Place-Based Sustainability

Place-Based Sustainability:

Research and Design Extending Pathways for Ecological Stewardship

Edited by

Jason Montgomery

Cambridge Scholars Publishing

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Cover image: View of Union Square, New York City.
Photo by Jason Montgomery.

This book is dedicated to my children, Jackson and Cecilia, along with the youth of today and tomorrow whose welfare we all must work to ensure.

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PREFACE

This book is a development of papers and themes presented at the AMPS (Architecture Media Politics Society) Cities in a Changing World Conference held virtually through the host institution, New York City College of Technology, City University of New York on 16-18 June 2021. With the continued intense urbanization of the world population, the call for papers stressed the interconnectivity of the challenges facing cities in the 21st century, confronting questions of climate, culture, and design. A wide range of academics and practitioners responded, presenting papers whose various approaches to thematic development and research methodologies clearly reinforced the importance of broadening the discussion of the future of cities. The most significant common theme among papers submitted after the conference was sustainability, but treatment of this theme was diverse, and upon reflection on the formation of a common narrative, the view of the relationship of sustainability to place emerged as the critical concept.

This book's development was supported by a fellowship leave granted by my college, New York City College of Technology (City Tech), City University of New York. The approval of this leave by our college president, Dr. Russell K. Hotzler, was essential to dedicate the time to produce this book. I am also thankful for Dr. Hotzler's support for hosting the conference at City Tech. Also critical to both the approval and logistics of the conference was the support of the past provost Dr. Bonne August and the Interim Provost, Dr. Pamela Brown. Dr. Reginald Blake, the Interim Associate Provost, Dean of Curriculum and Research and an expert on climate change, graciously accepted my invitation to write a foreword sharing his reflections on this work. I am also grateful for the collaboration with Dr. Graham Cairns, the Honorary Director of AMPS in the development of the conference and the invitation to lead this book project. I am grateful to my wife Anh, and my children Jackson and Cecilia, for their patience with me while I sat for countless hours in front of my laptop. Most importantly, I am grateful for the wonderful collaboration with the contributing authors, who bring their insightful research of place and sustainability in their corner of the world to light through their dedicated work.

FOREWORD

Perturbations in the climate system are typically the system's response to changes in radiative forcing that alter the Earth's radiative fluxes and induce changes to its climate. The magnitude and duration of these changes depend on the feedback (positive or negative) mechanisms that are internal to the system itself. Over time, the Earth's climate has swung the pendulum (on a variety of timescales) from extremely cold episodes to extremely warm ones. The historically recent (and current) increases in anthropogenic greenhouse gas emissions have resulted in accelerated climate change that has already caused major impacts on natural and human systems, and given the existing and projected trends in land use, demographic dynamics, urbanization, and economic development, these impacts are expected to be exacerbated and particularly be worse for poor, developing countries. For example, about 55% of the world's population live in urban centres today, but, by the 2050s, almost 70% of the global population is expected to live in these spaces, thereby increasing the pressures on built environments and their exurban and nearby rural areas all while cities continue to warm.

Innovative, integrative adaptation and mitigation strategies that focus on place-specific sustainability, ecological balance, and creative-forward looking design will, therefore, be necessary to increase the capacity and the resilience of critical infrastructure and communities (built and unbuilt) as they prepare to respond to the shocks and to the stresses of ongoing and pending climate change. New knowledge and assessment will be needed, and both must be cogenerated with input from all sectors and from all stakeholders including citizens and community groups, policy makers, and planners who are integral to decision making about built and unbuilt environments, housing, urban infrastructure, health, and environmental planning. Diverse and equitably acquired knowledge and assessment cogeneration will bring key stakeholders together to re-imagine and re-envision the untapped potential of built and natural systems.

