, it was pointed out that there is no land use authority on a regional scale.

This situation is aggravated as the responsibilities for basic infrastructure—e.g. schools, water, and sewer—are under the competencies of different authorities.

Additionally, the interviewees addressed the controversial question of establishing a regional planning authority in the Bay Area. The stakeholders instead claim for continuing the collaborative approach steered by the Association of Bay Area Governments. However, the active role of communities and counties is essential. Local authorities have to be involved, as the regional entity at present does not have power to implement planning strategies of any kind. In this regard, certain benefits or incentives must be perceivable in the regional cooperation.

The Role of the State of California[7]   As land use control in the US is dedicated to the states, national input to growth management is almost nonexistent. However, the degree of state control in terms of growth management varies greatly.[8] According to the stakeholders, in California, the state and local level are disconnected concerning land use issues. The state is considered to have 'no conception of what happens at the local level'. Some interviewees deem the state's policies irresponsible.

Moreover, sprawl is largely viewed as the result of fiscal choices. Most of the interviewees mentioned the 'fiscalization of land use' along with Proposition 13 as problematic issues. A change of California's taxation system is perceived as an important issue. However, a modification of state policies is considered almost impossible. Some changes have been attempted, but it is easier to work on a county and city level.

On the regulatory side, tools such as coastal zone protection and the Williamson Act exist but a more aggressive state promotion of growth management is necessary. For example, it was suggested that the state should develop a state-wide program dealing with land use and growth management aspects, as it is provided by Oregon or Maryland.

A huge amount of pressure is put on cities and counties by the Housing Element Law. This policy is deemed an insufficiently integrated approach. It demands the creation of housing units on the local level, yet the policies are separated from the services which have to be provided and funded by local jurisdictions.

Other suggestions regarding changes in the policy area of growth management were concerned with the following aspects:

• Long term decisions are important on all planning levels. However, the term limits of elected officials are too short and officials are too focused on local issues. For this reason, chances are very small that existing policies would

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6   See Chapter 4.
7   Most of the state regulations mentioned here are described in Chapter 5.
8   See Chapter 2 and Chapter 5.

undergo reforms.

- Evaluations and performance measures of growth management strategies should be taken into consideration.
- Car pricing issues are underrepresented in the discussion about growth management. Auto-orientation versus transit use remains an obstacle in the development of transit oriented neighborhoods.

2.   Which funds and/or incentives should be provided and by whom?

Incentives are viewed in an ambivalent way: some of the stakeholders are pro incentive, while others see incentives from a more critical perspective.

Incentives are deemed important in particular in regard to providing settlement structures of a higher density. The stakeholders made the following suggestions for incentives:

- The state should enhance its regulative powers in growth management; the greater powers could provide a strong incentive for growth management.
- Several stakeholders suggested supporting a regional approach by providing funds for regional plans or by enhancing regional governance.
- Planners should offer education to citizens and developers, preferably through workshops.
- More financial incentives for smart growth are considered helpful.
- The quality of development provided by smart growth was pointed out as an incentive in itself.
- Parking should be made more expensive in order to enhance transit ridership.

As noted above, some stakeholders refer to incentives as a problem. In terms of the role of planners as advocates for the public realm, interests within the private sector are likely to collide. Accepting financial input by private organizations means that decisions can easily be biased by the sponsor. The so-called 'incentive zoning'[9] combines commercial square footage and fiscal benefits has influence on the quality of place. Space that is created by private means such as bike paths or recreational areas on private sites is no longer truly public, even though it is accessible to the public.

3.   To what extent is growth management accepted by the public?

Interestingly, this question led to two-fold results.

On one hand, in most of the cases, growth management is not only widely accepted by the public, but initiated by the citizens. Very often growth management is enforced by ballot measures. This is especially the case for more traditional growth management tools such as urban growth boundaries or preservation of space outside settlement

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9   See Chapter 4.

areas. Both issues are somewhat related to environmental concerns, an aspect that motivates many citizens to become involved in growth management activities.

On the other hand, it became clear that the public support of growth management has its limits. Citizens are likely to establish a boundary to prevent their community from outward growth, but changes inside the boundary, especially those associated with higher density, are not well accepted. Almost all the stakeholders have experienced this attitude. The citizens' concern is that they might forfeit their quality of life.

The extent citizens oppose growth is thought to depend on the educational level of a city. Where people are well educated, as in San Francisco, Palo Alto, and Berkeley, they tend to advocate the protection of their property rights more strongly. The citizens that oppose higher density in their neighborhood are mostly older residents who dislike changes because of safety issues and newer residents who paid high prices for their home and are trying to avoid negative changes in property values.

But there are others beside the citizenry that are concerned with growth management. During the 1970s, developers viewed the emerging application of growth management activities quite critically. Developers were used to implementing the suburban sprawl pattern, and therefore often took legal action against cities that began implementing growth management, like for example Petaluma. Today, more and more developers in the San Francisco Bay Area are supportive of aspects of growth management, including infill development.

4. Which problems of sprawling land use are not being solved by existing growth management activities?

Once more it became clear that the citizens' perception of a variety of issues is a demanding obstacle when it comes to managing growth. Most of the citizens do not think long-term, but ten years in the future at the most. The NIMBY attitude, the desire for a suburban lifestyle, and car dependence all help determine the common lifestyle pattern. For these reasons, a pro-growth approach is still dominant.

Of course, high density development will not be attractive for all households. This type of housing attracts families without children, mainly one-person households and the so-called 'empty nesters'.[10] The lack of attractiveness of high density development is enhanced by the fact that multifamily units are often located in the inner cities where the quality of school districts is considered poor.

The Jobs-housing-balance is deemed 'out of control' in the San Francisco Bay Area, as a huge number of jobs has been generated by the Silicon Valley and San Francisco's Financial District. The development of moderately priced housing is pushing beyond the nine counties of the San Francisco Bay Area. As a result, the increased amount of through traffic cannot be handled by a single city's growth management tools. What adds to this problem is that the scale of development is

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10 Empty nesters are couples with adult children that have moved out of their parents' home.

often not considered. Growth caps and growth in tiers, which are both restricting population growth, have shifted development to other communities in the region.

Another recent development problem is connected to the attractiveness of the San Francisco Bay Area's open space and its agricultural heritage. The so-called 'gentrification of agricultural land' produces upscale residential development, for example homes of up to 30,000 square feet. The new residents do not favor agricultural uses, and deem their neighborhood 'residential'. They try to take legal action against farm related production facilities in their neighborhood, thus threatening the economic basis of many areas.

Interestingly, the issue that containing growth leads to higher housing prices, one of the main critiques of the growth management movement in the 1970s, was mentioned by only one interviewee.

5. Which aims are fundamental when it comes to using growth management activities (for example economic: infrastructure costs, environmental: preserving open space)?

The aims for applying growth management are manifold, depending on the location of the city. For example, factors include a high market value of land,[11] or potential to grow outward or not.[12] Nevertheless, interviewees agreed that the general aim was enhancement of the quality of life in cities or counties.

In many cases, the growth management approach was initiated by *citizens*. Their cities and neighborhoods changed rapidly with the enormous suburban growth in the San Francisco Bay Area during the 1950s and 1960s. Most of the target cities for sprawl were located in rural areas which transformed into bedroom communities for the city of San Francisco. Today, the citizens' concern for limiting growth is often related to the fear of changes in their neighborhood and to safety issues. To preserve the environment by means of growth management was often deemed citizens' hidden rationale for a NIMBY attitude.

In terms of *counties and cities*, costs related to infrastructure supply like schools, water and sewer are the main reason for applying growth management. Infill development and dense land use patterns require less funding for infrastructure; the efficient delivery of services becomes essential. In some cases, traffic congestion is the main reason for using growth management tools. In other cases, water supply restricts the expansion of a city.

In addition, interviewees agreed that density was an important aim for growth management. Creating higher density is related to a large number of growth management activities like mixed use and new urbanism which are mostly applied within existing urban settlements.

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11 In San Francisco, San Mateo County and Santa Clara County the market value of land is high, which allows for infill development.

12 Cities located on the Bay (e. g. San Francisco), or cities bordering other cities' urban areas (for example Mountain View) are limited in their outward growth.

In wine-growing counties like Napa or Sonoma, economic development used to contain sprawl naturally. Vintners were not eager to sell their land to developers to make a profit. However, growth tools such as urban growth boundaries and the Williamson Act[13] are applied as a supplement to ensure that agricultural land, or the rural character of these areas, is preserved.

As for *developers*, the costs of land are an incentive to take into account high density development. This is a high motivation to apply growth management related tools.

In sum, it can be concluded that citizens favor a no-growth-approach, while planning practitioners follow an approach of managing growth to fulfill housing needs.

6.   Are environmental aspects relevant for using growth management activities? If yes, which aspects?

The interviews showed that, in general, environmental aspects are not a central point when it comes to growth management. Nevertheless, there is some influence on growth strategies.

A perceived loss of open space is deemed the motivation for the public to initiate growth management. For this reason, mountain ranges or coastal areas were surrounded with permanent growth boundaries at an early stage. In particular, coastal zone protection was the starting point for growth management in Marin County and San Mateo County. Habitat conservation and water aspects are also important environmental issues in growth management. Moreover, a mix of agriculture and environmental protection plays a role in preventing settlements from growth.

However, 'keeping it green' is often an alibi for preventing poorer people from moving into a neighborhood. Again, the NIMBY issue plays a role in the motivation for managing growth. Consequently, environmental concerns are too focused on areas directly adjacent to urban areas representing 'the backyard', not open space in general. Again, it was mentioned that the acceptance for preserving open space is high, but not for density issues.

In addition to land use, congestion and air pollution were also stated to be of some relevance when it comes to environmental aspects in growth management.

B: Aspects Regarding the Implementation of Growth Management Activities in the City or County

7.   Since when are growth management activities in use in the city/county/Bay Area?

Since the beginning of the 1970s, growth management approaches were initiated in the San Francisco Bay Area's cities and counties. According to the stakeholders

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13 See Chapter 4 and Chapter 5.

included in the investigation, no 'high tide' of growth management can be identified. Initiating growth management was related to a wide variety of activities, again showing no concentration on one specific tool, but rather fragmentation.

Some of the starting points will be mentioned in this section to show the wide-ranging spectrum of growth management. They will be presented in a chronological order:

- San Francisco adopted its 'Transit First' policy in 1973, linking land use to transportation.
- San Jose applies an urban service area in 1975. With the fundamental change of the city's growth policies from the mid 1960s to the early 1970s, the use of development lines (Urban Green Line) was initiated. According to this plan, development of San Jose's and Santa Clara County's areas has to take place in existing cities. This policy is declared by memorandum, and preserves the county's unincorporated areas from urban growth.
- Since 1973, development was focused along 'city center corridors' in Marin County.
- In Petaluma, the housing allocation process started in 1975 with growth caps.
- In Napa the RUL (Rural Urban Limit Line) was set up as a growth boundary in 1975.
- In 1976, the California Coastal Commission passed the Coastal Act with mandatory policies for coastal counties to restrict land use. By this means, it is for example required to set up an urban growth boundary.
- In Walnut Creek, initiatives started in 1980 with a limit—surprisingly—on commercial development.
- In Napa County, a ballot measure established a growth rate in line with the general plan in 1980.
- Since the early 1980s community separators have been in use in Sonoma County.
- In Solano County, a voter initiative directed growth to cities in 1985.
- In the city of San Rafael, the process started with purchases of open space by the city during the 1980s.
- In 1986, San Mateo County added a growth boundary to cities which were not located in coastal areas to add to prior coastal zone protection.
- In Redwood City, infill and redevelopment were put into practice during the last 10 to 20 years.
- In 1980s and 1990s, growth management policies started in Alameda County, although the term 'growth management' was not used.
- Since 1990, an urban limit line has been in use in Contra Costa County.
- Growth management was implemented during the early 1990s in the city of San Mateo.
- In 1992, Mountain View implemented transit oriented development along

with other growth management related tools.[14]
• In 2001, the Association of Bay Area Governments carried out the Livability Footprint Project as a region-wide visioning exercise.

