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Evergreen issues of planning? Learning from history for sustainable urban-rural systems landscapes

Madeleine Granvik and Per Hedfors

Abstract

Contemporary planning for sustainable development has a main focus on sustainable urban areas. This paper highlights a systemic approach as well as integrated and contextual knowledge in spatial planning. Significant theorists within urban planning, landscape architecture and other related fields are faced with a search for knowledge that accommodates the development of sustainable societies. Our historical selected data (Sitte, Howard, Geddes, Migge, Mumford, and McHarg) was analysed in relation to the contemporary UN policy document The Habitat Agenda and the French architectural theorist Françoise Choay's theory on urban design and critical planning. We identify several issues that could be considered as fundamental and discuss their potential role in current spatial planning in a Scandinavian context. The results are discussed in relation to theory and current planning trends. The main contribution of the study is a tentative theoretical framework that supports urban-rural interaction in spatial planning, titled The Sustainability Approach. This framework is also suggested as a natural evolution of Choay's planning models.

Keywords: *contextual knowledge, landscape planning, planning theory, sustainability approach, urban-rural interaction*

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1. Departure: The Fragmented View in Modern Planning

The urbanisation process can be seen throughout the world and across different scales. One reaction to this course is a worry for how to establish sustainable urban development – probably mankind’s most complex and challenging problem, one that must be continually reassessed. The human community struggles to deal with change. In recent times, climate change has been pointed to as a clear example. Human societies seek greater control over change, aiming for a more structured and planned type of change that we can call ‘development.’

Sustainable development in political contexts is often considered as ecological, economic and social matters discussed all together (UNCHS, 1998; UNCED, 1993; Government paper 2001/02:172). The idea of sustainable development has come to be central in urban and spatial planning today. Planning is a broad field where theory, practice and policy meet. Planning requires competence from several fields of knowledge, especially when taking a sustainable development perspective, which requires the management of complex situations. Knowledge on the border between practice and science deserves to be brought forward, and interdisciplinary approaches should be found, as no single discipline can embrace it all. This paper is based on historical examples from scholars of different disciplines. It has become accepted in academia that multi- and interdisciplinary research and knowledge contributes both to the understanding of sustainable development and the means to approach it (e.g. Alexander et al., 1977; Roseland, 2005; Berg, 2004; Wlodarczyk, 2007). Different fields of planning, like spatial and landscape planning and urban design, can be seen as interdisciplinary within themselves (Hedfors & Granvik, 2008). These are fields dealing with problem-based planning that requires relevant knowledge from a variety of disciplines. Partly, these fields of problem management use knowledge from other disciplines and combine those consciously in an eclectic manner.

Multi- and interdisciplinary settings of planning are used to invite all knowledge that possibly can contribute to the understanding and shaping of sustainable urban developments. Multidisciplinary indicates that many disciplines contribute with valuable knowledge, while interdisciplinary additionally points out that the disciplines involved are bridging: they are generating integrated knowledge, which merges into something new. Transdisciplinary indicates cooperation between disciplines and society. Multi-, inter- and especially transdisciplinary settings are desired characteristics of participatory planning (Nowotny, 2004; Hedfors and Granvik, 2008). Collaborative learning processes based on the mutual exchange of ideas and sharing of knowledge through case studies and practical problem management are typical for advantageous spatial planning and urban design (Healey, 2006; Forester, 1999; Hallsmith, 2003). However, such situations are rarely accomplished due to various reasons, such as science and practical planning having different paradigms. Furthermore, most scientific activities are performed traditionally within their respective academic disciplines and lack these types

of practical experiences. Thus, pure interdisciplinary approaches will hardly develop in traditional academic milieus in the social sciences, natural sciences or humanities. However, fields like spatial planning, urban design, architecture, landscape planning, and landscape architecture are eclectic and welcome multi-, inter- and transdisciplinary approaches.

The sustainable development of urban and rural landscapes presupposes processes of change within a number of areas and touches both general structures in society as well as specific local conditions. Each specific place has different prerequisites which also mean that each place has to be understood as being unique: urban, peri-urban as well as rural. This approach is stressed in e.g. the UN Habitat Agenda (UNCHS, 1998) which discusses different aspects of habitation stemming from the idea of sustainable development.

We suggest that the site within its specific context is central as a starting point in the discussion of sustainable development. This statement has support from other researchers (see in e.g. Granvik, 2005; Davidson, 1996; Næss, 2001) and means that a more sustainable development could be achieved if planning is based on locally adapted solutions rather than an implementation of universal planning models. Contextual knowledge does correspond to the tradition of context-dependent planning which belongs to a place paradigm (Wahlström, 1984). This way of looking at planning can, for instance, be deduced from the works of Patrick Geddes. He recommends carrying out a holistic inventory and analysis of a particular area before starting the actual planning process: Survey-Analysis-Design (S A D) (Geddes, 1915; 1918; Bjur et al., 1983).