However, how will this new paradigm and approach to sustainable development occur? Where will the guidance come from to illuminate the path forward? Where are the examples that are necessary for the smart and sustainable stewardship of the built and unbuilt environment in light of climate change? How can seamless coupling and integration be achieved at the boundaries (and beyond) of the built and unbuilt environments? Well,

the answers to these and other serious questions about sustainable development and climate change are broached in this compelling compendium by Jason Montgomery and his prolific, diverse team of forward-thinking experts. Captivating ideas, creative examples, and clear-eyed insights are set forth to begin the triggering of concepts and designs for comprehensive, strategic approaches to sustainable development for a warming 21st century. The proactive strategies in this volume give hope that with coordinated, inclusive adaptation and mitigation schemes, development in built and unbuilt environments can be sustainable, urban centres and rural areas can be made more resilient, and the adverse impacts of climate change can be ameliorated. Enjoy the optimism rendered by this timely body of work.

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August 2022

INTRODUCTION

SUSTAINABILITY, STEWARDSHIP OF PLACE, AND PEOPLE-ENVIRONMENT RELATIONS

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Global challenges instigated by climate change and urbanization are driving research seeking appropriate and effective strategies for social, economic, and environmental sustainability. While technical advancements are a major focus for sustainable development, there are important research avenues that explore the relationship of place and sustainability: in terms of human-nature connections and people-environment relations, in terms of cultural and economic forces, in terms of local/regional architectural responses to the microclimate, in terms of community activism and engagement. Place-based research in sustainability opens up the wide range of activities and initiatives that need to both be layered and integrated with technological advances but also help drive them. The well-considered steering of sustainable development and practices is the essence of stewardship of place.

A place-based approach to research and practice seeks to reveal the climatic, economic, and cultural contexts that help us read the nature of a place, its history and evolution and the ongoing human response to the local environment. The assessment of this response manifested in the local built environment and daily life practices and patterns leads to discoveries that can help communities reflect on and redirect or refine their stewardship of their ecosystem.

This research can be placed in the context of scholars' exploration of human-nature connections and people-environment relations. Ives et al.'s "Reconnecting with Nature for Sustainability" provides a conceptual framework that helps place the chapters of the volume in context.[1] This

framework includes material, experiential, cognitive, emotional, and philosophical connections, and perspectives on our relationship with nature, a framework that many of the authors here explicitly or implicitly explore. Ives et al., similar to the authors of the below chapters, see this connectiveness as having "potential to help leverage deep societal change for sustainability."[2]

David Uzzell et al.'s exploration of people-environment relations emphasizes that sustainability must be a way of life where all facets of our lifestyles and daily activity are aligned with sustainable principles and practices. They argue that place-identity and social cohesion are central to initiatives for sustainability. They further emphasize the place-based, and thereby diverse nature of this complex project:

> sustainability is neither a vision nor an unalterable state but a creative and local process of searching for balance that spreads into all areas of urban management and decision making. As every city is different, each city must find its own way toward sustainability… The sustainability of an urban system can be understood as the compatibility between social, economic, and cultural dynamics and environmental resources in the present and the future.[3]

The dissemination of the diversity of concerns and strategies for sustainable outcomes for communities around the world encourages us to reflect on our own contexts and communities as we seek new insights into the modification/adaptation and application of sustainable practices suited to our neighbourhoods. This multi-author volume of a wide range of topics, disciplines and places, reveals new perspectives on the relationship of the culture of place and sustainability. The chapters address a wide range of distinct challenges in communities on four continents. This compilation of diverse disciplinary perspectives, contexts, and research methods, mirrors the necessary breadth of discussion and provides new discernments on the complexities of social-ecological systems and the many avenues for increasing social, economic, and environment sustainability. The authors represent their communities through their dedication to stewardship of place, bringing to the surface through their research critical issues that will impact the future culture and livability of their communities through their response to increasing challenges that demand adaptation and change.

This book is divided into two parts that together encompass vital strategies for sustainable development. The first part presents the examination of specific places through theoretical contexts and design interventions. Sustainable design of place requires sensitive strategies that respond to many factors inherent to a local context including reflection on historical

design performance, geographic and climatic parameters, and the health and connectivity of social and ecological systems. The research driven design strategies presented in part one provide examples of finely tuned research and analysis through theoretical perspectives translated into sensitive design considerations and propositions, executed projects, and academic research methods and pedagogy.