The interviews made clear that by the middle of the 1990s all of the communities had had several experiences with growth management. It also becomes obvious that there seems to be a lack of consistency and a fragmentation of growth management approaches.

Moreover, development shifts through time can be noticed: from containment (limit lines), to inner city approaches (infill and transit orientation) and regional development (Livability Footprint Project). Growth management also followed changing patterns in the location of sprawl, starting with the city of San Francisco to the adjacent suburbs in the South and the North and in the east Bay.

8.   Which of the activities in list 1 (see Appendix to Table 6.1) are or have been in use either by the county or by communities in the counties?

1. Urban Growth Boundaries   Some of the jurisdictions involved are not using limit lines as a regulative tool either because it has not been their policy, or because they have not had space to grow outward and for this reason do not need a limit line. For many cities, however, an urban growth boundary is the major growth management tool. Most of the boundaries were established by voter initiative during the 1990s, which shows the growing influence of stakeholders within the planning process. Usually, growth boundaries are implemented for a period of twenty years, but a few cities have established permanent boundaries.

As there are more nuances in the use of urban growth boundaries, some examples will be described in this section.

In San Jose the most important tool is the so called Urban Green Line, which is a permanent line. However, the city has sufficient growth reserves within this line. The Green Line policy has been widely criticized, as it foresees a new large high tech development in a rural area; these stated policies cause land use conflicts (Matthews, G. 2002). While the development would enhance the city's jobs-housing balance, it would also consume a large amount of open space.

The city of Napa's growth boundary is called the Rural Urban Limit Line (RUL). In the case of Napa, there is only very limited space to grow within the boundary. The purpose of this boundary is to preserve the high quality agricultural land of Napa Valley's wine areas. In this region, agriculture is a major economic factor, for both its products and the tourism it attracts.

The city of Petaluma changed its policy during the 1990s by creating an urban growth boundary on the basis of the city's green belt, which was established during the 1970s. As mentioned earlier, Petaluma is one of the pioneers of growth

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14 This roughly marks the point when transit-orientation became an issue in the San Francisco Bay Area.

management in California. The policy change towards the growth boundary was enforced by voter initiative.

In Marin County the entire county is divided into three parts: City-centered corridor, inland rural corridor, and coastal recreation corridor. The City-centered corridor line separates urban from rural areas on a county-wide scale. An urban growth boundary is also in use in Santa Clara County, but it is stated to be a more theoretical idea, as water and sewer aspects managed with the urban service area are deemed more important. Interestingly, in Alameda County the urban growth boundary is considered a good tool to settle conflicts between developers and farmers who want to sell their land to developers.

A remarkable example is Contra Costa County, which incorporated an urban limit line in 1990. In the year 2000, the limit line was moved closer to the cities in one area, an unusual event. Far more common is expansion of urban growth boundaries to coincide with a city's development. The county's procedure was strongly opposed, but it won voter approval. In 2010 the county has to set up a new general plan. At this time the urban limit line must be discussed again.

2. Urban development tiers (staging)   Staging plays a role in a variety of ways. In San Francisco, staging is carried out to assign development steps to industrial land. Another version of staging which is used by several cities is the designation of future settlement areas or urban reserves outside the urban growth boundary. In this regard, San Jose has declared two 'urban reserves' outside the urban service area, but within the urban growth boundary: Coyote Valley and South Almaden Valley.

3. Coordinated infrastructure planning   Coordinated infrastructure planning, clearly a tool based on procedural and systems analysis approaches in planning, is carried out in several cities and counties of the San Francisco Bay Area. Its common use is related to water and sewer lines. In this regard it plays an important role in Santa Clara County, which established an urban service area during the 1970s. Its purpose is to designate cities as locations for future development in order to support compact settlement patterns. For this reason, the county's land use competencies only extend to non-urban uses. Urban service areas correspond with urban growth boundaries, since certain types of uses are restricted where urban growth boundaries and urban service areas overlap. Other examples related to water and sewer systems are Walnut Creek, San Mateo, Sonoma County, Alameda County, and to a limited extent Contra Costa County.

A remarkable example is the city of San Rafael where coordinated infrastructure planning is applied to transportation. The general plan, which was introduced in 1988, set up congestion limits at intersections to tackle traffic issues. One requirement is that traffic improvements have to be in place before development occurs. For this reason, trips are issued in terms of types of property. For example, the type called 'day care' is issued more trips than single family housing. This allocation policy is applied in three areas of the city. Where the numbers are not met, an annual application has to be carried out which is called a 'priority project procedure'. Within

this process, the traffic capacity has to be approved. Emphasis is given to projects that have affordable housing, that generates high taxes, and that align with suggested neighborhood improvements (for example park renovation, day care, landscaping). Today, the standards which were developed in 1988 are approaching their limits now, so development has stopped. However, an attempted increase of the limits will surely raise the public's concerns, as the citizens are likely to follow a no-growth policy.

4. Growth caps   Traditionally, growth caps were among the first approaches used in growth management. Today they are accompanied by other tools, or even replaced. Among the few examples that were mentioned is the city of Petaluma, where a growth cap was established as one of the first examples of growth management in the US. The city implemented an annual limit of 500 housing units as growth policy.

Likewise, Napa County and the city of Napa established a capped annual growth rate. In Napa County this cap includes building permits even in unincorporated areas. In the city of Napa it is called an 'even rate of growth' that designates a certain number of new housing units per year.

Despite the vast discussion about growth caps related to high housing prices in the San Francisco Bay Area, a study by the Bay Area Council (1993) states that between 1987 and 1991 only four cities had enacted formal growth caps: Walnut Creek, Union City, Pleasanton, and Livermore.

Regulative tools are clearly overlapping, as demonstrated by the cities San Jose and Petaluma. The use of multiple tools is often considered counterproductive and causes confusion, since—as in the Petaluma case—no evaluation accompanied the policy shift from growth caps to the urban growth boundary.

5. Preserving space outside of settlement areas   On the county level open space districts or non-profit organizations (land trusts) like the Santa Clara Trust are the main actors involved in purchasing land. For this reason, either an addition to sales tax is directed to growth management for a limited time period, or a fee has to be paid on every newly built house as part of a county-wide policy. Moreover, park districts and water districts have the ability to purchase land.

An interesting example is Sonoma County where the Agriculture Preservation and Open Space District was created in 1990. The voters approved this district-wide approach as a ballot measure. Under the District's leadership the 'Acquisition Plan 2000' was developed to preserve agricultural and open space lands. Moreover, development agreements are enabled in these areas so that developable land is subdivided to create clusters of settlements at a higher density. In addition to that, agricultural preserves established under the Williamson Act contribute to the protection of open space. Here a quarter cent addition to the sales tax is directed to growth management.

Other examples include Contra Costa County where a half cent sales tax increment combined with growth management passed as a ballot measure.

In Solano County the 'Orderly Growth Initiative'[15] has protected agricultural and open space land by directing urban growth and development to existing cities. These selected areas cannot be changed until the year 2010. Another path was taken in Marin County, where rural and coastal areas had been defined according to a low growth rate. Moreover, a land trust (Marin Agricultural Land Trust—MALT) foresees a non profit agriculture protection easement. In Contra Costa County the acquisition of land is conducted by public agencies and non profit organizations.[16] Furthermore, high quality agricultural land is declared desirable in the general plan, and is thus protected from urban use. In Alameda County the approach is based on a combination of urban growth boundary and habitat protection, blending environmental aspects and agriculture. Interestingly, in the city of San Francisco, where open space outside of urban areas barely exists, large amounts of space within the city are protected from urban development.

6. New generation zoning (mixed use) Mixed use has become a very popular planning tool that is applied by many cities and counties. In many cases it is related to downtown areas or transit oriented development, but it is also utilized in unincorporated areas. Mixed use is accompanied by a variety of approaches like designated residential commercial districts, vertical zoning, and incentive zoning to achieve a balance between development, intensity and height.[17] This is partly perceived as a bargaining process between city planners and developers in order to coordinate the communities' growth policies.

Among the many municipalities applying mixed use, the following examples should be mentioned:

- In San Francisco mixed use has a long history, since residential commercial districts and vertical zoning were already established in 1978.
- In San Rafael it was newly introduced at the beginning of the new millennium as part of the community visioning process for the downtown.
- In Mountain View so-called 'precise plans' combine zoning with design regulations.
- Fairfield's General Plan foresees fifteen selected sites for mixed use.
- In the city of San Mateo housing is permitted in commercial areas.
- In San Mateo County it is related to unincorporated areas like the specific plan for the Daly City-Colma BART station.
- In Santa Clara County it is only applied with agricultural uses like agrotourism or food processing.

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15 For further information on the Orderly Growth Committee see American Farmland Trust (1997).

16 Actors include land trusts, and the organization Save Mount Diablo.

17 See Chapter 4.

7. Tax benefits   Tax benefits regarding growth management can be divided into two groups: one is based on the Williamson Act,[18] the other includes redevelopment agencies.[19]

In all of the San Francisco Bay Area's counties—except San Francisco county— agricultural land is preserved under the Williamson Act. In some counties like San Mateo County and Santa Clara County a large number of farms are protected under this regulation, while in other counties like Napa County or Contra Costa County it is only partially employed.

Many San Francisco Bay Area cities and counties (for example San Francisco, Walnut Creek, San Mateo, San Jose, Alameda County, Contra Costa County, Marin County, Napa County) have established a redevelopment agency to transform brownfields for new urban uses. The city of Emeryville is of special interest, as it initiates a comprehensive approach for the large number of brownfield sites the city contains.

Local jurisdictions' undertakings to jointly use taxes are scarce. Alameda County tried to establish a joint redevelopment agency between two communities, but the attempt failed.

8. Purchase of development rights/Transfer of Development Rights   Purchase or transfer of development rights is rarely used by San Francisco Bay Area cities and counties. However, in San Francisco transfer of development rights is an important part of the implementation strategy for the downtown plan. Transfer of development rights is also used to a great extent in Contra Costa County. As explored in Chapter 4, a purchase of development rights is more easily carried out than a transfer of development rights. However, in most of the jurisdictions not only the development rights, but also open space land, are purchased directly.

9. Density incentives (Building advantages, impact fees)   Building advantages are mostly related to downtown areas or transit oriented development areas. These incentive-based approaches are offered on the regional, county and city level. A few examples will be mentioned in this part.

Of *regional* importance is the Metropolitan Transportation Commission's Transportation for Livable Communities Program (TLC), which is dedicated to mixed use and housing. On the *county* level C/CAG[20] developed a transit oriented development incentive program.[21] Moreover, in Contra Costa County a transit village is planned near a BART station. Also, Alameda County has designated specific plan areas for transit oriented development. The latter is also an important policy of Santa Clara County.

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18 See Chapter 5.

19 See Chapter 5.

20 San Mateo City/ County Association of Governments.

21 Both examples will be characterized later in this chapter in the frame of transit oriented development.

A large number of cities are making use of incentive-based transit oriented development. Among cities' examples are the following:

- Mountain View conceptualized a transit oriented approach with the award-winning examples 'The Crossings' and 'Whisman Station' during the 1990s.[22]
- San Francisco's Better Neighborhoods Program foresees upzoning and transit orientation in three designated neighborhoods: Balboa Park, Market & Octavia, and Central Waterfront Area.
- San Jose developed several neighborhoods near transit stations along the Tasman and Guadalupe light rail lines.
- Fairfield rezoned a transit station along the Capitol Corridor line. Moreover, the city applies incentive zoning.

10. New urbanism (design aspects) Urban development in the US is steadily moving into a 'new urbanist' direction. Most of the San Francisco Bay Area's planners and also a few developers use design aspects to make dense urban developments attractive to citizens and neighborhood groups. Some stakeholders even call raising density and providing better urban design the 'new mantra'. While many elements of new urbanism are there, the development is usually not explicitly designated as such. In several cases it goes hand in hand with transit-oriented development and is therefore dedicated to certain parts of a city or county.