In this paper, planning ideas of some previous significant theorists within urban planning, landscape architecture and related fields, are consulted in the development of knowledge for sustainable landscapes. We suggest that their ideas, characterised by a systems approach, can be used in current planning to avoid fragmented perspectives and sector planning. Our theoretical approach is in the history of urban planning, landscape architecture, systems theory and resilience theory. It is developed and discussed in terms of a suggested framework for contemporary spatial planning. The intention is to critically discuss today's rather narrow perspective mainly focusing on urbanity and on terms like 'city planning' and 'urban planning', and instead stress a wider perspective through a systems approach incorporating larger scales. Further on, we suggest that this approach is suitable as a development of the French architectural theorist Françoise Choay's theory (1969) on urban design and her idea of critical planning. She uses several of the same historical references in her analysis that are in focus in this study. The question in this study is: What can be learned from planning theorists in modern history in the perspective of current planning trends and policies, and in developing a theoretical framework to support sustainable rural-urban systems landscapes?

2. Historical perspectives of spatial planning

Choay (1969) introduces the concept critical planning as a criticism of the downsides of the early industrial society. Critical planning denoted new management tools for urban planning of that time, which were characterised by great complexity and based on new ideas about society and the city as an object. Her categorisation of urban designs in regularism, culturalism, and progressism, aims at various forms and stages of urban development that was consciously related to the evolving capitalist industrial society (Figure 1). Regularism is one model that she introduces, which is described as a search for order that is based on the existing conditions at a site. She refers, for example, to the landscape architect Frederick Law Olmsted and his approach to city building as sensitive to the existing landscape. When pre-urbanism developed into urbanism, town planning developed from being a manifestation of overall societal development to mainly focusing on the physical design of society. Choay uses the term urbanism to designate an urban design freed from the landscape and starting from a blank sheet, in contrast to regularism. Culturalism developed from an intellectual tradition regarding the concept of culture which was frequently in use in England in the early 1800s. It criticised the industrialised society compared to the pre-industrial society. The pre-industrial city, with its limited size and its individualised environments, was the basis for the urban planning ideas of culturalism. Culturalism and progressism are, according to Choay, two versions of urbanism, and progressism is later transferred into functionalism. Progressism is characterised by rationality, analyses, and the desire for the hygienic city. The city was divided into districts having specific functions. Efficient cities were pursued (Figure 1).

Period	Development model	Legitimacy
pre-industrial	pre-stage	overall development of society
pre-urban	Regularism	
urban	Culturalism Progressism	physical design of society

In accordance with Choay’s analysis, we engage with a few significant planning theorists within several disciplines referred to in this study. Our interest is in their different backgrounds, approaches and ideas in relation to present trends and policies of sustainable development. This section is a brief presentation of the main ideas and statements of six European and American planning theorists from the 19th and 20th centuries: Camillo Sitte, Ebenezer Howard, Leberecht Migge, Patrick Geddes, Lewis Mumford, and Ian McHarg.

Figure 1. Regularism, culturalism and progressism are categories of urban development models characterising critical planning, according to Choay (1969). The latter two are counted as urbanism, which evolved into physical (as opposed to social) methods of design.

The motives for selecting these planning theorists were based on the following:

- they are well known and have significantly influenced the discourse of urban and rural development in the time period as they were active,
- they belong to different disciplines: architecture (Sitte), town planning (Howard), biology and sociology (Geddes), garden architecture (Migge), sociology (Mumford), and landscape architecture (McHarg),
- they developed ideas in spatial planning regarding the site and its natural processes, and thereby in one way or another criticised their contemporary society,
- the selection is limited to Europe and America, which are the regions that significantly influenced our part of the world, Scandinavia, during their active period of time.

As Choay developed categories of models for urban development, she also referred to some theorists as advocates for each category (1969). The selected theorists in this paper belong mainly to what she characterises as culturalism. The reason is that culturalism, together with regularism, has clear connections to the existing landscape as one basis for a discussion about urban-rural interplay, while progressivism tends to neglect existing landscape values and underpins globalisation.

Below is a presentation of each of the theoretician's planning approach. Furthermore, their planning ideals are analysed in relation to the contemporary global policy document "The Habitat Agenda", which stresses seven aspects of sustainable habitation (Physical, Economic, Biological, Organisational, Social, Cultural and Aesthetical) (UNCHS, 1998; Berg et al. 2010). It is necessary to stress that the analyses does not claim to be detailed, instead focusing on the main concepts that were influential for each theoretician's planning ideas. Each presentation ends with a simple table showing the connections to the Habitat Agenda. The seven aspects imply a high degree of complexity, and they interact and overlap to some extent. In the tables below, physical (P) and biological (B) aspects are considered together in terms of biotic and abiotic factors of physical space, which are seen as interrelated and which constitute ecosystems.