The initial chapters explore the critical interface of built and unbuilt territories within and on the edges of cities, with case studies from France, the Netherlands, and Oslo raising the issue of critical encounters that build the relationship and connections between people and their local ecosystem. These are followed by a study of the landscape features of the Bengal Delta and the evolution of the settlement patterns in Dhaka. This study seeks to reinvigorate the historical strategies that work with rather than against the seasonally dynamic conditions of the delta. A case study on urban agriculture in Shanghai then explicitly argues for place-making that builds people-environment relationships in an intense urban environment by integrating local agriculture and food supply into the city neighborhoods and sensitively weaving these places into community life. As a group these authors see an opportunity to enhance the appreciation and values of city residents for the natural systems that are critical to the sustainable balance of their urban ecosystem.

The following chapters of part one shift to questions of architecture and the design of the built environment in relation to the local climatic and cultural context. This theme starts with the important analysis of the way the refined municipal guidelines and regulations can help nurture both an improved performance response to the local climatic conditions but also at the same time nurture a language of architecture of place. The next chapter links performance to pedagogy as a vehicle for a technological but also cultural shift towards sustainable architecture. The final chapter of part one provokes a new invigoration of critical regional architecture where analyses of historical architectural responses to structure and envelope provides a context for new design experiments searching for the intersection of high-performance and a contextual tectonic approach that revitalizes the local architectural culture and sense of place. This emphasis in this group on architectural language is perhaps a more subtle but still critical pathway for building the awareness of our relationship to our environment and our essential role as stewards of our ecosystem.

Part two shifts to a social/economic perspective, providing case studies that share the goal of changing the mindset of planning authorities, communities, and organizations and companies. The first chapter of part two focuses on urban mobility in Manila as a critical infrastructure for social

equity while supporting economic opportunity and environmental sustainability. The next chapter explores the mindset of repair culture in the social-economic ecosystem of New York City, seeking strategies for promoting the importance and opportunities of the circular economy. Changing mindsets requires creative communication and engagement. These themes are explored in the next chapter, where comics are the creative foundation for inclusive community engagement of sustainable practices. The final chapter addresses changing the mindset of organizational and corporate culture to address the critical need to adopt sustainable management strategies. These chapters weave together a range of community sustainability challenges and highlight strategies for advocacy, engagement, and enhancement of sustainable community and organizational development.

The important perspective that emerges from this collective research is the diversity of opportunities for increasing sustainability, providing models and approaches for specific local conditions that offer scholars, students, and design professionals new insights to reframe or refine principles and strategies for place-based social-ecological stewardship.

Notes

[1] A good review of human-nature connections that is a strong context for this book is Charles D. Ives, David J. Abson, Henrik von Wehrden, Christian Dorninger, Kathleen Klaniecki, and Joern Fischer, "Reconnecting with Nature for Sustainability," *Sustainability Science* 13 (2018): 1389-1397, https://doi.org/10.1007/s11625-018-0542-9.

[2] Charles D. Ives et al., "Reconnecting with Nature," 1389.

[3] David Uzzell, Enric Pol, and David Badenas, "Place Identification, Social Cohesion, and Environmental Sustainability," *Environment and Behavior* 34, no. 1 (2002): 26-53, 27, https://journals.sagepub.com/doi/pdf/10.1177/0013916502034001003.

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PART ONE:

RESEARCH DRIVEN DESIGN OF PLACE

CHAPTER 1

RURAL OPEN SPACE PERSPECTIVES FOR FRAGILE PERI-URBAN SCENARIOS: WATERCOURSES AS CRUCIAL DESIGN TOOL FOR "RE-JOINING" AND "RE-SIZING" ACTIONS

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Introduction

Peri-urban spaces, located between the suburban settlements and the surrounding countryside, represent paradigmatic places concerning ecological balance and the definition of people-environment relations through design.[1] In planning and architectural terms, the development of peri-urban fringes in European cities started mainly during the reconstruction after World War II, triggered by the crisis of the countryside and the massive movement of people to urban areas, together with the public will to increase the infrastructures of the countries mostly where the openness of the fabric allowed it. The intensification of cars and low cost of the peri-urban land sustained the planning operations towards a rapid modernization and expansion of cities. In Italy, the post-war neighbourhoods linked to INA Casa[2] represent compelling examples of settlements close to the countryside instead of the city. Another typology of expansion involving the edge of the urban areas occurred some decades later when major cities incorporated the little towns around them which were increasingly detached from their impoverished countryside and more connected to the urban dynamics. This expansion was followed in the 1990s by yet another typology that generated the peri-urban areas we know today, raising to prominence the crucial topics of sprawl and suburb. The countryside still offered the cheapest soil to consume and neglected rural spaces to reimagine and be inhabited by people looking for dilated places in opposition to the denser city.[3] A model of urban life became a possibility also for the less affluent population, ready to