Some cities have created design codes which provide regulations for new development to a more or less strict degree. Examples are Mountain View, San Jose, and San Rafael, which developed a 'design charter'[23] for the downtown area.

However, new urbanism per se is also viewed critically, as by several interviewees mentioned that the ideas are applicable, but the implementation is deemed not dense enough. In this regard, the interviewees mentioned New Urbanism as a 'band aid for suburbs'.

11. Stakeholder involvements Exploring the role of communicative action in planning practice shows that every county and city must be participatory in order to respond to the citizens' demands for information in an adequate way. Consequently, planners are targeting the 'usual density concerns': increased traffic, changing urban fabric, additional people, overcrowded schools. In addition to workshops, visioning sessions are conducted in some areas, as it is considered easier 'to look into the future than to talk about numbers'. Some cities are working together with developers to enhance the design quality of proposed projects.

But, the 'workshop-approach' was also perceived as problematic, as only the 'usual suspects' participate, and not always the citizens who will be affected by a

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22 Mountain View's transit oriented development will be characterized later in this chapter.

23 Charette describes a community design process which is usually conducted by design specialists (Silberstein and Maser 2000).

certain development. Moreover, the citizens cannot be viewed as a homogeneous group. The people involved in visioning processes are usually more 'smart growth friendly', while the ones participating in the discussion of specific development projects are in general opposed to the land use that is about to occur in their neighborhood. This is enhanced by the time lag between the visioning exercise and its implementation.

While in the past the process generally involved planners reacting to the citizens' requests for information, today a more pro-active approach is applied: people are encouraged to get involved in the planning process before development begins. Furthermore, it was stated that high density housing should be viewed as a product type to prove that development and density are not threatening.

A more integrated approach on the city level is suggested by San Francisco's Better Neighborhoods Program. This program is part of San Francisco's Citywide Action Plan which strives for a 'rational' framework for balancing growth, housing needs, and the quality of life. The program is a community-based area planning effort that is seeking to create a shared vision of the future for three pilot neighborhoods which are targeted for new development. One aim is to raise community acceptance for a long-term vision by conducting discussions with the neighborhoods about change and better place making, thus enabling the citizens to take ownership of the vision and its implementation.

12. Inter-jurisdictional and regional cooperation Inter-local cooperation was mentioned by the interviewees from almost all the cities and counties. However, many of the activities are informal and consist of a more or less loose cooperation. These efforts are deemed not very intense, and always voluntary. The aim is not to solve problems but rather to identify mutual interests. It was mentioned by many stakeholders that although numerous meeting groups exist, the results are not always visible.

An interesting example of closer cooperation is currently taking place in Napa County. The county has difficulties in fulfilling the requirements of the Housing Element Law[24] in its unincorporated areas. For this reason, the planning department is cooperating with the biggest cities in the county, Napa and American Canyon, to estimate the possibilities for an allocation of 2000 of the county's additional housing units in their territory. The cities and the county are currently in the process of balancing their interests. The prospects for the cooperation are positive, as cities in Napa County have a long standing tradition of organized meetings.

A few more programmatic examples have been established on the regional and county levels, following a participatory approach.

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24 See Chapter 5.

Region: Smart Growth Strategy—Regional Livability Footprint Project (Association of Bay Area Governments)

To handle growth related problems like traffic congestion and a lack of (affordable) housing on a regional scale, a strategy of future development has been elaborated for the nine San Francisco Bay Area counties. The process is based on a bottom-up approach. For this reason, two series of workshops were carried out in each of the counties, where citizens were encouraged to act as 'planners for a day'. The stakeholders that were interviewed evaluated the entire project as 'a good promise', 'a great idea' and 'a great concept'. Moreover, city and county planners agree with the proposed smart growth principles. However, they claim that the project has to prove its success during the implementation phase. This project will be investigated as an example of growth management later in this chapter.

County: Shaping Our Future (Contra Costa County)

Shaping Our Future, launched by all 19 cities and the county, is a new program supporting Contra Costa in making decisions about managing growth during the next twenty years. It comprises a regional approach based on a community-oriented 'vision', which will be developed jointly by community leaders, citizens, elected officials, business leaders, and planning and transportation experts.

Other examples of cooperation:

- San Mateo County established C/CAG (City/ County Association of Governments) in 1990.
- The Colma/Daly City BART station was developed by a joint specific plan of San Mateo County, San Mateo County Transit District (SamTrans) and the city of Daly City.
- In San Francisco the chamber of commerce is carrying out a project about inter-jurisdictional housing.
- San Rafael initiated cooperation efforts with the county and the city of Novato in terms of the jobs-housing balance.
- In Solano County negotiations for the allocation of the county's housing element in cities located in the county are taking place.
- The cooperation between the city of Petaluma and Solano County is judged strong.
- Alameda County has a large number of meeting groups.
- In Santa Clara County cooperation is carried out on an informal basis.
- In San Mateo cooperation is organized, but it is not considered intense.
- The North Bay Division of the California league of cities and counties (Marin, Napa, Solano, Sonoma) worked together to influence growth policies like MTC's HIP program.

13. Land use monitoring systems (GIS supported)   In general, the GIS capacity is underused by the San Francisco Bay Area's cities and counties. Some of a few examples are:

- The Metropolitan Transportation Commission uses GIS to search for vacant land around transit stations.
- San Francisco developed a digital map with several categories of information.
- In Contra Costa County GIS data is available for the consultants conducting the Shaping Our Future process.
- The Sonoma County Agriculture Preservation and Open Space District uses GIS for the analysis of agricultural, natural resource, greenbelt and recreational lands. This analysis will be used to set land acquisition priorities and evaluate properties.
- In the city of San Mateo GIS simulations are used to study traffic congestion.

9.   Which of these activities have mostly been applied, which have been applied only scarcely? And, how is their relevance?

The interviews showed that activities most often in use are urban growth boundaries, mixed use, protected space outside of settlement areas, new urbanism, and workshops with interest groups. Interestingly, these categories represent a mix of regulative, incentive and collaborative activities. Among the procedures that are of minor relevance in the San Francisco Bay Area are the purchase of development rights, state funds, joint use of taxes, and land use monitoring systems.

Depending on their specific location, the application of growth management activities in different cities or counties is very heterogeneous. This heterogeneity is mainly related to the potential of a city to grow and on the pressure on a city to grow (housing demand). Some cities have a potential to grow outward; others are 'locked in' by natural factors (San Francisco is from 3 sides surrounded by water) and other cities like Mountain View are adjacent to other cities' urban areas. Some cities have established growth boundaries like San Jose but still have potential to grow inside these boundaries, while other cities surrounded by an urban growth boundary are almost built out (e.g. Napa). Several cities further away from the San Francisco Bay Area's job centers San Francisco and Silicon Valley, like Brentwood, have only in recent years been designated for new sprawling urban development and their policy is generally growth supportive.

10.   Which other growth management activities have been applied?

The list of additional activities that have been applied in terms of growth management is comparably short. Nonetheless, the few examples that were mentioned are of innovative character.

So called community separators are used in Marin County and Sonoma County. In Sonoma County the community separator functions like a greenbelt. However it is not focused on a single community, but on the open space between two communities. The separators have been protected from change by voter initiative. This county-based approach is accompanied by urban growth boundaries which have been established by the cities in Sonoma County. Solano County also uses greenbelts to prevent cities from growing together in cooperation with the land trust.

In Contra Costa County, cities are required to put a growth management element in their general plan and to participate in the county's planning processes. This approach can be viewed as a variation of the self-certification process carried out in the San Diego metropolitan area.[25]

While most cities are restricting growth in terms of housing, Walnut Creek limited the city's growth in addition to housing in terms of commercial development to 7500 square feet per year in the 1980s. The citizens initiated this growth cap according to huge commercial developments that were threatening to change the community's entire character. In addition, mixed-use housing and retail development strengthened the city's downtown area.

As citizens are considered 'afraid of changes', another incentive is urban conservation of city traditional neighborhoods. This was mentioned by several stakeholders as a tool to 'keep citizens satisfied'. However, this 'backdoor' planning strategy transfers new development to areas with either less organized neighborhood groups or to the urban fringe.

Moreover, education is gaining the status of a new and highly important growth management tool. Planning departments are dedicating a huge amount of time on conducting city tours with neighborhood groups to look at or inside developments which are of higher density.

11.   Which groups of activities (compare list 2, Appendix to Table 6.1) are most appropriate for achieving growth management?

After gathering information about the use of different growth management activities it is important to connect the tools to the theoretical frame as explained in Chapter 3.

To link the theory-based approach to growth management practice, the single activities were grouped into five categories of activities: Regulation, incentives, design, collaboration, and information. Because of the relevance of these categories for growth management, the following conclusions can be drawn from the interviews:

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25 See Chapter 2.

Regulation seems to be the first choice for stakeholders when it comes to growth management. They widely referred to regulative tools as being effective in growth management practice. For this reason, a large number of planning activities are applied to support this approach. However, there was also consensus that regulation has its limits, and thus it must be accompanied by a set of other growth management tools.

The *incentive-oriented* toolset is also deemed to be of some relevance. Incentives are important when it comes to supporting planning processes. They can steer decision-making of developers and citizens. However, incentives were criticized by some since they hold the potential of undermining other regulative policies which are in place.

The *design-oriented* approach is considered of growing importance. Still, some stakeholders expressed that it is not very effective. Others say it might influence people's perception of additional urban development. For this reason, design can be utilized as an incentive to support other growth management policies such as higher density.

Collaboration is relevant for citizens, neighborhood groups, developers and other interest groups such as environmental groups. However, it is only considered useful when the parties involved are not too far apart in their standpoints.

On the one hand, *information*, especially providing education for citizens about development patterns or visioning processes, is stated to be of growing relevance. On the other hand, it was mentioned that information tools have to be handled with care, as they are highly persuasive and often not value neutral, but politically influenced. GIS is widely applied on all planning levels, but the interviewees have had different experiences with it. The technical side of information GIS represents is often limited by planning departments' financial and time constraints. The research work of the Maryland-based National Center for Smart Growth and UC Berkeley should be observed in this regard. Landis et al refer to computer models developed around GIS as 'an extremely powerful tool for organizing information about the causes and impacts of growth and for developing future growth policies' (Landis et al 2003).

The stakeholders mostly agree that tools for growth management are available, but that coordination between different approaches is lacking. Some activities are even considered inflexible when they are used individually. For example, this was mentioned regarding the use of urban growth boundaries. They are deemed fairly ineffective when only the line is drawn without applying additional policies. For this reason the combination of growth management activities is important.

Most of the stakeholders acclaim a program-based approach which integrates all of the categories mentioned above. This result supports my idea of interdependence in planning practice and theory. However, it was also pointed out that there is a lack of knowledge about which elements such an interdependent approach should include. Since practitioners do not have the opportunity to investigate this further—a fact they highlighted during the interviews—they claim that this information should be provided by research, based on thorough theoretical considerations.

12.   Which problems, conflicts and conflict resolutions can be identified while implementing growth management activities?

The problems that were mentioned by the practitioners are highly diverse. However, they can be grouped into three categories: firstly, the scope of growth management, secondly, the stakeholders, and thirdly, negative side effects of growth management processes. They will be summarized in the following paragraphs.

Problems in terms of the scope of growth management   Managing the jobs-housing balance is deemed a regional issue, as the stakeholders agree that urbanization reaches beyond a city's boundary. Moreover, notions of identity or perception form obstacles for a future-oriented vision of the San Francisco Bay Area's development. The settings in the regional arena differ to a wide extent. Despite the fact that the Bay represents a landmark in the region, most of the cities identify themselves with other, often smaller, regional areas. The San Francisco Bay Area as a regional frame does not seem to offer sufficient identity. In this regard, ABAG's Livability Footprint Strategy can be seen as part of larger process since it offers the chance to create a wider consensus among San Francisco Bay Area stakeholders in growth management. An agreement on a regional basis on growth issues is important, as it adds the regional dimension to planning and might facilitate a joint regional identity.