'Genius loci' as the driving concept

Camillo Sitte, 1843-1903, was born in Austria, trained as an architect and worked within urban planning. Sitte put emphasis on the need for an artistic approach to urban planning. He based his ideas on how people perceive urban space, focusing on how space affects people's moods and senses. In his opinion, people would be strengthened by living in beautiful surroundings with green-blue elements and thus would find it easier to face the difficulties and misfortunes in life. Sitte wanted to

capture the soul of the place, *Genius loci*, and wanted to stress the need of place identity. He was critical towards the consequences of industrial development, as he believed that such development impoverished and destroyed cities. Many cities were built in right angle systems by engineers who, according to Sitte, were not interested in arts and design but looked upon urban planning mainly as a technical issue. He wanted artefacts to be designed according to how they were presumed to be experienced from specific places (Sitte, 1982; Table 1).

Sitte	
Physical/ Biological	Greenery and water are key elements in the design of the city to achieve aesthetic values
Economic	States that the aesthetic should be equal to economic and other planning factors
Organisational	Critical to the new engineering-oriented city planners who advocated grid systems Start with the given natural conditions in urban planning
Social	Through aesthetically-oriented design well-being increases and thus strengthens social values
Cultural	Preserving tradition and buildings in order to understand the passage of time in the city
Aesthetical	The design of the city in an aesthetically pleasing manner is of paramount importance

Table 1. Central mind-sets of Camillo Sitte are presented in relation to seven aspects – physical/biological, economic, organisational, social, cultural and aesthetical - of sustainable habitation discussed in the *Habitat Agenda*. The central mind-sets are interpreted from the referred literature presented above

Theory of the garden city

Ebenezer Howard, 1850-1928, was a British town planner working in London during the end of the 19th century. Like Camillo Sitte, he was critical of the consequences of industrialisation. According to his planning ideas, the countryside and the city should be seen as a whole and thus should be united. The idea of the garden city became his lifetime achievement. The concept was built upon the idea that the land was owned by society. His vision was that the garden cities could be built close to each other and be connected by roads and railways and other infrastructures. Each garden city should be planned for 30 000 inhabitants with separate houses and gardens in zones for habitation, industry and trade. The area would be surrounded by an agricultural community with 2 000 inhabitants in the neighbouring countryside. It was important in the planning and design process that people from several different professions worked together to make the result as good as possible. When constructing new buildings, these had to blend well into the surrounding architecture (Howard, 1946; Table 2).

Howard	
Physical/ Biological	Balance in the cultivation of agricultural land, all the nutrients back to the soil
Economic	Advocates common ownership. Everyone should own the streets, public buildings and technical systems
Organisational	Rejects much of the previous planning ideals. Garden City should be autonomous, independent from the state. Initiative of the residents is important in planning
Social	The social structures were to build community residents were central in the work
Cultural	The surroundings of the garden city would be a varied cultural landscape
Aesthetical	Greenery as a huge source of experiences of the beautiful

Table 2. Central mind-sets of Ebenezer Howard are presented in relation to seven aspects - physical/biological, economic, organisational, social, cultural and aesthetical - of sustainable habitation discussed in the Habitat Agenda. The central mind-sets are interpreted from the literature presented above

Ideas of site analysis, civics and collaborative planning

Patrick Geddes, 1854-1932, was a Scottish planner, educated in sociology and biology. He was the first British man to call himself a landscape architect. In the beginning of the 20th century, he developed an alternative planning method where 'integration' was the keyword. He meant that matters of history, geography, technique, social issues and arts were related to each other. He recommended carrying out holistic inventory and analysis - a so called S-A-D, Survey-Analysis-Design - of a particular area before starting the actual planning process (Bjur et al., 1983). Furthermore, he meant that urban planning could not be carried out in a top-down process, according to general principles, which can be learnt in one place and imitated in another (Geddes, 1915). He suggested that the unique character of each location should be highlighted, and issues would be discussed as they arose. He saw knowledge about citizenship, 'civics', as an applied form of concrete sociology. Geddes advocated a new way of thinking that would lead to a new way of acting, through collaboration. Geddes' strong belief in the power of how the human being is shaped and characterised by the landscape have been criticised by sociologists.

Geddes	
Physical/ Biological	Advocates nature conservation. He is also strongly opposed to pollution
Economic	Advocates regional economy as the truly democratic unit of sociability
Organisational	No universal panaceas in urban planning. Planning should be based on the local context. Each site has specific conditions
Social	Social processes and spatial form are related
Cultural	People are strongly influenced by their environment and thereby develop different lifestyles. The rise of cities in a historical perspective is about the degree of integration between lifestyles
Aesthetical	Promoting the happiness, health and comfort of all residents, rather than focusing on roads and parks available only to the rich

Table 3. Central mind-sets of Patrick Geddes are presented in relation to seven aspects - physical/biological, economic, organisational, social, cultural and aesthetical - of sustainable habitation discussed in the Habitat Agenda. The central mind-sets are interpreted from the referred literature presented above.