develop their projects in peri-urban flexible spaces more than in the expensive locations of the historical centre. Therefore, close to the consolidated cities' stagnation and to the countryside's continuous depopulation, the peri-urban areas represented, for many decades, a space for growth and the possibility of social redemption.[4]

Only from the end of the last century, the debate has begun to focus effectively on the undesirable effects of suburban dynamics. Starting from the 1990s *terrain vague*'s concept, this chapter explores today's possible lens to approach the condition of the fringe areas, defining a renewed idea of "territorial fragility" and placing peri-urban scenarios between the *unmeasurable vagueness* and the *measurable vulnerability*. The focus is on the network of open spaces that evokes, more than other built environment elements, the intricate questions regarding these areas along the border between the settlement and the countryside. The issues become today even more impelling with rare effective solutions concerning the *transition* between urban and rural domains. Nevertheless, some "agri-urban" visions still feed essential design strategies to face fragmented and residual conditions in which waterlines represent another crucial tool to work with to get the countryside closer to the inhabitants. Considering the open space network of the whole settlement as a basic assumption, regeneration projects act on the design reconfiguration of the relational fabric also supporting apparently irrelevant watermarks and, at the same time, counteracting the undesirable effects of the fragile water balance. In so doing design actions stress the closeness of the countryside, as a unique peri-urban condition, strengthening social and ecological dynamics in a general idea of *place-specific* sustainability.

From Terrain Vague to Territorial Fragility

Ignasi de Solà-Morales was the author who, during the 1990s, described a particular condition of territory "vagueness" that he firstly named with the French expression *terrain vague*. The concept started from the awareness of a different sensibility for the city places triggered mainly by urban photography. Marginal, ephemeral, or leftover spaces became fascinating, representing a sort of downside of the regulated urban fabric, a direct expression of a top-down public domain. "Terrain" implies a limited ground with building use to improve the city scenario, and "vague" can be linked to the word "unengaged," suggesting an absence but also a potential expectation, a possibility of change or redefinition intrinsically related to something missing.[5] de Solà-Morales used three adjectives to summarise the main characteristics of that condition: "uninhabited," "unsafe," and

"unproductive."[6] The first suggests a general discomfort linked to the possibility of inhabiting those places; the second implies a perception of a lack of safety connected to the absence of control, and the third alludes to the lack of purposes or well-defined uses. Despite their negative implications, these features provide a positive mark linked to spontaneous uses and ephemeral traces that future transformations can preserve and reinterpret. de Solà-Morales affirmed that *terrain vagues* are "foreign to the urban system, mentally exterior in the physical interior of the city, its negative image, as much a critique as a possible alternative."[7]

From the 2000s onwards, there were many insights and reinterpretations of de Solà-Morales's idea. The England-based writer and artist Gil Doron explored the topic in the second half of the 2000s, emphasising how the areas in which a *terrain vague* condition displays itself are never empty spaces, as the establishment too often considers them. On the contrary, these areas are always animated by the transitory coexistence of minorities-people, green species, or animals-thus being places for weak or soft identities and counterbalancing the ordinary urban spaces.[8] Moreover, Doron controversially named these areas "dead zones," exasperating a common negative perception that contributed to a general underestimation of these spaces and often justified tabula rasa operations. Dead zones are also sites in which different forms of excess and transgression occur, but when the experience of the void, residue or downsides dominates, the spaces become unbalanced, developing negative consequences.[9]