The regional scope of growth management makes clear that inter-jurisdictional and regional cooperation, as well as collaborative planning, are necessary.

Problems in terms of stakeholders   A wide range of decision makers take part in applying growth management activities, but their interrelation does not function well. It was deemed a problem that decision makers are not provided with sufficient training about the side effects of growth.

Furthermore, density concerns of *citizens* remain problematic. Citizens are likely to establish a boundary to prevent their community from outward growth, but changes inside the boundary, especially when related to higher density, are not well accepted. Almost all the stakeholders reported persisting experiences of the NIMBY- attitude.

Despite the fact that some exceptions exist, most *developers* shy away from infill or mixed use projects. One reason might be that it is problematic for them to receive bank support for these attempts, as banks provide loans for either housing or retail development, but not for mixed use projects.

The processes in terms of infill development are not easy to implement as the regulations of other city *authorities* like public works and fire and safety issues sometimes do not seem to be compatible with growth management aspects. For example, narrow lanes and rotary traffic islands are usually opposed by fire departments based on large fire truck sizes. The coordination of local governments with outside agencies is deemed even more difficult and time-consuming.

Negative side effects in terms of growth management processes   The fiscalization of land use was mentioned as a problem many times, especially the cities' focus on the development of so-called 'big box retail' at the expense of affordable housing.

When growth boundaries are brought up by voter initiative—for example in Petaluma—they seem to be a tool which is easy to establish. For this reason, there is often no time set aside to investigate whether the boundary's allocation makes sense to provide for future land use. This is a problem since the established boundary will serve for the next 20 years.

In some cities like Napa, land for future development is scarce. However, with a further allocation of housing as required by the Housing Element Law,[26] future growth could change the character of the entire city.

Moreover, environmental reporting by means of the CEQA-process[27] is considered a problem by many stakeholders; some of them even stated that CEQA regulations are 'out of control'.

13.   Which activities (see list 1 or other activities) should be changed, which are unnecessary, or inflexible?

The experiences over time showed that it was always important to apply changes to growth management approaches. The necessity of perceiving growth management as a process of evolution was highlighted by all stakeholders.

Redevelopment agencies and transit oriented development are considered inflexible tools. These policies are deemed to add too many regulations that make the implementation of projects difficult for developers. Several mixed use projects, which are considered successful by some of the stakeholders, for example 'Santana Row'[28] in San Jose, have been developed outside a redevelopment agency.

14.   In which areas of growth management are activities missing?

It was the consensus among the stakeholders that for the application of growth management a wide variety of tools exist, as does the political will to execute them. However, several aspects are missing that are necessary to carry out growth management activities.

Important aspects are the regional scope of development, and to look beyond administrative boundaries. To achieve this, stakeholders on the local level claimed that a strategy is needed without 'dictation' from a regional authority. Moreover,

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26 See Chapter 5.
27 See Chapter 5.
28 Santana Row is a new mixed-use project with high-end retail, hotels, and upscale residential units. It represents traditional European design of the 19th century in the middle of a suburban strip mall; its location is not transit oriented, as it is far away from San Jose's public railway lines, and its residents cannot be considered typical bus-riders. Its value for growth management is highly controversial.

a better understanding of growth management approaches and awareness by the public is considered necessary.

With regard to a transfer of development rights or a purchase of development rights it was mentioned that these activities should be applied in an inter-local and even inter-regional way, which is not yet being done.

Furthermore, many interviewees bemoaned the fact that no evaluation is carried out in terms of growth management, as the cities and counties are overburdened with day-to-day planning tasks.

Another important aspect which deserves more attention in future growth management work is education. This goes hand in hand with the demand for more visioning processes and demonstrating good examples to citizens, political decision makers, and developers.

Part C of the questionnaire will be presented in the next section which deals with two examples of growth management.

Examples of Growth Management in the San Francisco Bay Area

This section of Chapter 6 will investigate two examples of growth management practice in the San Francisco Bay Area. The first example, 'Transit oriented development', mainly operates on the level of the county or city. The other example, the 'San Francisco Bay Area Livability Footprint Project' is a regional one.

Both examples represent 'state of the art' growth management as it is currently applied in the US, and both of them can be considered smart growth examples as well.[29] Most importantly, they incorporate a variety of approaches to growth management (variations of collaboration, design, regulation, and incentives) and might help shed light on an interdependent view of growth management in the San Francisco Bay Area.

Firstly, I will characterize each example and their different modes of application. Secondly, the results of a SWOT analysis (strengths, weaknesses, opportunities and threats) will be summarized.[30] The SWOT analysis was carried out by means of a stakeholder-centered approach using the interview method. In-depth knowledge was gathered about advantages and disadvantages of these examples in growth management practice in the case study region.

Growth Management Example 1: Transit Oriented Development

Providing transit in metropolitan regions has been Californian policy since the 1970s, enforced by the federal Intermodal Surface Transportation Efficiency Act (ISTEA).[31]

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29 On smart growth see Chapter 2.

30 See Table 6.1 and the explanations on methodology earlier in this chapter.

31 Compare Chapter 5 on metropolitan development and transit along with the federal Intermodal Surface Transportation Efficiency Act.

However, a closer link between transportation and land use development, emerged as policy during the 1990s.

Facilitating an efficient flow of transportation, especially under the conditions of increasing traffic congestion, is one of the main issues in the San Francisco Bay Area. Encouraging the use of public transit is deemed an important aim in this respect. For this reason, transit oriented development has boomed because of support by communities, counties and transit authorities. This has not always been the case. The development of transportation and land use issues took place separated from each other for decades, and thus the related authorities operate on different planning levels; land use is directed by local jurisdictions, but transportation is steered by state and regional authorities (Glickfeld and Levine 1992).

Transit oriented development in the San Francisco Bay Area includes an approach to growth management that is influenced by smart growth.[32] It is carried out on regional, county and city level.

Characterizing the growth management approach   In the San Francisco Bay Area, innovative examples of transit oriented development can be observed; three of them will be summarized here.

(1) Regional level: Transportation for Livable Communities Program (TLC)[33]   The Metropolitan Transportation Commission (MTC) has attained a significant role in growth management in the San Francisco Bay Area.[34] Of regional importance is MTC's 'Transportation for Livable Communities Program (TLC)', which is dedicated to mixed use and housing. The program, launched in 1998, supports community-based planning efforts by providing planning grants for cities and nonprofit organizations to develop transportation projects. These may include conceptual design, technical assistance and capital grants for construction. Among the projects that have been funded so far are pedestrian oriented streetscapes, plazas and bicycle paths near transit centers. The program is of interest for growth management as it links MTC's transit expansion policy to land use criteria.

In 2001 a so-called 'Housing Incentives Program (HIP)' was added to the TLC approach, which is derived from a program developed by the San Mateo County. Criteria for project approval are:

- Projects should be in the planning process.
- Housing projects should be within a 1/3 mile walking distance to a transit stop (rail, bus or rapid-transit).
- Transit service has 15 minute headways during peak commute hours.

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32 See Chapter 2.

33 Information on the TLC program was gathered during the interviews, the participation in ABAG's Smart Growth Working Group, and MTC's website http://www.mtc.ca.gov/planning/smart_growth.

34 Metropolitan Planning Organizations have been set up by federal law for transportation planning in metropolitan areas over 50,000 people (Porter 1997), see also Chapter 4.

Funding in the frame of the HIP program is based on density incentives per bedroom:

- 25 units per acre receive $1000 per bedroom plus $500 per affordable bedroom.
- 40 units per acre receive $1500 per bedroom plus $500 per affordable bedroom.
- 60 units per acre or more receive $2000 per bedroom plus $500 per affordable bedroom.

City or county departments are eligible for funding. The project applications are reviewed by representatives from the Citizens' Advisory Council, the Bay Area Partnership and MTC staff. A Commission agrees on the final list of projects to be funded. During the first call for projects 16 applications was submitted comprising a total amount of $22 million. $9 million, half of the TLC budget, were available in the program to support 5323 housing units in 15 cities, from which 5411 bedrooms were market rate and 2060 bedrooms affordable. One example of a HIP-project took place the city of Dublin, where a mixed-use community with 1500 apartments of a 70 units per acre density will be created adjacent to the Dublin/Pleasanton Bart station. Another example of HIP will occur in the city of Vallejo where 125 affordable housing units will be developed near a shopping center and the Sereno Bus Transit Center.

(2) County level: C/CAG's Transit Oriented Development Incentives Program[35]   On the county level San Mateo's City/County Association of Governments (C/CAG) launched a program on transit oriented development incentives addressing housing needs, congestion, and environmental quality in 1999. Incentives are provided for twenty land use agencies, cities, and the county for the creation of housing nearby rail transit stations. By this means, land use is combined with an efficient use of the transit system.

The level of funding is contingent on the number of bedrooms created within the housing development. The eligibility criteria require the location of the project within 1/3 mile of a rail transit station and a density of a minimum of 40 units per acre. The agencies receive the funds only if the units are under construction or already built. The funds may be used to support improvements either on- or off-site. In addition to direct transportation improvements, some general measures are possible for example landscaping, lighting, plazas, sidewalks, and recreational projects.

During the first implementation phase, October 1999 to September 2001, the program supported the creation of 1282 bedrooms in five projects with grants of $2.3 million. During the second phase, February 2002 to February 2004, 10 projects will be funded to support the development of 2407 bedrooms.

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35 Information on the TLC program was gathered during the interviews, the participation in ABAG's Smart Growth Working Group, and the World Wide Web http://www.epa.gov/smartgrowth/san_mateo.htm.

One of the first examples that were constructed is Franklin Street Apartments located at the Caltrain station in downtown Redwood City. It includes a compact multi-family housing structure with a few retail and restaurant facilities. The project received $1.2 million of C/CAG's TOD funds.

As the program is regarded as successful, several other jurisdictions in California were inspired to initiate comparable projects (e.g. MTC's HIP program) as well as Sacramento, Fresno and Monterey Counties.

(3) City level: City of Mountain View[36]   The city of Mountain view was incorporated in 1902 with a population of less than 1000 people. Due to suburban growth and industrial development, the city now has 72,000 residents. The city's postwar growth was driven by its proximity to San Francisco and San Jose, and its location in Silicon Valley. Since the beginning of the 1990s, Mountain View has initiated several approaches to concentrate new settlements (housing, retail, industry) nearby transit stations. The driving factor for this development was the decision to build a light rail line between San Jose and Mountain View at the end of the 1990s. This encouraged the city to develop the center of Mountain View as a hub for different transit systems.

The general plan of 1992 took these developments into consideration and set up priorities for future land use development in three so-called 'Precise Plan Areas'. All these areas are dedicated to transit oriented development. These precise plans are comprehensive planning and zoning documents for designated geographical areas within a city that replace traditional zoning. They serve as a growth management tool by providing high density settlement structures near transit stations accompanied by detailed development and design standards. The main criteria concern air quality, transport issues, and the provision of housing.

The three Precise Plan areas are:

- The San Antonio Center Precise Plan for the site of an older unattractive shopping mall; here, the neighborhood 'The Crossings' (17 acres) was created adjacent to the San Antonio Caltrain station.
- The Whisman Station Precise Plan, which should transform an old industrial complex into the neighborhood 'Whisman Station' (40 acres). At Whisman Station, single and multi family housing was built nearby a light rail station along the new Mountain View—San Jose light rail line (see Figure 6.1).
- By means of the Downtown Precise Plan, 200 mixed use units (apartments and office buildings) were created embedded in a revitalization strategy for the entire downtown. This development is adjacent to the new inner city transit hub, where Caltrain, light rail, and a bus terminal are connected.

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36 Information on the Mountain View example was gathered during the interviews, an on site tour with city planning staff, and from information from Mountain View's website (City of Mountain View 2001).

Of special importance were new urbanism aspects (see Figure 6.2). Architecture and urban design of high quality were provided to create a neighborhood character and a sense of place. The features of one of these projects, 'The Crossings', will be described in the next paragraphs

Figure 6.1   Whisman Station, Mountain View

Neighborhood 'The Crossings'

The design and master plan of this housing project comprises 359 units (21 units per acre). It is transit oriented, as it is located across the street from a relocated Caltrain station.