Ideas of individual creativity and recycling

Leberecht Migge, 1881-1935, was working in Germany as a garden architect. Migge was a strong proponent of a recycling society. He was strongly critical of the institutions within society, as he believed that they did not consider the prerequisites of people's everyday lives. He was against the construction of waste water systems, as all waste instead should be returned to agriculture, according to him. He also disliked water closets which, in his opinion, were a waste of clean water. He advocated small-scale farming techniques, and promoted self-construction, self-sufficiency, individual creativity and gardening to produce beauty and quality of life. He wanted to work for the large number of poor in society to improve their living conditions by creating gardens where cultivation could be carried out. Cultivation was seen as the key to a better life of a large number of people, as a means of survival, to improve general health, and to create experiences of beauty. Another argument was the importance of being self-sustained in the shadow of WWI. Having this view, land use planning became central; buildings and other constructions for services and communication were only seen as means to attain the goal of an extensive agricultural landscape (Jarlöv, 1996; Table 4).

Migge	
Physical/Biological	Recycling, soil, sun, water, fresh air and cultivation
Economic	Advocates self-construction and expansion as each could afford
Organisational	Cooperatives and community facilities in housing estates with tenant gardens, school gardens, lease parcels and professional agriculture
Social	Important that people feel that they belong to a whole and work with both body and mind
Cultural	The idea of The Garden Culture is about the socialisation of urban green space, of transforming the city into an autonomous entity without exploiting the surrounding countryside
Aesthetical	Social functions as major principles for design

Table 4. Central mind-sets of Leberecht Migge are presented in relation to seven aspects – physical/biological, economic, organisational, social, cultural and aesthetical - of sustainable habitation discussed in the *Habitat Agenda*. The central mind-sets are interpreted from the referred literature presented above.

Theoretical approaches to local communities

Lewis Mumford, 1895-1990, was a successful sociologist active in the US. He was a writer rather than a professional architect or planner (Wheeler & Beatly, 2009). Mumford was critical of the social consequences of industrialisation. He wanted to defeat alienation, rootlessness and casual acquaintances between the citizens by decentralising the city into smaller units; neighbourhoods. His book *The Culture of Cities* from 1938 became well known also outside US e.g. throughout Europe. Mumford contended that the more money that was put into a city, for example in magnificent buildings and technical systems, the more difficult it was to be flexible and make room for renewal. This attitude probably also arose from his view regarding technical development occurring at the expense of people's other basic needs. He wanted to put human beings in the centre rather than devices or machines. He thought that a majority of the inhabitants' social and individual needs could not be satisfied by the market, since the market norm is to satisfy profits above other interests (Mumford, 1942; Table 5).

Mumford	
Physical/ Biological	Sunlight, clean water and fresh air are human rights Mankind part of the cycle
Economic	Critical to the development: power and money man's highest goal
Organisational	Neighbourhood idea of proximity to service functions
Social	The Community of the utmost importance. All the technology and urban planning to promote social contact and interaction
Cultural	Learning from the Middle Ages that took more account of human needs
Aesthetical	Greenery is vital to human well-being

Table 5. Central mind-sets of Lewis Mumford are presented in relation to seven aspects – physical/biological, economic, organisational, social, cultural and aesthetical - of sustainable habitation discussed in the Habitat Agenda. The central mind-sets are interpreted from the referred literature presented above.

Methods for designing with nature

Ian McHarg, 1921-2001, was a Scottish landscape architect active in the US. In the mid-twentieth century, he developed an approach to planning which considered existing values in the landscape. He further developed these methods for landscape analysis as a prerequisite for landscape and urban planning as well as for landscape and urban design. His book *Design with Nature* from 1969 became widely read and served as a handbook in professional planning projects. His methodology is compared and related to Patrick Geddes' works and considered as an evolution of the same line of thought (Spirn, 2000). McHarg heard the environmental alarm sounded by Rachel Carson and others, and brought it home to the design and planning professions. As a theorist, McHarg is part of a tradition of environmental thinking that relates human progress to the quality of its environments, one that begins with Georg Perkins Marsh, Aldo Leopold and Lewis Mumford (Yaro, 1998). One of his premises is: "that the shaping of land for human use ought to be based on an understanding of natural process." McHarg's work has had a profound effect on the theory and practice of city planning and city building (Table 6).

McHarg	
Physical/ Biological	Methods to reintegrate nature with the city; water, soil, vegetation and resources that could be used for agriculture, forestry, mining etc
Economic	Using of basic data of the economic situation within regional planning
Organisational	Advocates systematic landscape analysis to observe the existing values and precede city development to avoid seemingly random expansion. Precursor of modern computer-based GIS
Social	Philosophy and methodology for taking ecological considerations in the context of city growth. Social aspects were part of basic data
Cultural	Cultural aspects and historical values were part of basic data in the methodology of landscape analysis
Aesthetical	Recreational aspects were part of basic data in the methodology

Table 6. Central mind-sets of Ian McHarg are presented in relation to seven aspects – physical/biological, economic, organisational, social, cultural and aesthetical - of sustainable habitation discussed in the Habitat Agenda. The central mind-sets are interpreted from the referred literature presented above.

Synthesis of their ideas

Our interpretation of the respective theorists' planning ideals are summarised into a few key contributions in Table 7. In spite of their different backgrounds and active time periods, some similar standing points, either among all or some of them, can be found in their planning ideas. We summarise their recurring perspectives as:

- The site and its natural processes,
- Systemic view in planning,
- The need for urban-rural interactions,
- Context-based planning,
- Human well-being, community and participation, and
- Scepticism towards the effects of industrialisation.