In 2014, the American writer and professor Patrick Barron defined *terrain vague* as "counter-spaces" containing a fragmented history. These places animate the landscape through "paradoxical combinations:" "vacancy with freedom," "absence with possibility," "limitlessness with mobility," "and never clearly urban and rural."[10] Furthermore, Barron remarked on the double possibility to consider *terrain vague* as "condition" or "process," distinguishing between problematic situations and the connected process, to be considered even if the phenomena are not yet intense.[11]

Some years later, Mariana Mogilevich, an American-based historian of architecture and urbanism, focused on the risk of improving *terrain vague* through the same generalised formula as a contradictory effect of the globalised urbanism of the twenty-first century. There are two main impacts of the marginal space reuse rooted in cutting-edge urban experiences of the 1960s and 1970s: on the one hand, the possibility of gentrification, and on the other, a dark perspective without any upgrades. Instead, a way to be put in the middle provides that the transformation of the physical space go hand in hand with a more complex enhancement process, comprising policies' activation and spatial governance to preserve the value of urban commons.[12]

Concerning "territorial fragility," the idea has a solid connection to the analysis of specific sites and historical moments; territorial fragility in absolute terms does not exist. Moreover, it has a multidimensional character as the territory, dealing with complex situations to be worked through a cross-disciplinary approach.[13] Territorial fragility represents the inability to react or to adapt to territorial changes without developing adverse effects.[14] Comparing *terrain vague* to territorial fragility, we observe the same positive focus on resources and redeeming possibilities linked to the uncertainty of definitions, rather than focusing on the criticalness of the sites. The transformations to come must be aware and recognise the "open" condition of fragile and *vague* places and their uncommon and minority specificities. As the *terrain vague*, a fragile scenario can be intended as a "condition" or "process," dealing with problematic situations or single negative phenomena not yet even exacerbated. Both scenarios suffer from unbalanced features, the excess of which improves the possibility of breaking a precarious balance. Furthermore, a general perception of inhabiting discomfort, unsafeness linked to various aspects, and different levels of disengagement are common traits of all conditions, emphasising the strong connection between phenomena linked to the physical domain and the realm of experience.

What mainly differs is the relationship with the factors linked to each of the situations; the territorial fragility represents the possibility or the "predisposition" to develop dangerous effects linked to a mix of countable and uncountable adverse phenomena, keeping together the *unmeasurable vagueness* and the *measurable vulnerability.*[15] On the contrary, *terrain vague* situations mostly show the unpredictable consequences of only uncountable factors.

The concept of territorial fragility triggers thus plural interpretations that can only be interdisciplinary as well as *place-based*. It means moving beyond sectorial interpretations that in recent decades pretended both to isolate the dimension of risk-hoping for predictability and measurability of all negative factors-and to make a condition of uncertainty prevailing, being unable to deal with more technical issues that are equally essential.[16]

Peri-Urban Spaces Between Vagueness and Fragility

As a result, we can consider the peri-urban areas a territory in which the "vagueness" is more perceived than in the denser part of the city; this condition opens possibilities of redefinition, accepts transitory uses and soft identities, but the border between opportunities, disengagement, and undesirable consequences is very fragile. The vagueness concerns the

absence of crucial urban relations or convincing agricultural landscapes. The openness of the fabric weakened the network of the relational spaces, unable to intertwine effective connection if not supported by the closeness of the building masses, and the countryside emerges as residual space, ready to be invaded by the urban settlements planned as the real focus of the territory. Land use unbalances lead to the *fragmentation* of the urban and rural fabric and to the inability to develop the necessary proximity networks. Among other facts, infrastructure, malls, and logistic hubs-whose increase within the fringe became considerable-not only consume the territory but answer basically to the need of the vast scale, producing deep breaks and discontinuity factors on the local one. The network of neighbourhood connections appears consequently weakened, just where it becomes more strategic due to the sprawl. The result is the lack of tensions between places essential for any urban development.[17] An increase in fragmentation can also trigger *peripheralization* phenomena, inhibiting relations to the close urban and rural districts as well as to the city centre. Peripheral neighbourhoods testify a tendency to be self-referential, even if they often have insufficient facilities and meeting places.