Key objectives of the Precise Plan for the Crossings are:

•   Provide higher density on the sites closest to the train station.
•   Create a strong sense of neighborhood.
•   Orient buildings to the streets to give the opportunity for neighbors to interact.
•   High quality design to attract home owners.
•   Provide safe pedestrian and vehicular access to the site and on the site.

The following 'new urbanism' design requirements should be met by the developer:

- Provide a mix of building types.
- Create relatively narrow streetscapes with trees.
- Place garages in the back of the sites.
- Build front porches facing the streets.

Figure 6.2   New Urbanism in Mountain View

Although the buildings are exclusively residential, the development is part of a mixed use neighborhood with retail facilities within walking distance (Benfield et al 2001). In addition to following the new urbanism design aspects, the development area is located at the site of an abandoned shopping mall. A large number of waste building materials could be recycled for the new construction (Benfield et al 2001). This makes the entire project environmentally friendly from a resources perspective.

As a result, 102 small single family homes, 129 town homes and 128 condominiums have been built at the Crossings. The density of the settlement varies between 11 units per acre up to 70 units per acre. The first homes were finished in 1994, the last in 1999. The relocated Caltrain station opened in 1999.

The project, which is regarded as a best practice example, is broadly accepted by the public. Even on a national level it is praised for its innovative character, as it was awarded the price for the best application of planning by the American Planning Association in 2002.

Another successful instrument used to achieve compact settlement structures is the declaration of so called 'transit overlay zones'. A transit overlay zone is defined as an area of industry and commerce which is located within a 2000 feet radius of a transit station.[37] Within this area, benefits are provided for companies to relocate to a transit zone. As land prices are extremely high, an incentive allows developers a higher building density. In return, the city expects the companies to participate in programs to support the use of public transit. To achieve this, every new development has to pay $3 per square footage of building space.

On site the following preconditions have to be met:

- Orient entrances towards pedestrian walkways to the light rail station, not towards the parking spaces in the back of the buildings.
- Provide a cafeteria or a comparable food court in the building, fitness amenities, ATMs and other service facilities on site.
- Create parking spaces for carpools as well as spaces for bike parking facilities.
- Set up a program for transit users that includes free transit tickets for all employees as well as a contribution to the costs for the Caltrain shuttle.

By this means, the city was able to raise funds of approximately $4.850.000 for bike paths and walkways within transit zones. As a result, 500,000 sq. ft. of office space has been developed or is projected within Mountain Views' transit zones.

Other cities like San Jose and San Mateo followed Mountain View's approach to designate new housing and mixed use development to transit stations. San Jose uses Specific Plan Areas to implement the general plan, such as the Tamien Station Area Specific Plan with 1200 housing units oriented to a multi-modal transit station, or Rincon South Specific Plan with 1900 multi-family housing units oriented to light rail transit with supportive retail uses and nearby office and hotel development. San Mateo is in the process of transforming the site of a horse race track into a mixed-use transit oriented development nearby an existing Caltrain Station.

Evaluation through planning practice

What are the strengths of transit oriented development?

The positive effects of transit oriented development are associated with the possibility of accommodating higher density in downtown areas and other sites. In particular, actively considering infill development can help meeting cities' and counties' housing needs.

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37 It is useful to know that for the city of Mountain View the term 'industry' does not mean chemistry or metal work. Instead the city is home of aerospace industries and high-tech industries (One branch of NASA as well as 76 computer and software companies are located in the city, among them Hewlett Packard).

Moreover, a variety of housing types is offered as it was done in Mountain View's 'The Crossings'. As a requirement, it was stipulated that development should be big enough to create a neighborhood.

What are the weaknesses of transit oriented development?

In the US people's lifestyle is still dependent on cars. Despite the fact that mass transit exists, a large amount of parking has to be provided in transit oriented neighborhoods. Moreover, estimating impacts of traffic generated by new development are only recorded for roads, while transit use is not taken into consideration. Thus the positive effects of transit use in terms of congestion and air quality are not considered.

Moreover, many work areas in the suburbs are not located next to transit stations, but in office parks with convenient highway access. For this reason, and for the sake of the jobs-housing balance, it was suggested that jobs should be created near transit, as it is carried out in Mountain View's transit zones.

As to the development, housing units, in particular single family homes within transit oriented development are considered still too big. However, from the perception of the inhabitants, the backyards are often too small.

Which opportunities can be identified?

As transit, housing and retail are combined, the development reduces the necessity to drive to shopping malls. Moreover, development can be concentrated in urban areas along the historical commuter rail lines like Caltrain.

Several cities have already experienced a revitalization of downtown areas in the wake of transit oriented development. For example, in Mountain View or San Mateo new customers could be attracted to the existing restaurants.

The transformation of parking lots at BART[38] stations to mixed use development can contribute to creating walkable communities and a higher orientation towards pedestrians.

Encouraging companies relocate to transit oriented areas, as described in the Mountain View example, is an important goal that addresses the jobs-housing balance.

Which threats can be identified?

One major problem remains unsolved. Despite all these efforts, there is no guarantee that people living in housing areas designated as transit oriented development will really use transit. The interviewees reported that less than 20% of these citizens actually use public transit. Many people desire a new home within a transit oriented development, but they do not consider transit a choice for their daily life. In this regard, it was pointed out that the public should be well informed about the

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38 Bay Area Rapid Transit.

possibilities transit has to offer. Moreover, a high quality of the design has to be provided by developers to make transit oriented neighborhoods attractive places to live.

Another rather negative aspect is that the problem of gentrification arises as a problematic issue when it comes to transit oriented development and smart growth. As the new developments are highly attractive, housing prices in the adjacent neighborhoods may rise as well, which might have effects on the affordability of these areas.[39]

Growth Management Example 2: San Francisco Bay Area 'Regional Livability Footprint Project'[40]

Increasing traffic congestion and a lack of (affordable) housing have been central problems of growth in the San Francisco Bay Area. Based on California's growth management traditions, efforts to handle a growing population, economic development, and environmental impacts were principally handled by local authorities.

Nevertheless, two attempts to establish strong regional governance structures in the San Francisco Bay Area failed. In the 1960s, the Association of Bay Area Governments was intended to be transformed into a regional government, but this was not executed (Calthorpe and Fulton 2001). Next, regional governance approached a more concrete phase during the 1990s. The Bay Vision 2020 Commission, established in 1989 by business, civic and political representatives of the San Francisco Bay Area (Porter 1997) discussed growth issues. The result was a regional governance bill to establish a region-wide political forum with the purpose of determining future growth-related aspects towards sustainable development. A regional governance model was supposed to enhance cooperative agreements on the subject of growth aspects in the region by means of a regional commission in charge of developing a regional plan. This attempt, however, was not enacted by the state legislature, mainly due to resentments against the dominance of 'the wrong people' on a region-wide body which might lead to an undesired growth pattern—with either too much growth or too little (Lydon 2000).

A regional government was perceived as a top-down-approach, a factor which contributed to its failure, the development mirrored the movements of state growth management programs of that time. An example of state growth programs would be Oregon, which established regional planning authorities by state law.[41]

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39 As described in Chapter 5, housing affordability is one of the major land-use problems in the San Francisco Bay Area.

40 Information in this section is derived from interviews, the participation in the Association of Bay Area Governments' Smart Growth Working Group, and ABAG's website http://www.abag.ca.gov/planning/smartgrowth/.

41 Compare Chapter 2.

However the regional level was not completely avoided. At the end of the 1990s, the smart growth movement gained momentum, and activists claimed: 'The time is ripe for a 'Smart Growth' initiative in the Bay Area' (Coen; Hobson 1999). In 1999, the Partnership for Smart Growth was launched by ABAG, MTC and the Bay Area Air Quality Management District with the purpose of developing a joint strategy for the San Francisco Bay Area's future growth based on smart growth policies (Urban Land Institute 2000). Since the top-down approaches described above had failed, another path was taken in which regional planners acted as moderators of a locally-based visioning process. ABAG[42] took the leading role in developing a strategy of future development for the region of the nine San Francisco Bay Area counties. The purpose was to not only consider land use aspects, but also to provide a useful link between transportation and land use issues.

Characterizing the growth management approach

The Livability Footprint Project was based on a bottom up approach. For this reason, two series of workshops were carried out in each of the nine counties, where citizens were encouraged to act as 'planners for a day'.

The first round of workshops was held in September 2001. It focused on the search of alternative locations for future settlement (see Figure 6.3).

As a result of this collaborative exercise, three alternatives could be generated:

Alternative 1: Central cities (higher density): development is concentrated on the central cities of the valley which are San Francisco, Oakland, San Jose and the biggest city of each county.

Alternative 2: Network of Neighborhoods (moderate density): additional development in the existing communities along rail transit corridors.

Alternative 3: Smarter Suburbs (lowest density): in addition to the locations of alternatives 1 and 2, compact housing is developed along the periphery of the region.

The alternatives' maps (see Figure 6.3) display the foreseen growth patterns in the three smart growth alternatives and the current trends base case. They point out 'areas of change' in terms of infill development and construction on undeveloped or greenfield lands (ABAG 2002, 5).

Moreover, during the workshops suggestions for incentives and reforms in land use planning were collected to be implemented by cities, regional agencies and the government (state and federal).

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42 In 1961, elected officials from the region's cities and counties came together to form ABAG-California's first council of governments. ABAG is the official comprehensive planning agency for the San Francisco Bay region. Since its inception, ABAG has examined regional issues like housing, transportation, economic development, education, and the environment. In 1970, ABAG developed the Bay Area's first comprehensive regional plan.
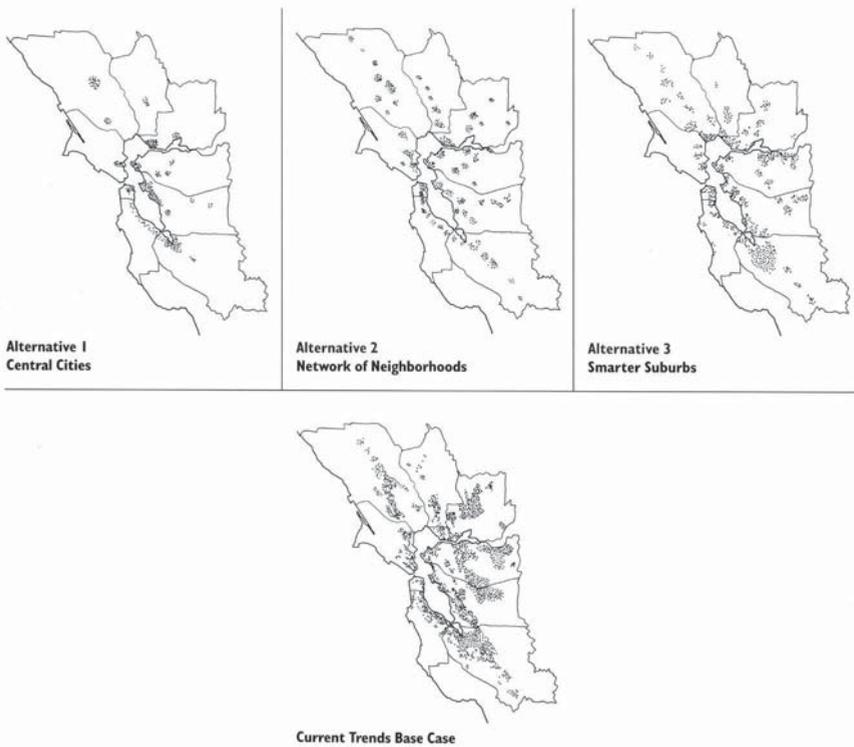
Figure 6.3   Smart Growth Alternatives
Source: Association of Bay Area Governments 2002, 5.