	Sitte	Howard	Gedde	Migge	Mumford	McHarg
Key contribution to urban-rural planning	Art and aesthetics in experience of urban space	Garden City as a model for urban-rural interaction	Contextual and holistic perspective of local areas and the role of civics	Recycling and self-creation	Decentralization of cities and community and collaboration	Design-with-Nature and landscape analysis

Table 7. The table presents the most central statements and mind-sets for each of the six planning theorists.

Analysing their mind-sets in relation to the Habitat Agenda raises several issues on timelessness such as: Design-with-Nature, landscape analysis, contextual and systemic perspective of local areas, recycling and self-creation, urban-rural interaction, community and collaboration, and experience of different landscapes from an aesthetic point of view. These issues mediated by the intellectual traditions developed from the industrialisation and forward are as important today as then.

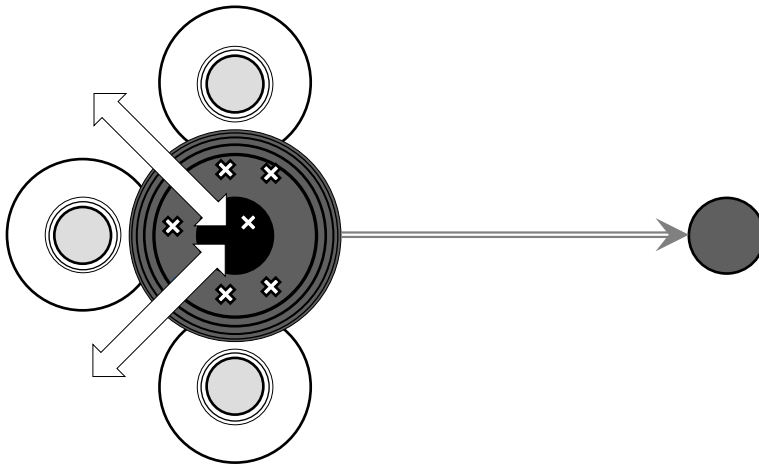
3. From past to present – assembling views for the future

The last decades of urbanisation globally have led to several trends related to spatial planning today, such as urban growth, densification, uncontrolled sprawl and an on-going discussion about urban-rural interaction. Urban expansion areas have, historically, often been at the expense of nature (e.g. Campbell, 1996) and have broken the previous strong links between urban and rural areas (Haughton, 1997). The current discourse on sustainable urban development in Europe concerns, to a great extent, the densification of urban populations (UN Habitat, 2012; Gehl, 2010; Gaffron, 2008; Thwaites et al., 2007; Roseland, 2005; Hallsmith, 2003). Proponents for this stance argue that densification can counter urban sprawl and urban neighbourhoods, reduce car traffic and promote public transport, biking and walking – thereby reducing the environmental impact of transportation. Densification of the population is also presumed to provide a better economic basis for municipal services. The effects of this kind of densification have, however, seldom

been evaluated (Berg et al. 2012). Additionally, the densification doctrine has also contributed to the focus given to cities and other highly agglomerated areas in the sustainable development discourse. Thus, the sustainable society is being studied mainly from an urban point of view—sustainable cities, eco-cities, sustainable urban development – a perspective which is often separated from discussions about development in rural areas, farmlands and forests.

Since the first urban settlements, rural functions were considered a compulsory urban function (Sinclair, et al., 2010; Hyams, 1976). The historic urban and rural interactions and flows –people, energy, food, ideas and inventions were co-evolving until the beginning of the 1930s in central Europe and until the 1950s in the Nordic countries (Berg and Rydén, 2012; Saifi and Drake, 2007). Planning for urban-rural interactions has not been in focus since a half-century ago. Thus, cities are supported with food, natural resources and energy mainly from the global market rather than from the immediate surroundings. So far, in a short-term perspective, it has been beneficial to geographically separate production from consumption (Kahiluoto et al., 2006; Khaliliet al., 1997).

However, environmental crises, global change (Steffen et al, 2004) and resource crises e.g. peak oil (Alekkett, 2008) claim a new era on how to organise and plan urban and rural areas. The need for a radical revision of urban and rural systems has been stressed. The development of local flows and systems, so called (re-) localisation processes concerning for instance energy and food (Granvik; 2012), is a topical issue in planning of today, as well as the development of landscape analysis, place analysis, dematerialising production, creating strong local communities, and changing lifestyles (Itoh, 2003; Gaffron & Huismans, 2005; 2008; Frame & Brown, 2007). Urban-rural interactions - rurban areas - have again become an issue of current and growing interest among scholars and in planning practise (e.g. Seitzinger et al., 2012, Sieverts, 2003; Berg et al., 2013). The Swedish Government Strategy for Rural Growth (Swedish Government Paper, 2009), the Swedish Government Budget bill (2011), regulation of the European Parliament on support for rural development (REGULATION (EU) No 1305/2013), and the UN agenda from 2015 “Transforming our world: the 2030 Agenda for Sustainable Development” serve as examples suggesting that urban-rural interactions and the city’s dependence on its hinterland will become even more relevant in future planning, and especially in spatial planning. Rurban areas are characterised by continuous interaction between the city, surrounding agglomerations and rural areas in the landscape at the local level. The degree of contact is crucial, as well as land-use efficiency and caution when developing new land. Processes like densification, sprawl, the development of neighbouring agglomerations (satellites), and regional hierarchies of city, town, village etc. are factors changing the proportion of interaction between urban and rural areas (Figure 2). Despite an urban-rural approach, urban perspectives heavily influence this figure. The motive is that the urban extension is forceful and generates peri-urban land use conflicts that influence the surrounding rural areas. The figure illustrates an active management of city extension to maintain rural environments in the neighbouring landscape.