We can observe a general *disintegration* of urban and rural identity values, inextricably linked to the proliferation of the sprawl in those "intermediate" areas between the consolidated city and the countryside.[18] Despite that and the related increased permeability between heterogeneous fabrics, the fringes demonstrate mostly ineffective transitions between urban and rural domains. Marginal spaces show a lack of dialogic relations, a symptom of design strategies that continue to involve city and countryside separately, without the idea of sharing networks, places, or uses and consequently generating extremely vague borders.[19]

In terms of architectural scale, housing estates within modern and post-modern settlements, but even more the recent malls and logistic hubs, generally generate a low spatial quality compared to the denser city, mainly because their design underestimates the importance of giving form to *proximity dynamics*, so valuable for inhabited fabrics. Buildings appear disconnected from the surroundings and introverted; parking areas are often the ineffective in-between elements. What emerges are both the fragmentation factors and the unconscious combination of spaces linked to completely different scales and types of accessibility-walkable spaces and car infrastructures or facilities-displaying "residual" and "conflictual" areas. *Open space* networks express the dialogic impoverishment more than other parts of the building environment; places are mostly disconnected from one another and not human scale-designed, appearing uninhabitable, disallowing uses, and weakening the corresponding social values. This is also what

happens along the border between the settlements and the countryside, where paths or comfortable spaces rarely succeed in making the rural side closer to the inhabitants. The vagueness of the whole network is exacerbated by abandonment, underuse, or neglect, as well as by the absence of ordinary maintenance, testifying to an urban and rural heritage not yet openly recognized.[20]

However, the situation of the peri-urban areas is even more complex; it is not only about a general condition of discomfort and disengagement, but resources are often threatened constantly by "measurable" negative phenomena. One of the most important is the *soil consumption* that continues to erase the countryside. After the post-war developments, through which European cities rebuilt themselves, recent decades saw space given primarily to malls and logistic hubs. On the other hand, an equally recent countable phenomenon is the abandonment of built fabric, especially of rural buildings, now almost surrounded by the city, or factories and freight yards linked to disused economies. Strictly connected to the improving urbanization and the tendency to join different settlements, the *fragmentation* of the ecological network represents another measurable relevant issue. Beyond territorial unbalances, peri-urban expansions and infrastructures can deny movements and growth of flora and fauna, altering the terrestrial ecosystem we inhabit. Even the depletion and trivialization of cultivated soils, as with the impervious urban ones, indicate essential environmental decay factors for fringe areas, where often an unsustainable modernization of agricultural techniques prevailed over more environmental-friendly visions respectful of biodiversity.[21]

Another important countable phenomenon is the pollution of soil, water, or air, linked to agricultural techniques and intensive farming-specifically to the use of chemical pesticides and the emission of harmful gases-or to active and inactive industrial buildings that continue to produce and disperse substances that are damaging to the environment. Finally, the peri-urban territory is also affected by *environmental risks*, especially in regard to water issues, like the ones that register in recent decades a significant intensification due to the worsening of the climate change effects on a territory frequently not well anthropized, with excessively high percentages of impervious soil. The possibility to develop countable and uncountable undesirable effects makes the peri-urban areas *fragile*, proving the complexity of a territory in which different factors "imbricate" one another.[22]

Facing a Vagueness Condition Through Rural Open Space Perspectives

As we can observe starting from urban models that promoted profitable interactions with the surrounding countryside, the possible *transitions* between the urban and rural scenario emerged by considering the settlement configuration as a whole and not only by working close to the edge that joins and, at the same time, separates the two often conflicting sides. If the plan involves the agricultural spaces together with the neighbourhood both the urban and rural conditions become founding elements of the new inhabited scenario. It is easy to understand how open spaces can play a crucial role where significant transition processes occur; inhabitable connective fabric must arise operating on the *density* of the buildings and the linked dimensions and hierarchy of open spaces. In so doing, the network of places feeds relations of *proximity* also toward the agricultural structure, free to partially penetrate the settlement and distributing areas with a solid vegetal connotation. Therefore, not a rigid edge but a valuable and reciprocal reverberation between the two contiguous scenarios can support peri-urban expansions' design or regeneration, as the observed models testify.