The second round of workshops was held during March/April 2002. Suggestions for choosing one of the alternatives mentioned above were discussed and proposals for implementation in the communities derived. Surprisingly, the citizens decided in favor of alternative 2, which represents a more compact settlement pattern than the suburban alternative 3. This can either be a sign for a raised awareness for smart growth in the San Francisco Bay Area, or it might demonstrate the participation of a large number of citizens who are supportive of smart growth.

Be that as it may, the workshops were a significant attempt to inform citizens about future developments and to involve them into regional planning practice. The outcome of the project, which is being conducted by the Association of Bay Area Governments, will be one basis for this agency's regional planning approach. This will be interlinked with measures for transportation investments coordinated by the Metropolitan Transportation Commission.

The Livability Footprint Project intends to be a vision which has to be implemented by follow-up programs. These will be communicated to citizens and relevant agencies which could offer support. Among these programs is the approach

of 'smart corridors', which was suggested during the workshops. The idea to use transit as a linear element to shape as well as implement the overall 'smart growth' policy on a city-regional scale is innovative. Existing neighborhoods as well as new transit oriented developments can be incorporated in a consistent development. The corridor program is applied in one corridor in the east Bay, the San Pablo Corridor.

Evaluation through planning practice

What are the strengths of the project?   All in all, the project is considered promising, 'a great idea' and 'a great concept' by the stakeholders involved in the interviews. There is broad agreement for the proposed smart growth principles. Concerning the implementation, it was pointed out that the idea could be successful if money and policies at state level are provided.

The outreach process initiated throughout the region was deemed one of the strengths of the project. With the Regional Livability Footprint Project, the diversity of stakeholders who were included was considered very important. For the first time, issues related to social equity, economy, and environment were discussed for the entire San Francisco Bay Area.

Another positive aspect of the project is that smart growth was transferred to the top of the political agenda. For this reason, the project gets support and attention from the state. Moreover, convincing the public of the benefits of smart growth is 'support and propaganda' for the concept itself.

Furthermore, the high quality of the process and product as well as the workshops, the management and the reports were mentioned as an advantage of the project.

What are the weaknesses of the project?   Despite the positive aspects, a large number of weaknesses were highlighted relating to the workshops, the policies and the proposed implementation process. They will be summarized in the following sections.

Workshops   Despite the positive comments concerning the outreach process, it was pointed out that 'there were too few steps involved, there was too little time, and the participants were too little prepared'.

It turned out that the planning exercise was overextending most of the participants. The content of the process was too wide, and the participants could not gather all the necessary information. For example the place types, which had been prepared as information for the workshops, were deemed too complicated for laypersons.

Moreover, an 'over-participation' by environmentalists was criticized. On the other hand, the participation by planners, builders and developers was considered inadequate. For this reason, in many cases a forum was provided for people with a NIMBY attitude.

Policies   With reference to the policies underlying the process, it was stated that the project never honestly considered slow growth. Instead, a large amount of urban

growth is foreseen. If and to what extent less growth might be achieved was not discussed sufficiently.

Moreover, it was pointed out that the jobs-housing imbalance is not handled in an effective way. This aspect in particular is considered as 'too related to the conventional thinking of planners'.

Concerning the product, the vision is perceived 'too loose to be implemented'. Moreover, the proposed policy projections cannot fulfill the multitude of demands arising from the different stakeholders.

As smart growth is widely advertised by the project, some of the negative effects such as the neighborhood impact are not mentioned explicitly. This is deemed problematic, because most citizens still do not know enough about the new smart growth ideas.

The proposed set of alternatives is considered 'suspicious looking' by some of the stakeholders on the local level. It reminded them of the familiar 'this is what you should do approach', which is often foregrounded by regional authorities.

Implementation   With respect to the implementation it was stated that the process remains largely unclear. Many participants suspect that the approach was not taken seriously by the participating city officials. In addition, a true understanding by local governments is missing. It was pointed out that the organizers of the process assume that local governments will act in favor of the policies, but this view was not deemed realistic. Their fear is that the policies would 'end up on the shelf'. Thus the continuity of the process was considered not well organized. In particular, the distribution of information after the workshops was deemed problematic.

Which opportunities can be identified?   The exchange of information initiated by the project was highlighted as an important step for smart growth in the region. Legislative proposals should follow that can rely on this established framework, since many institutions would carry them out. In particular, the interviewees pointed out that the strategy has to be seen as part of larger process, offering the chance to create consensus among San Francisco Bay Area stakeholders in growth management.

The project displays a different view of how the San Francisco Bay Area could look in the future. It is thought to set a basis for region-wide 'shining examples' of smart growth, and encourages mobilizing the potentials for future redevelopment.

Dealing with growth issues on a regional basis was considered important. This adds a regional dimension to planning. It is innovative to suggest an approach that starts at the regional level. Before, these proceedings were generally locally driven. ABAG's responsibility was to compile the development prognosis based on cities' population trends. The new policy-based projections, as they are now applied, may contain different growth projections derived from the 'Network of Neighborhoods' alternative.

An incentives-only approach would be appropriate for the implementation, but external factors remain unclear. The state of California could offer a consistent basis for incentives, e.g. with taxes, but this was considered unlikely to happen.

Which threats can be identified?   The overall project approach was considered as too theoretical, not a real world project.

In general it seems impossible to institute regionalism into the San Francisco Bay Area, as all cities have been progressing in different directions for too long. What adds to this problem is that cities view themselves as not sufficiently involved in the project. For this reason, the chances for implementation are very small.

A broad understanding exists that one single community cannot handle all the growth pressure. However, the regional scale of the nine San Francisco Bay Area Communities has its limits. As a huge amount of development is sprawling into the Central Valley, the San Francisco Bay Area should at the very least be regarded as larger than these nine counties. In 1993 Landis suggested population growth projections for the scale of a greater Bay Region, including the counties Sacramento, San Joaquin, Santa Cruz, Stanislaus, and Yolo in addition to the nine county San Francisco Bay Area (Landis 1993). However, this approach was not taken up for the Livability Footprint Project.

The Association of Bay Area Governments' capacity to implement the vision was deemed not necessarily sufficient. The policy changes require new knowledge and methodologies to deal with growth projections. This is a new approach for ABAG's departments, which might hinder the implementation phase.

Planning has always been a political process. It is hard to keep consistency as elected officials are changing frequently. During their term they are not able to keep abreast of ongoing planning and development processes. For this reason, duration was reported to be a threat for the implementation of the project. Moreover, the commitment for the implementation might vanish, as people 'get bored with smart growth'.

Requirements for Future Oriented Growth Management in the San Francisco Bay Area

The issues raised with the evaluation of growth management in planning practice show a common trend: the activities as such are not criticized or questioned, but uncertainties concerning their application create major obstacles. During the interviews and the workshop several aspects turned out to be of joint interest for a successful application of growth management in the San Francisco Bay Area. In sum, this requires the following considerations

- Regional and inter-jurisdictional cooperation in the San Francisco Bay Area and beyond.
- Coping with fragmentation of growth management activities.
- Collaboration of stakeholders in growth management.

In the spirit of building a sense of interdependence in the San Francisco Bay Area, the following paragraphs will further elaborate on these requirements. Moreover, related to the three aspects mentioned above, I propose a series of policy recommendations

which may support stakeholders in growth management in understanding how future oriented growth management could or should work.

Requirements for regional and inter-jurisdictional cooperation in the San Francisco Bay Area and beyond

As for regional collaboration, the critique of existing approaches raised by the stakeholders was overwhelming. There is uncertainty about the strategies that are necessary to balance growth between different locations within the San Francisco Bay Area and beyond.

The San Francisco Bay Area is a fragmented realm when it comes to managing growth.[43] Thus, the success of growth management depends on horizontal and vertical coordination of authorities. One has to bear in mind that state and local approaches to growth management take into consideration the geographic and political context as well as land use developments in the area they are applied in.

The citizens of the San Francisco Bay Area promote a collaborative approach in terms of growth management. Then again, a survey among stakeholders in growth management in California from 1991 documented a huge support for an active role of the state of California in growth management, while at the same time a regional governance body did not at all gain the same amount of support (Governor's Office of Planning and research. Governor's Interagency Council on Growth Management, 1991).

The role of communities and counties is considered essential in growth management. Local authorities have to be involved, as regional planning authorities do not seem to have the power to implement planning programs. However, local governments have to be motivated to participate. They must see a benefit or incentive in the regional cooperation.

The implementation of the livability footprint project is carried out by means of the corridor project. However, due to financial limitations, the corridor project appears to have been reduced to a single project in the East Bay; this does not correspond with the original regional intention. This narrow execution undermines the overall strategy and the benefits of the regional approach can be lost.

Policy recommendations on the way to regional interdependence:

- The momentum of the regional livability footprint project should be continued with a consistent application strategy.
- The existing corridors program should be developed and applied as a model policy tool, which should be carried out in areas of transportation corridors all over the Bay Area.
- Future visioning processes, facilitated by ABAG, should be initiated in all Bay Area Counties, plus the counties of the central Valley, which are affected

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43 Metcalf observes for the San Francisco Bay Area 'the Bay Area is fragmented into hundreds of district jurisdictions, most of which make unilateral land use and transportation decisions without reference to one another' (Metcalf 2003).

by the Bay Area's growth (mainly Stanislaus and San Joaquin counties). A good model for this county-based approach would be Contra Costa County's Shaping Our Future Program.

- A regional transfer of development rights program should be installed.
- A regional tax-base sharing program should be set up to fight fiscal zoning.
- Growth management should be carried out as an inter-local approach, for example by creation of networks of cities, or involving adjacent communities and county officials in general plan activities.
- It would be necessary to develop a marketing approach for a statewide growth management program, and for a region-wide understanding of growth management.
- A self-certification process should be arranged to provide communities with a tool to check if their land use developments are in accordance with regional programs. A model would be the San Diego metropolitan area.
- ABAG's role in regional development needs to be strengthened by actively taking on the task of being the initiator, facilitator of innovative and creative regional approaches.[44]
- Linkages between different planning levels (state, region, county, and city) should be provided to ensure vertical interdependence.

Requirements to cope with the fragmentation of growth management activities

The analysis showed that the set of growth management activities has been refined over the years due to many evolutionary shifts. The majority of tools are following a highly regulated and process-oriented approach. Moreover, smart growth has found its way to the Bay Area's cities and counties, offering mixed use and transit oriented solutions. In this respect, collaborative processes are considered important. According to the stakeholders, the multitude of activities allows great flexibility in their application and they can be matched to different planning situations. Still, finding the appropriate mix of activities and tailoring them to the community seems to be problematic, as this has to deal with planning failures of the past and impacts of political decisions.

Some communities can look back at a 'parade of systems', which have become more complex over time. This 'parade' reveals fragmentation, but also the need for coordination. The approaches seem to represent 'muddling through' with disconnected projects. Every city or county seems to develop activities on its own, while consistent approaches are hard to find. The input with which cities and counties have to perform is high. This 'methodology' requires a large amount of information to keep up with current trends in growth management. This is particularly difficult for smaller communities with comparably small planning departments.

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44 This does not suggest that ABAG should apply a top-down-approach to growth management, but that the agency should obtain stronger acceptance and authority driven by the incentives it would provide.

The San Francisco Bay Area's growth management activities lack an interdependent approach. Nevertheless, most of the stakeholders are satisfied with the results of growth management, although the process requires a large amount of time, commitment, and adaptations to changing demands. The stakeholders' conclusion is to keep the growth management approach simple, since growth management will not be able to solve all urban planning problems of a neighborhood, community, or county.

After all the varied experience with growth management programs, there still does not to appear an 'ideal model' for managing growth. This is in fact positive, because ideal models would not take the complex requirements of planning processes into adequate consideration. Complexity requires continuous revision and adaptation. If new tools are developed, however, their application has to be monitored carefully and compared to existing tools. Monitoring and evaluation, especially as different states and local governments learn from each other, should be more effective, so that the direct implications on land use, negative as well as positive, can be observed and communicated.