Towards a theoretical framework: the Sustainability Approach

This paper highlights the need for a planning theory that deals with the continuous play of development and maintenance, along with the effects of this interplay. We suggest a theoretical framework regarding sustainable rural systems landscapes, as a contribution to sustainable development, and particularly to sustainable urban development. It is named the Sustainability Approach, a contemporary supplement to Choay's three categories of development models. This approach is linked to resilience theory. The notion of resilience has become a central element of the policy discourse in relation to sustainable development (Davoudi et al., 2012; Evans, 2011). As a concept, resilience is used in many different contexts related to planning, e.g. urban resilience (Davoudi et al., 2012; Newman et al., 2009), resilient city lands (Berg et al., 2013) and resilient food systems (Almås et al., 2012). Sustainable rural systems landscapes in this paper are understood as: resilient and adaptive socio-economic-ecological systems where different structures, functions and processes in the rural and urban landscapes are interacting at different scales throughout the global system.

Furthermore, systems thinking is used to view the world in terms of interrelated parts, structures, functions, and processes. The intention is to make complex and dynamic human bio-cultural-socio-psycho systems understandable and manageable (Gharajedaghi, 2006; Murphy & Hedfors, 2011). This approach supports an understanding of landscapes from a systemic view, exemplified by the selected theorists and their mind-sets. One advantage of applying systems theory is the potential to provide an inter- and transdisciplinary framework when studying complex phenomena and designing regenerative environments.

We consider the discipline of landscape architecture to be a suitable contribution to a theoretical framework on sustainable rural systems landscapes. For instance, McHarg had the knowledge and interest to embrace the entire scope of the landscape architecture discipline— 'the shaping of landscape from garden to region (Spirn, 2000, 100).' The

Figure 2. The timeless issue of establishing continuous urban-rural interaction to support resilient rural systems, during processes of city expansion or expiration: Expanding city in the landscape; old city centre (black), early additions (dark grey), new areas for trade (light grey), late additions (white circles), late densification (white x), late sprawl (black circles), constant reservation of land through the city history to secure urban-rural interaction (white arrows), resources from the expanding city are distributed to existing neighbouring agglomerations (grey arrow). The reservation of rural areas in between agglomerations is to secure urban-rural interaction (white large fields) instead of additional sprawling development (continuation of additional black circles).

landscape architecture discipline confirmed a grounded theory in a long-term perspective, long before the global movement of sustainable development started in the 1980s. Hedfors and Granvik (2008) propose a Landscape Architectural City Theory (LandACT) to shed light on the traditions within the discipline and point to its decisive interdisciplinary character. This is practiced in the management of landscapes through maintenance, planning, and design (ECLAS, 2015). LandACT aligns with the theoretical framework that we now propose – the sustainability approach – that points to all kind of landscapes, with emphasis on the continuous interplay between rural and urban environments. We suggest a number of concepts partly generated from our studies of the theorists that together form a pattern of abstract relations towards a theoretical framework.

The results of our historical study are interpreted and categorised into three main components: strategies, human resources and management (Figure 3). Some of the results were interpreted as fundamental or supporting a long-term perspective and considered as being planning strategies. These are exemplified as urban-rural interaction, integrated and contextual knowledge, and (re-) localisation. Other results were categorised as human resources, defined in this context of the Sustainability Approach as knowledge, relations, skills, values and identity. This is exemplified by fellowship, place-belonging, and aesthetic preferences (Figure 3). The management component concerns how the strategies are applied in practise through human resources, such as systems of local flows, and recycling. All three components are needed for the process-oriented implementation of the Sustainability Approach.