Nevertheless, concerning *density*, we can solidly affirm that a considerable decrease, although in favour of greater integration with natural elements, has given very questionable results, contributing to the manifestation of those territorial and environmental fragilities that today we have to counteract. As already mentioned, a lower density consumes and reduces the permeability of a greater quantity of soil, and the expansion of the urban grid often does not correspond to an adequate strengthening of the connections, triggering an increasing use of the private car, with the negative consequences that this entails. Sprawl models must thus balance carefully solid and void, focusing on the importance of natural elements as well as urban networks toward surrounding settlement or countryside and the city centre.

As regards *proximity* issues, there are many benefits still discussed in the debate about its increase in inhabited fabrics. Investigating its meaning specifically, we can observe that the concept involves the closeness between two elements of a site and mainly their ability to influence each other, developing reciprocally a precious "sharing" attitude rather than one of separation. Proximity is a product between *density* and *diversity*, traditionally distinguishing the compact city and activating forms of *mixitè* concerning uses or social and identity values. In so doing, inhabited fabrics

generate articulated community dynamics that considerably enhance urban landscapes.[23]

Unfortunately, urban models promoting valuable transitions between city and countryside represent a "counter-history" because the architectural and urban planning debate often considered urban and rural scenarios as two distinct worlds. The dynamics of urbanization had always been focused on their primary objective: the capacity to accommodate an ever more significant number of people aspiring to settle in the city, looking for better living and working conditions than what the countryside had to offer.[24]

However, the assumptions for the desire to integrate urban and rural structures historically arose at the end of the nineteenth century with the garden city concept development. Ebenezer Howard was the first to work effectively on the new settlement attitude, also proposing later some projects, together with Raymond Unwin, in England in the early twentieth century. The aim was the growth of "balanced" communities, which can benefit from the positive aspects that the countryside had to offer, for example, the psycho-physical well-being linked to being outdoors, together with the favourable connotations linked to an urban situation, including technical facilities and political and intellectual fervour. Therefore, it was not a city model, but a settlement principle aimed at the urban and rural scenario together, preventing the development of "suburban dormitories" by configuring self-sufficient agglomerations of small dimensions and surrounded by the countryside. The latter served as a containment of the built fabric and as an integral part of the inhabited core committed to agricultural activities.[25]

Subsequently, during the twentieth century, the so-called "agrarian urbanism" emerged; specific urban models continued to approach agricultural production topics together with the settlement, trying to dissolve the timeless opposition of city/countryside by reformulating productive suburban landscapes for low-density estates.[26] Partially re-reading the assumptions of the garden-cities, possible alternatives emerged to be compared to traditional settlements that were increasingly destabilized by the growing migratory flows, feeding conditions of overcrowding and poor sanitation, and by a particularly invasive industrial development, issues that characterized the entire course of the nineteenth century.

Thus, in the first half of the twentieth century, trying to weaken the overall urban perspective, Broadacre City was proposed as a low-density fabric in which the buildings benefit from the relation to a natural surrounding that pervades the settlement.[27] A little later, through the New Regional Pattern, connected to the well-known Lafayette Park experience, Ludwig Hilberseimer worked on a much more complex concept of

proximity; not only agricultural spaces had to move closer to the housing estates, but the argument also involved commercial facilities and productive buildings. The general aim was to set up self-sufficient settlement units to be repeated in a continuous landscape.[28]

At the end of the twentieth century, linked to the debate about urban sprawl that reaffirmed the importance of a strategic connection with the agricultural side, Andrea Branzi developed a "weak" urbanization model disconnected from the durability of the buildings to settle on the rural soil sequences of light and reversible pavilions. Agronica's "semi-agricultural" and "semi-urbanized" vision established a fruitful relation between an agricultural "outside" and an equipped "inside." It also represents the last critical "partial" utopia on the subject.[29] On the other hand, in the same years, Pierre Donadieu developed the idea of the "urban countryside," or a renewed relationship between the already existing suburban areas and the agricultural belt. A "feasible" perspective focuses on the importance of taking care of the built heritage and bringing the agricultural side closer, assuming it as an area of leisure activities for peri-urban citizens. Open spaces are what almost exclusively demand *multifunctionality*; the "agricultural park" becomes a fundamental "approximation tool," mending conflictual scenarios.[30] The French-based concept focuses thus on new inhabiting forms of the peri-urban countryside, no longer contemplated as an expansion possibility for the city but envisioned as the necessary multifunctional open space, part of the relational fabric's backbone.