After decades of sprawling development in the San Francisco Bay Area, the decentralization of employment continues. Growth management is often only applied in terms of housing, and several mixed use projects add one or two retail facilities or a restaurant to the housing units. Many people work at remote office campuses which are not within reach of public transportation. What adds to this disconnect is that job creation is not adequately taken into consideration by planning practitioners, as it is not in their area of competency. It is primarily left to the powers within a democratic process (Metcalf, G. 2003) and to market forces. Only very few examples are considering growth management in the sphere of offices and job creation. The jobs-housing balance needs a more consistent consideration as has been pointed out by the example of Mountain View's transit zones.

Moreover, education is gaining the status of a new and highly important growth management tool. The planners' job is transformed more and more into one as an 'information broker'. It is important to use educational tools to support people's choices. For this reason, another important aspect which deserves more attention in future growth management work is developing a program for education. This initiative goes hand in hand with more visioning processes and the presentation of best practice examples to citizens, political decision makers and developers. However, the concepts and the language used by planners make it difficult for citizens to understand growth management goals.[45] Imaging technologies combined with internet use would provide the appropriate platform for envisioning tools which could be used by citizens on a continuous basis.

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[45] Ben-Joseph mentions that the techniques such as maps, charts, diagrams, computer models and simulations are better developed than ever, but few people outside the profession are able to either interpret them or imagine how such a place would look (Ben-Joseph 2002).

Policy recommendations on the way to interdependence of growth management activities:

- An interdependent framework for growth management is needed. This should not only represent a response to short-term political movements attached to ballot initiatives.
- The process of selecting growth management tools should be consensual; techniques should not just be added, but tailored to the specific needs of the community. This differs from the 'store'-metaphor introduced in chapter 3, which appears rather uncoordinated.
- Based on the San Francisco Bay Area's regional governance history, an interdependent toolset should be locally driven, but regionally facilitated, monitored and evaluated.
- The visioning process should be established on a continuous level, including monitoring and evaluation, and responding to current development issues.
- The jobs-housing balance should be tackled by incorporating office facilities into cities' growth management strategies. The city of Mountain View's transit zones could be a model for this program.
- Transit orientation should not only be considered for a small number of designated neighborhoods within a city, but also for the transformation to higher density development and the use of city-scale public transit should be applied.[46]
- Since a gap exists between the policy of transit oriented development and transit use of residents in these areas, more emphasis should be put on the incentives for citizens to use transit.
- A growth responsibilities-pool should be established related to different planning levels: region, sub-regional area, county, city, and neighborhood.
- On the level of the region, horizontal interdependence should be organized by means of region-wide tools, such as tax-base sharing, regional policies, a long range smart growth strategy, and regional visioning processes.
- On the area level, representing inter-jurisdictional problems or specific interests, area programs would be developed to deal with specific growth management and land use problems; these area programs would be comparable to the corridors program; their advantage is the flexibility to reach over administrative boundaries.
- On the county level, infrastructure-related policies should be established along with county-wide growth boundaries.
- On the city level, tools such as transit oriented development, growth boundaries, and community visioning processes should be applied.
- On the level of neighborhoods, design guidelines, density incentives, and neighborhood visioning should be carried out; this level would offer the highest level of public participation.

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46 Harms (2003) calls this approach 'spatial continuity'.

- On all the levels mentioned above, review and evaluation of growth management approaches is critical. This evaluation could be carried out periodically, or, when new strategies are tested. For this reason a set of key performance indicators should be developed that allow planners and citizens to assess how growth management functions, and whether it is successful. The performance could be measured related to the aims defined in a region-wide growth management policy.

Requirements for Collaboration of Stakeholders in Growth Management

As explored earlier in this chapter, when it comes to growth management in the San Francisco Bay Area, a large variety of interests and concerns is involved. Major problems associated with growth management arise due to weak collaboration of the many stakeholders.[47]

In this respect, smart growth is an important movement in the San Francisco Bay Area. However, the new trend is to a large extent planner-centered. Planning practitioners are struggling, as they claim to know how development should be carried out. However, the implementation is hindered by many factors beyond their control. Any acceptance by the public and by developers is still far from accomplished. Resentments towards higher density and lawsuits are common reactions arising from NIMBYs. The key is to get other stakeholders involved. In this collaboration, knowledge exchange about different expectations becomes important.

Stakeholders' responses to collaboration reveal that most planning practitioners consider it difficult to organize the involvement of citizens in a democratic way. In particular, facilitating outreach towards the groups which are not the usual suspects, but the people typically left out of the processes, remains problematic. Yet, demographic changes, issues of ethnicity and of social equity have to be taken into consideration for growth management to be successful.[48] Poverty and environmental justice, the representation of minority groups in public meetings, are all issues related to this requirement.[49] Stein pointed out in 1993 that 'physical planning has been emphasized over functional planning with the result being that important segments of our population—minorities and the poor—have been neglected' (Stein 1993). Still, proposals to make smart growth work for low-income people are deemed to lack specificity. The 'just city' requirements formulated by Fainstein (1999) are not embedded in planning practice. Her critique is still justified seven years later.

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47 Metcalf states that for the San Francisco Bay Area 'Probably the hardest problem to solve is the contradiction between our desire for a small scale democratic process and our need to solve large-scale problems' (Metcalf 2003).

48 The biggest growth in terms of population in the Bay Area is related to the Hispanic population. Most of these people live in apartment buildings, but only during transition to a single family home. This group is usually not informed about growth management processes.

49 Policy changes that are required in California to direct development towards social equity are suggested in Snyder 2001.

Policy recommendations on the way to interdependence between stakeholders

- To take on a role as moderators in collaborative growth management, planning practitioners should attempt to keep their 'tools' simple and tailored towards their realm of understanding when dealing with different stakeholder groups.
- For citizens, a better understanding and public awareness of growth management is needed. For this reason, the public should be encouraged to get involved before development starts. Environmental concerns could be leveraged as incentive for citizens to become involved in growth management activities.
- To ensure that not only 'the usual suspects' participate in visioning sessions and workshops, an active collaboration between planning departments and advocacy groups should be encouraged.
- Density incentives should be advertised to developers in favor of smart growth, but these incentives should be in line with the overall growth strategy.
- Since many best practice examples for growth management have been implemented in the San Francisco Bay Area, they should systematically be incorporated in demonstrative tools; these could be used as growth management information kits targeted to the information requirements of developers, public works departments, and citizens.
- Other city authorities should be encouraged to join the learning process about growth management and new requirements for urban development.

This chapter provided an in-depth investigation of growth management practice in the San Francisco Bay Area. Not only was the instrumental side addressed, but also a wide spectrum of interdependence in growth management. Chapter 7 will elaborate on the different notions of interdependence introduced here in a more general way and consequently draw major conclusions for this project.

Chapter 7

Conclusions

This project contributes to growth management research in three ways:

- First, the project carefully connects growth management to planning theory, in particular a typology of planning theory, and examines their relevance for planning practice.
- Second, the project evaluates growth management practice in a case study region, the San Francisco Bay Area, based on a qualitative, stakeholder-centered methodology.
- Third, the project, by examining both theoretical considerations and empirical analysis, highlights interdependence as a key factor for future-oriented growth management research.

With this last chapter, I do not intend to summarize the findings from previous sections. Instead, I will further explain the different notions of interdependence in growth management. Moreover, during the project work, additional ideas for research projects arose, which point to a research program. I will finalize the project work with a summary of these ideas, which represent an outlook where growth management research might be heading in the near future.

Conclusions with Reference to Interdependence in Growth Management

The argument of this project has been that fragmented and competing discourses in planning theory have contributed to disconnection and thus confusion in planning practice. Viewed from the perspective of growth management, analyses of planning practice in the San Francisco Bay Area clearly reveal this fragmentation of planning activities. Growth management stakeholders are overburdened by the myriad tasks necessary to complete a well-tailored set of growth management activities. Even so, interviews clearly indicate that there are no substitutes for these tasks. In addition, it can be concluded from the interviews that a growth management strategy is regarded as important, in that it links existing strands in an interdependent way, rather than giving rise to new activities.

It could be observed that interdependence addresses an array of aspects in growth management. Most of the lessons learned from Bay Area stakeholders can be related to the notions of regional interdependence, interdependence of growth management activities, and interdependence between stakeholders. The main findings concerning

interdependence will be summarized in this section, followed by conclusions regarding interdependence in planning theory.

Regional Interdependence

The regional approach to interdependence is based on the understanding that development is taking place at a scale larger than a single community. This approach has been emphasized in European growth management for many years.[1] Awareness of regional scale growth management is rising in the US as well, even as the US lags behind Europe. Metcalf observes 'the Bay Area is fragmented into hundreds of district jurisdictions, most of which make unilateral land use and transportation decisions without reference to one another' (Metcalf 2003). Bollens states with respect to growth management in the US in 1993:

> Fragmentation of growth management efforts encourages policymakers in one locality to ignore the harmful effects of their local decisions (such as environmental degradation, or increased traffic congestion) felt by individuals outside their borders. (Bollens 1993).

Hayden comes to the conclusion that as for the ongoing sprawl, 'the whole metropolitan agenda needs to be more than the sum of the parts (Hayden 2002).

There is consensus that growth management can cause negative developments for metropolitan regions when it is solely steered and applied on the local level. The interviews reveal that state and regional governments should have a stronger influence when it comes to defining local planning practice.

This approach of regional interdependence can only be achieved with the active involvement, and thus approval, of local jurisdictions. Hence, they must perceive a benefit in the participation in regional growth management efforts. This is not an easy endeavor for a fragmented realm of authorities such as the San Francisco Bay Area. To achieve success of regional programs, trust among the stakeholders must be ensured, and the benefits and responsibilities of all participants in any regional exercise of collaboration must be clarified.[2]

Interdependence of Growth Management Activities

Growth management is to a great extent a complex and fragmented endeavor. How can interdependence be achieved in future oriented approaches? Pendall recommended in his 1993 study that to speed up development approval processes, local governments

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1   For suggestions concerning future oriented growth management in Germany see Müller (1999); Einig (1999); for a characterization of the Dutch approach to growth management see Needham and Faludi (1999). Further investigations of growth management in international comparison are suggested at the end of this chapter.

2   The mode of regional cooperation in planning processes of various contexts, mainly under European planning conditions, has been object of my research in previous years (Pallagst 1995; 2000).

should not at all engage in 'rationing' development, as communities applying growth management 'impose additional complexity on an already complex process' (Pendall 1993, 28).

If the requirements of dealing with fragmentation in growth management are to be incorporated into an interdependent approach, several aspects have to be considered. First of all, the fragmented set of growth management activities and the experiences that exist in practice should be regarded as a good basis for interdependence. Moreover, a framework for growth management is needed which does not merely react to short-term political requirements, but combines future-oriented visioning, pro-active policy making, thorough implementation and in-depth evaluation. A creative as well as—admittedly—complex mix of regulative tools, incentives, design features, collaborative exercises and information should be embedded in this interdependent path.

The selection process of new activities, which are constantly evolving in growth management, should be handled with care, since techniques from the growth management 'store' cannot be added haphazardly, but rather customized to the specific planning requirements of the community, county or region, while taking their interdependence into consideration.

Interdependence between Stakeholders

According to Innes, growth management

> presents a particularly challenging task of linking knowledge and action. It requires many kinds of knowledge—from facts and predictions about growth patterns and relationships among activities, to knowledge of interests and values of players and practical understandings of how things work. The knowledge must, moreover, help to change the behavior of a wide variety of players. The task is particularly problematic because the issues at stake—property rights, land use control, quality of life—have important symbolic and emotional meanings in the U.S. (Innes 1991b, 16).

American citizens are ambivalent towards higher density and the quality of an urban lifestyle, even with short paths and transit orientation. Citizen acceptance of these goals is not guaranteed. The planning practitioners have to engage in pro-active approaches which do not intend to override citizens' or developers' concerns about the type, mode and location of development. Pendall's description of the situation in 1993 sounds like the description of a battlefield: 'City councils and planning commissioners … must not bow to unreasonable pressures from neighbors to cut back project size or kill affordability, or to short-sighted attempts by builders to reduce the density of sites zoned for higher-density development' (Pendall 1993). Today, however, planning practitioners can no longer afford to rely solely on what is perceived as expert knowledge, since the public no longer grants experts the same level of legitimacy.[3]

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3   See Chapter 3 on the changing role of planners and the legitimacy-issue.