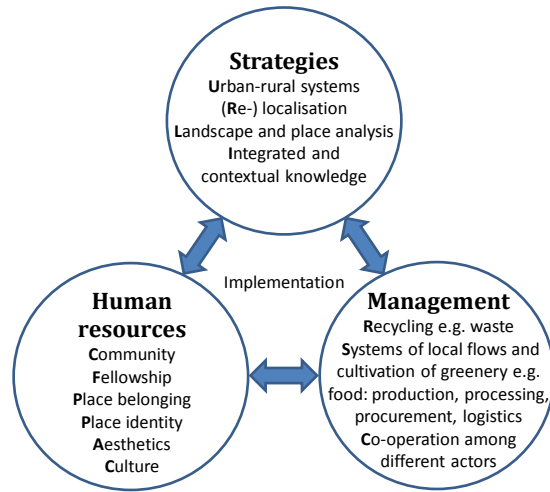
The Sustainability Approach related to Choay's models

Choay's three categories of development models still remain in contemporary spatial planning, but additional discourses and terminology colours the planning debate and practice, and this has partly changed the focus to "planning for sustainable development". Our proposed Sustainability Approach (Figure 4) is defined as having:

- its roots in the core value from which the critical planning was evolved, i.e. as a reaction to the negative consequences of industrialisation;
- an urban-rural systems perspective in spatial planning;
- a context-related multidisciplinary planning approach based on participatory processes; and
- an integrated planning approach that requires the coordination and collaboration of diverse policy administrative boundaries, along with planning resources, to achieve defined goals within and between municipalities.

We added the Sustainability Approach to Choay's framework. Rurban is included as a fourth period to highlight a systems perspective in the implementation of sustainable development. According to former models, the sustainability approach is legitimised by the reintegration of societal development and physical design ideals.

The Sustainability Approach



Choay’s three categories of development models contribute to the sustainability approach to different degrees. Regularism contributes particularly by stressing the need for a planning approach based on existing conditions at a site. More generally, this line also underpins the need for organisation, planning and order. Culturalism contributes by stressing the need for culture, civilisation, and individuality to influence the planning of environments (places and people), and being conscious of the city and its relation to the surrounding landscapes. Progressivism relates to the sustainable approach at the detailed scale (buildings and districts), taking into consideration health, sun light, air etc. when planning for separate buildings or blocks. However, progressivism, according to our interpretation, places little value on the existing landscape (e.g. topography, hydrology, and phytosociology). According to our interpretation of Choay, the major contributions to the Sustainability Approach derive from culturalism, and partly from regularism.

Figure 3. This study suggests three main components towards a theoretical framework of *The Sustainability Approach* related to Choay’s critical planning (1969): *Strategies, Human resources, and Management*. These are components for an inter- and transdisciplinary process-oriented co-operation and implementation by different stakeholders.

Period	Development model	Legitimacy
pre-industrial	pre-stage	overall development of society
pre-urban	Regularism	
urban	Culturalism Progressivism	physical design of society
rurban	The Sustainability Approach (sustainabilitism)	physical design of society based on systems thinking

Figure 4. *The Sustainability Approach* is here presented as ‘sustainabilitism’ in relation to former models developed by Choay.

4. Discussion: Timeless Issues in Systems Landscape Planning

Since Choay's time, a paradigm shift has pivoted the focus in planning towards sustainable development. Today, we cannot ignore this objective, i.e. regarding the ecological dimension, which is overlooked by Choay and contemporary scholars. The new political movement towards sustainability pervades spatial planning in a way that was not the case during preceding periods. In these periods, planning was mainly focused on local and regional problems and conditions. Today, the global perspective is of similar importance because of climate change, among other environmental issues.

However, the planning practice still generally focused on local and regional conditions, as they are most tangible for local or regional stakeholders, who are most familiar with viewing problems at these scales. This division in scales is an example of the "fragmented view" within planning. Another example is the governmental administration, which is divided into sectors; at the national level, there is division in different ministries, and at the local level, the authorities are divided into departments. Additionally, this division at the national level influences regional and local authorities. The sectorial administration that characterizes a nation's governmental organization is both a necessity to secure different interests, but at the same time creates difficulty in synthesizing procedures and holistic planning.

These examples of fragmentation mean that actors become trained in sectorial thinking instead of considering the world as a single system and developing the ability to see the relations between different subsystems. This dilemma of sectoral fragmentation in planning has been highlighted recently. There have been EU calls for an integrated planning approach, based on the coordination and collaboration of diverse policy administrative bodies and planning resources, to achieve defined common goals within and between cities and communities. Besides sector fragmentation, a long-term perspective is a critical issue in sustainable development, which is central also in spatial planning (e.g. through comprehensive planning). However, planning is governed by political systems, which in many states is organized in short mandate periods. These different time horizons are an evident dilemma in achieving sustainable development.

Urbanisation has developed in many ways since Choay made her analysis, and several concepts have been coined which point to different directions: e.g. new urbanism, ecological urbanism, landscape urbanism, and biophilic urbanism. Despite these directions, planning must consider sustainable development. That is our reason for discussing so-called 'timeless issues' in landscape planning and describing how to go from a seemingly fragmented view in time and space to the systemic view needed for the future. There are obviously many obstacles for different kinds in planning for sustainable development. The fact that there are parallel trends in urban planning jeopardizes the potential for complex systems to become in-focus in planning practise. Complex systems

cannot be dealt with as trend-sensitive; rather, they must be treated as timeless. This study shows that timeless issues should be further elaborated upon.