Contemporary Case Studies in Europe

Design solutions are still generating interpretations of this idea; "post-productive" and "porous" countryside spaces work as peri-urban recreational areas, considering rural instances equally as urban ones and softening the ever-present dichotomy between the two domains.[31] Analysing a collection of case studies dealing with the regeneration of peri-urban areas, two typologies of rural/urban reconnection strictly linked to the geography of the existing clearly emerge: the first strategy works on the "thickening" of the border, conceiving an in-between space as a place in its own right, a new scenario that occurs as intermediate between the city and the countryside; the second strategy, instead, still working on buffer areas, focuses on those elements "going beyond" the border and entrusts them with re-joining of the lacerated fabric.

Figure 1.1 Michael Desvigne, project for the Paris-Saclay area, Paris, France, 2009-present. *Copyright Michel Desvigne Paysagiste.*

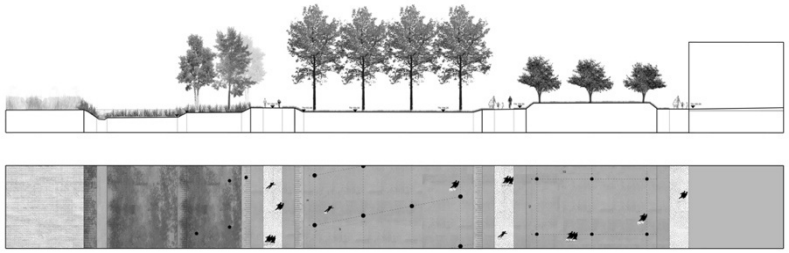

Figure 1.2 Michael Desvigne, landscape section Paris-Saclay. *Copyright Michel Desvigne Paysagiste.*

Landscape architect Michel Desvigne, belonging to the French landscape tradition, has dealt with the first strategy since the beginning of the 2000s, designing new in-between conditions in which "a triple urban, agricultural and social ecology could thrive."[32] The project for the Paris-Saclay area (2009-present) represents a crucial case study concerning border thickening operations to reconnect peri-urban places. The strategy involves three different and interacting scales: a landscape idea for the development of the entire *plateau* in which research and higher education buildings make isolated archipelagos; a plan for the southern fringe, or the campus area; and a design solution for École Polytechnique district's open spaces. The project enhances the geography of the site establishing coherence at different levels. The vast one, concerning the entire *plateau*, entails the improvement of the wooded hillsides surrounding the built environment. Regarding the campus area, the intermediate level, the project involves the backbone of open spaces focusing mainly on the edge between buildings and fields; Desvigne

displayed a prototype of transition areas combining ecological and hydraulic issues with recreational places and sports facilities. Finally, the École Polytechnique district's level aims at unifying the open space network-the public areas and the inner courtyards-through a recognizable layer of lush vegetation, recurring mineral soils, and low-flow channels as stormwater storage.[33]

Figure 1.3 Michael Desvigne, perspective view Paris-Saclay.
Copyright Michel Desvigne Paysagiste.

On the other hand, Dutch architect Berno Strootman, connected to another strong landscape tradition such as the one in the Netherlands, worked on this topic by mainly exploring the second strategy of re-joining the lacerated fabric. Improving the landscape in proximity to the city means developing coherent visions in which ecological networks, storage and filtering of water and sustainable agriculture cooperate. Linear elements-such as water streams or paths-become the drivers for the reconnection as the solution for Landschapspark Pauwels (2018-present) in Tilburg, Netherlands attests. The project enhances the three existent landscape types: uncultivated land, marshy wooded areas, and agricultural landscape, giving them a more vital expression. Furthermore, the masterplan provides a "parklike layer" to set up a network of attractive recreational spaces, devices to rest, enjoy nature and go closer to the water. Human-sized and inhabitable places go hand in hand with a more sustainable water system, agricultural innovations, and the demand of clean energy.[34]