Sandrine Glatron
Laurence Granchamp *Editors*

The Urban Garden City

Shaping the City with Gardens Through History

EXTRAS ONLINE

Springer

Cities and Nature

Series editors

Danny Czamanski, Technion-Israel Institute of Technology, Haifa, Israel
Itzhak Benenson, Tel Aviv University, Tel Aviv, Israel

Cities and Nature fosters high-quality multi-disciplinary research addressing the interface between cities and the natural environment. It provides a valuable source of relevant knowledge for researchers, planners and policy-makers. The series welcomes empirically based, cutting-edge and theoretical research in urban geography, urban planning, environmental planning, urban ecology, regional science and economics. It publishes peer-reviewed edited and authored volumes on topics dealing with the urban and the environment nexus, including: spatial dynamics of urban built areas, urban and peri-urban agriculture, urban greening and green infrastructure, environmental planning, urban forests, urban ecology, regional dynamics and landscape fragmentation, among others.

More information about this series at http://www.springer.com/series/10068

Sandrine Glatron · Laurence Granchamp
Editors

The Urban Garden City

Shaping the City with Gardens Through History

🛡 Springer

Editors
Sandrine Glatron
Laboratoire Dynamiques Européennes—
    DynamE
Université de Strasbourg/CNRS
Strasbourg
France

Laurence Granchamp
Laboratoire Dynamiques Européennes—
    DynamE
Université de Strasbourg/CNRS
Strasbourg
France

Printed on acid-free paper

Contents

Contributors

Cathy Blanc-Reibel Dyname UMR 7367 and AMUP EA 7309, University of Strasbourg, CNRS, Strasbourg, France

Marion Brun CITERES UMR 7324, University F. Rabelais, Tours, France

Jean-Noël Consalès TELEMME UMR 7363, Aix-Marseille University, Aix-en-Provence, France

Brice Dacheux-Auzière Laboratoire de recherche en paysage (Larep), École nationale supérieure de Paysage (ENSP—site de Marseille), Marseille, France

Eleni Dalipi Laboratory of Urban Design, National Technical University of Athens, Athens, Greece

Kaduna-Eve Demailly Lab'URBA, University Paris-Est Créteil, Marne-la-Vallée, France

Arnaud Frauenfelder HES SO Genève, University of Applied Sciences and Arts Western Switzerland, Geneva, Switzerland

Pauline Frileux Ecole Nationale Supérieure de Paysage (ENSP), Versailles, France

Frédérick Lemarchand MRSH-b Pôle risque, Université de Caen, Caen Cedex, France

Sandrine Glatron Dyname UMR 7367, CNRS, Strasbourg, France

Laurence Granchamp Dyname UMR 7367, University of Strasbourg, Strasbourg, France

Olivier Haegel Service of the Inventory of the Cultural Heritage, Strasbourg, France

Helene Haniotou Department of Urban and Regional Planning, School of Architecture, National Technical University of Athens, Athens, Greece

Ilse Hilbold University of Bern, Bern, Switzerland

Lotfi Mehdi CITERES UMR 7324, University F. Rabelais, Tours, France; UMR Live, Strasbourg, France

Beatrice Del Monte University of Milan, Milan, Italy; University of Turin, Turin, Italy

Kenjiro Muramatsu Department of Japanese Studies, University of Strasbourg, Strasbourg, France

Francesca Di Pietro CITERES UMR 7324, University F. Rabelais, Tours, France

Richard Raymond LADYSS UMR 7533, associated with Eco-Anthropology and Ethnobiology UMR 7206, CNRS, Paris, France

Mathilde Riboulot-Chetrit LADYSS UMR 7533, Panthéon-Sorbonne University, Paris, France

Victoria Sachsé Dyname UMR 7367 and AMUP EA 7309, University of Strasbourg, Strasbourg, France

Laurent Simon LADYSS UMR 7533, Panthéon-Sorbonne University, Paris, France

Céline Tanguay CITERES UMR 7324, University F. Rabelais, Tours, France

Stéphane Wandriesse Temos, University of Angers, Angers, France

Chapter 1
Places and People of Urban Gardens. Elements for an Introduction

Sandrine Glatron and Laurence Granchamp

Abstract Gardening in urban spaces refers to different meanings, depending on the context and circumstances. In this introductive chapter, we first synthesize the academic and intellectual debate in which our questioning about urban gardens raised. "Order and disorder in the garden: social and ecological stakes" was the complex issue we addressed in a colloquium held in Strasbourg in March 2016. During two days, we explored how, through history, some social groups used gardens as an instrument of contestation of a political, economic, aesthetical, or ecological order in urban areas, but also as an instrument of creation of new norms and new prioritization of values. In the past few years, the emergence of the food but also the biodiversity issues created a context of competition between opposed conceptions of order and disorder in the garden and of the garden in the city. This context contributed to increase the diversity of forms and meanings of gardens. This chapter intends to expose some key elements to analyze it through a basic framework.