Despite the fact that the concept sustainable development did not exist at the beginning of industrialisation, the theorists in this study were considered to be precursors to current theories in sustainable urban development. Many of their ideas have been grounded in local planning throughout history, and they can be repeated again and again, formed into new shapes as they are adapted to different sites. A common viewpoint among the theorists was scepticism towards industrialisation from an environmental point of view, along with concerns regarding pollution and the degradation of nature.

In current Western countries, the ecological dimension of sustainable development has been in main focus in politics. A common political approach is ecological modernisation, a view that states sustainable development as mainly an issue concerning technique, efficiency, and economic growth. According to this view, required changes can be made within existing frameworks of society. Researchers interpret this expression in different ways; however, a common interpretation is that ecological modernisation concerns the relationship between environmental and economic issues in a democratic society. The essence of this approach is the idea that sustainable development and economic growth are joint mechanisms. Another approach is deep-ecology, which encourages essential changes within society when it comes to political and economic systems, including the need for individual lifestyle changes.

According to the theorists discussed in this piece, responding to environmental and ecological dimensions in practical situations requires an adaptation to the existing landscape: the site and its natural processes. However, this is often neglected in modern development projects. A number of functions defined within development projects are prioritised without necessarily taking the existing values on the site into consideration. Such a limited approach in concrete projects may lead to negative consequences on the surrounding environment. This could be exemplified by land being levelled out prior to exploitation, which reduces the ecosystem's capabilities, such as biological features of the terrain. The consequences of a limited approach can also lead to an "isolated island effect" that does not significantly contribute to the surroundings. Instead, concrete projects could play an important role in a larger perspective by supporting the general development of the local community. This is exemplified by a quote from the Swedish landscape architect Sven A. Hermelin "it is your house, but our community" [authors' translation] (cited in Andersson et al., 2000). This means that a single landowner's undertakings can either strengthen or weaken the community.

The politics for sustainable development requires cooperation between sectors, along with a political will and interest in understanding different perspectives and rationalities. The social aspects of sustainable development can be related to our selected theorists' ideas of community and participation to support human wellbeing. The action program

Agenda 21 and the Habitat Agenda both focus on the local level and the bottom-up approaches in the implementation process of sustainable development. The Habitat Agenda states that a sustainable habitation requires local work and citizen participation in the planning and implementation process. Modern planning can move towards sustainability when it is responsive to people's values, preferences and everyday life. Thus, shared competences and many small decisions that are made in a society can cooperate for sustainability efforts. Different arenas need to be established to support the integration of knowledge, e.g. citizen dialogue, future scenario workshops, etc.

Fourth modern development model: urban and rural interaction

Sustainability aspects in current planning are implemented mainly from an urban point of view. An urban hegemony dominates a discourse ruled by urban norms. The vocabulary of this discourse does not include rural perspectives or interactions between urban and rural areas. The paradox is that urban areas can possibly not be sustainable without their surrounding land. In the context of Choay's critical planning, a fourth modern category is suggested in this paper: the Sustainability Approach. This contribution involves a context-based view in planning, linking the site and its natural processes to global concerns, and encourages systemic landscape management, as both urban and rural areas are situated in landscapes. Therefore, we consider the 'landscape' to be a cardinal concept, significant for the understanding of 'rurbanity'. Like the European Landscape Convention (2000), the Sustainability Approach supports the management of landscape values. This aims to take the 'big picture' into consideration in all initiatives that intervene with the landscape, no matter whom is in charge, to avoid the tyranny of small decisions prompting fragmentation. In addition, it concerns all kinds of landscapes: remarkable, every-day, urban landscapes etc. Thus, the Sustainability Approach questions contemporary urban densification – in line with previously referred research – as the main strategy for sustainable spatial planning. There is a need for long-term perspectives beyond urban densification for several reasons: e.g. to stress the role of rural areas in planning, to point out the uncertainty to which extent urban densification actually is sustainable, and to recognize the limits of urban compactness. An alternative strategy for sustainable spatial planning is to facilitate the distribution of resources from the expanding city to existing neighbouring agglomerations, which have closer relations to rural conditions (Figure 2, grey arrow). The main objectives are to have both urban and rural sustainable development by mitigating the depopulation of rural areas. An example is urban-rural local food systems, which promote job opportunities and maintain the local services in rural areas. At the same time, these systems support the urban population with local food – an observable trend in Western countries.

The suggested Sustainability Approach should be considered tentative. In this paper, three main categories of a sustainability approach are proposed: strategy, human resources, and management. These are components for inter- and transdisciplinary process-oriented imple-

mentation. The integrated knowledge required can only be achieved by a pluralistic approach to both theory and methodology. In practical planning, landscape architecture has a potential to meet the need for a process-oriented implementation. Its combination of a focus on applied research; the close relation to professional practise; a site-specific and future-oriented approach; and shifting between different scales within spatial planning, design, and management are valuable in facilitating a planning process to avoid fragmentation. Depending on the worldview about sustainable development, e.g. ecological modernization and deep ecology, there will be profound differences in the contents of strategies, views on human resources, and management style. We invite researchers, practitioners and others to contribute transdisciplinary to the further development of this theoretical framework.

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