Interdependence among stakeholders also intends to bring a broad range of people together in a joint learning process to achieve consensus on the growth management activities to be applied. This appears to be difficult when the system is strongly based on a bottom-up approach, as it is the case for the Bay Area. Carefully conducted visioning processes to simultaneously develop and promote growth management objectives could be an auspicious start for policy-making. However, the stakeholders should be aware that in creating a vision, that they are making choices which likely preclude other choices. Local jurisdictions cannot expand development at the urban fringe and at the same time protect open space. Silberstein and Maser (2000) call this 'trading freedoms'.

A diverse spectrum of citizens should be involved in planning exercises at all stages to achieve broad consensus. Emphasis should be placed on engaging representatives of all relevant groups of the community, not only the 'usual suspects' to sustain the requirements of social equity.

When asking who should be in charge of interdependence in growth management, the capability of planners and their expertise has to be questioned. In my opinion, planners have to accept a complicated dual role. They should not only act as moderators in the planning process, but also apply their specific skills and knowledge. The latter should be shared actively with all other stakeholders in growth management. In every growth management program, open-mindedness and democracy must be informed by a broad range of skills and knowledge from technical skills to people skills to knowing about legitimacy and ethical values. This knowledge would assuredly require modifications of planning education.

Planning in the US has the tradition of relying on public participation and information. Citizens have a wide interest in the quality of life and the appearance of their neighborhood and urban environment. While today this is expressed by a NIMBY attitude, with enhanced interdependence of stakeholders, a change towards a YIMBY[4] attitude might be possible.

Interdependence in Planning Theory

My analysis reveals that growth management has previously been discussed with strong emphasis on planning practice, yet without thorough discussion of theoretical references. On the other hand, with planning theory, the discourse about the challenges for planning has to incorporate growing complexity, in particular the interaction of different competing paradigms.[5] Consequently, this disconnection typifies today's postmodern situation in planning. The simplicity of rationalist planning has vanished. In current growth management, rational planning is no longer sufficient—there must be consideration of the whole 'store' of planning. This cannot be a reactive endeavor, but it should take on the challenges of complexity and define areas and modes that planning practice should engage in.

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4   See Chapter 2.
5   Compare Chapters 1, 2 and 3.

As we learned, planning practitioners do not have the time or the resources to take on this task. Then again, planning practice needs input for a new interdependent approach that integrates successive evaluations and adaptations to change. This approach should be a joint endeavor between research, local and regional jurisdictions and a broad range of further stakeholders. Practice oriented research should provide the necessary basis for developing measures and indicators, and display best practice examples. On this basis, local authorities should be enabled to apply indicators and measures for their specific situation in order to be able to implement evaluation and monitoring procedures in their planning routines. The performance could be measured according to aims defined in a regional growth management policy approved by local jurisdictions. Monitoring of land expansion with GIS should play a part in this approach.

Planning theory has a history of discussing the legitimacy and changing demands of the role of the planner.[6] This inspired me to take a closer look at the way these people carry out their day-to-day work, and the way they intend to interact with other stakeholders in the San Francisco Bay Area. In this regard, I noted that none of them considers their work that of a technical expert, although many of them have to apply procedural toolset and expert skills. They struggle with both growing complexity and bridging instrumental gaps, often caused by the disconnect between approaches and methods which have been generated by different theories.

Moreover, it becomes apparent that the struggle with power in the planning process, which pretends to be democratic, remains unsolved. This conundrum reflects the situation of a postmodern era in planning. In this respect, some growth management promoters call for a regeneration of the planners' technical skills. Metcalf claims in this regard:

> Perhaps we need to create cultural change that revalues technical expertise and invites experts to inform the debate, even if we do not empower them to be the ultimate decision makers (Metcalf 2003).

In my opinion, this solution is not sufficient; the planning process must also demand a style of planning which is not reactive, accept the challenges of development, and define new modes of development.

Planning theory should try to develop solutions or models for this proposed interdependent approach. Planning practice requires these solutions/models. Yet planning theory does not appear to be poised to fulfill these demands. Instead of focusing on one strand of theory, planning theory should see value in exploration of the linkages and overlapping of different theoretical movements, and not merely extend a classification. However, the need to handle the different paradigms in practice remains, and planning practitioners are left to cope with it unassisted. Whether planning theory is ready to develop a toolset or 'store' useful for planning practice is unclear, but more attempts in this regard are clearly desirable.

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6   See Chapter 3.

Further Considerations for Growth Management Research

Based on the project work outlined in the previous chapters, my future considerations for research focus on further analyzing growth management and its application. The research considerations center on an analytical framework for growth management as a tool for controlling land use expansion in the US. The San Francisco Bay Area, in comparison to other metropolitan regions in the US and in Europe, will be the main scope of the investigations.

A short term (4-year) project structure would be developed, which will take on current aspects of growth management research. Depending on the given time and resources, these projects would be elaborated parallel to each other or in sequence.

The project structure would be based on the following objectives:

1. Evaluating the role of governance, the environment, and education and information in growth management.
2. Analyzing the different growth management activities in use in international comparison, and their advantages and disadvantages with special focus on usability in practice.
3. Defining requirements for interdependent approaches to restrict land use expansion with regard to changing planning conditions.

The following paragraphs will describe these points in more detail.

Governance Processes in Growth Management

As land use control in the US is dedicated to the states, national input on growth management is almost nonexistent. However, the degree of state control in growth management varies to a wide extent.

According to DeGrove and Metzger (1993) 'successful growth management also requires coordination among local governments (horizontal consistency) and between state and regional agencies and local governments (vertical consistency)'. This coordination is promoted in states with a state-wide growth management system. All stakeholders should be brought together to achieve consensus on the growth management instruments to be used. Achieving consensus is no small task when the system is strongly based on a bottom-up approach, as is the case in California.

Moreover, administrative boundaries of cities, counties, or regions do not necessarily represent planning concerns that support growth management. These overlapping boundaries necessitate implementation of a regional interdependence approach. As development is sprawling into the Central Valley,[7] a greater Bay Area region should be considered. Also the task of managing the jobs-housing-balance should be a regional issue, as urbanization extends beyond city boundaries.

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7   See Chapter 5.

There is continuing uncertainty about the strategies that are necessary to balance growth between different locations within the Bay Area and beyond. The regional scope of growth management makes clear that inter-jurisdictional and regional cooperation as well as collaborative planning are necessary.

With this project, governance structures, networks and relations of actors in growth management would be analyzed in the San Francisco Bay Area and beyond its 9 counties, as well as the potential for collaboration on a regional scale to enhance cooperative initiatives. This analysis would use a regional frame to look beyond political boundaries. To achieve this, a tool is needed that is not based on a top-down-approach. Moreover, on the local level, a better understanding and public awareness of growth management strategies is needed. In this regard collaborative initiatives like the ones developed by ABAG, Contra Costa County or San Mateo County should be examined for their potential for a growth management approach of other cities, counties or areas.[8]

Environmental Aspects in Urban and Regional Planning Processes with Special Emphasis on the Implementation of Growth Management

Since the 1960s ecological consciousness has been growing in the USA. In this regard, coastal protection—based on state law and implemented on county level— was the starting point for growth management in the San Francisco Bay Area (Marin County, San Mateo County). For this reason, mountain ranges or coastal areas were surrounded by permanent growth boundaries at an early stage.

It could be assumed that growth management is to a greater extent a tool of environmental planning than of city and regional planning, and that its primary focus lies on environmental concerns. However, the interviews and analyses I conducted in the San Francisco Bay Area reveal that—despite the fact that there is some influence on growth strategies—in general environmental concerns do not centrally determine growth management.

From the point of view of the public sector, the main argument to limit growth lies in the cost of maintenance and construction of infrastructure. The capacities of the communities' existing water and sewer systems are limited, yet growth of cities is dependent on this basic infrastructure. The same aspects occur in the field of transport infrastructure. The maintenance, as well as the extension, of these services greatly challenge a community's resources. The 'limits of growth' become obvious and require communities to find new solutions for handling growth and growth related problems.

Citizens are concerned with changes going hand in hand with new development and increasing numbers of residents in their community or neighborhood. These raise safety issues, create traffic congestion, lead to a loss of farms and of agricultural land, thereby transforming a community from rural area to suburban enclave.[9]

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8   See Chapter 6.
9   This became obvious in the interviews, as revealed in Chapter 6.

For citizens, a perceived loss of open space is often the motivation to initiate growth management, but 'keeping it green' is often an alibi for preventing poorer people from moving into a neighborhood. Environmental concerns are to a great extent focused on areas directly adjacent to urban areas, not open space in general.

For this reason, the role of environmental aspects in growth management activities should be investigated. Questions that would specifically be addressed in this regard are:

1. In what way are environmental aspects embedded in growth management strategies from the policy level (the formulating of objectives) to the application process level?
2. How is their relevance compared to other aspects (for example financial aspects, social equity aspects)?
3. Which aspects are of highest priority when it comes to implementing growth management, and have these priorities changed over time (land use, water, air, climate, quality of life)?
4. How do different stakeholders in growth management (planners, citizens, developers, NGOs) evaluate environmental issues? What are their motivations either to promote or hinder the provision for environmental factors?

Appropriate case studies for the project would be the following (others would be specified additionally):

- The city of San José implemented the Urban Green line as an innovative urban growth boundary and developed several neighborhoods near transit stations along the Tasman and Guadalupe lightrail lines.
- The city of Mountain View conceptualized a transit-oriented approach with the award-winning examples 'The Crossings' and 'Whisman Station'.
- The Association of Bay Area Governments is in the phase of implementing its Smart Growth Livable Footprint Project, (e.g. Smart Corridors Project).

Developing Educational and Information Tools for Applying Growth Management and Land Use Development Processes

Education is gaining the status of a new and highly important growth management tool. For example, planning departments in the city of San José are dedicating a great amount of time to touring cities with neighborhood groups to look at developments of higher density and holding workshops. Thus the planners' job is slowly transformed into one of 'information broker'.

It is important to use educational tools to support people's choices. However, the stakeholder groups and their concerns are diverse. Many decision makers take part in applying growth management instruments, but their interrelation does not function well. Density concerns of citizens remain problematic. Citizens are likely to establish a boundary to prevent their community from outward growth, but changes

inside the boundary, especially when related to higher density, are not well accepted. Almost all the stakeholders interviewed during my project in the Bay Area reported experiences with this NIMBY-attitude. Despite the fact that some exceptions exist, most developers are still not convinced of the benefits of infill or mixed use.

Consequently, an important aspect deserving more attention in future growth management work is elaboration of a tool kit for education. This kit is central to initiating and conducting visioning processes, and the presentation of good examples to various stakeholders like citizens, political decision makers and developers.

For this investigation, best practice examples in the US would be selected. Experiences of cities in the San Francisco Bay Area would be included. Application processes with different educational programs would be reviewed and, where possible, monitored. On this basis, criteria for a program of education would be developed.

Growth Management Strategies in the US and in European Countries in Comparison

This project would analyze the experiences with implementing growth management activities and their advantages and disadvantages from the perspective of international comparative research. Ten to twelve case studies and best practice examples from different US states and selected European countries would be presented and compared. Case studies from different time frames within growth management would be selected ('old' examples and new ones). Moreover, the case studies would be related to different planning levels (urban and regional).

The following US states and European countries would be of interest due to their growth management experiences, or different planning traditions:

- US: California, Maryland, Oregon, Florida, Hawaii, New Jersey
- Europe: Germany, the Netherlands, France, United Kingdom, Italy, Czech Republic

These research considerations are embedded in the long-term research question to which I am dedicating my professional work: With enhanced cooperation and exchange of knowledge, will planning systems of different countries merge?

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