Keywords Order/disorder · Kitchen garden · Social norms · Social practices Planning · History of urban thought

S. Glatron (✉)
Dyname UMR 7367, CNRS, Strasbourg, France
e-mail: sandrine.glatron@misha.fr

L. Granchamp
Dyname UMR 7367, University of Strasbourg, Strasbourg, France
e-mail: laugran@unistra.fr

As cities continue to grow all over the world, the presence of gardened spaces in the middle of the urban fabric, from balconies, terraces, facades, and roofs of the buildings to the parks and "remarkable" gardens, as well as all the variations of individual gardens or collective, family, shared, public, etc., is increasingly perceived as a marker of the quality of life in the city. The scarcity of available space, whether for urban development policy reasons or because of the property pricing, thus seems to inspire a multitude of initiatives for greening and gardening at different scales. Many examples, such as "guerrilla gardening" (Adams et al. 2013; Reynolds 2009; MacKay 2013), community gardens (Demailly 2014 and in the present book, Zacharias et al. 2012) and even the cultivation on foot trees spaces (Pellegrini 2012), show that the inhabitants' preoccupation is not only to preserve "a garden of oneself", a private space where to give free rein to its aesthetic tastes or his gardening skills, but to inscribe and preserve in the public space those plantations created and maintained by the inhabitants themselves. Is this the sign of a notable evolution of the ways of life and living in the city? Answering this question requires analyzing the functions attributed to gardens in cities over time and space.

Depending on the context and the circumstances, the planting practices can cover different meanings. However, these planting practices are never invested with a symbolic meaning as strong as when they touch on the food issue. Planting chard and carrots in the city is a manifesto of the will of the urban people to reconnect with the plants that feed them and to the act of producing one's own food, were this purely symbolic and anecdotal. In their contemporary forms, these garden practices can be alternately instruments of resistance and contestation of power, of political or financial relations expressed in the urban space, and supports of projections for new forms of relationship, not only between humans but also with the elements of the biosphere. On the one hand, they constitute more or less explicit forms of rejection of a social order expressed in particular through the organization and planning of urban space. For example, the picture of a frail flower planted in an open hole in the bitumen incarnates for the guerilla gardeners the peaceful resistance of the weak against an artificial urban world, aspired in the capitalist logics. On the other hand, contemporary gardens, especially community gardens, are often seen as privileged tools for popular education—because they appeal to both social animators and the audience they target. Beyond the real benefits in terms of social integration, the capacitation of fragile populations, this ambivalence of contemporary gardens in their collective form is calling out. Gardening practices thus appear as a source of disorders (by contestation) and also as an instrument for the reproduction of order (pacification). Besides, the practices of gardeners are not without causing conflicts between groups, or between divergent conceptions about "good practices", conflict also concerning urban and environmental aesthetic (Blanc 2012) or accepted uses of these spaces. Consequently, to what extent are gardens a privileged symbolic and physical place for production and confrontation between competing conceptions of "order", as normative representations of social relations but also of relations between human and the nature in the city? Which social groups oppose or propose other forms of social-spatial ordering, what are the values they defend, and how far (and on what) their possibly normative aims are going?

Moreover, to what extent, in certain circumstances, are conceptions of the place, functions, organization of gardens or "good" practices carrying a form of symbolic domination that expresses social, aesthetic, sanitary standards?

These central questions served as a guide for our reflections, during a colloquium entitled "Orders and Disorders in the Garden. Ecological and Social Issues", from which are the chapters of the present book. This international colloquium, held in Strasbourg in March 2016, sought to combine the knowledge of different disciplines: sociology, geography, urban planning, history, ecology, etc. The communications proposed ultimately came mainly from the human and social sciences: Only two teams of geographers and ecologists have also participated, one studying species characterization within the biodiversity approach and the other discussing the quality of urban soils for gardening. This shows how difficult it is to build an interdisciplinary approach; it seems that the way social scientists formulate their questions do not succeed in catching attention of their colleagues from natural sciences. However, the interest of urban stakeholder for our scientific questions and work must be highlighted, as the presence in the audience of landscape architects and staff of the garden and green spaces municipal departments could testify.

During this symposium, we focused our attention on three main issues. First of all, the place of the gardens in the thoughts and theories about the city, their functions and their evolutions, paying particular attention to kitchen gardens; secondly, the way gardens are seized by the hygienist current of thought and its historical and contemporary evolutions, in particular through the problematic of urban food; finally, to what extent does the issue of biodiversity and its maintenance in the city contribute to changing the place of gardens and gardening practices in city designs carried out by urban planners, landscapers, inhabitants.

The gardens, whether ornamental (for pleasure) or vegetable (for nurture), are the reflection of societies and of their time. It is perceptible in social practice as well as in the thinking of urban planners and/or landscapers. The symposium wanted to question the aesthetic thoughts that highlighted both the variability of models in the possible ordering of plant, mineral, and human elements in gardens, and the malleability of borders between savage and domestic, nature and culture. The order and disorder of plants and the order and disorder of society could be thought of analogously, as Haudricourt (1962) established a parallel between the mode of treatment of plants and animals and the place given to individuals in society (holistic or individualistic conceptions) in Western and Eastern civilizations. Can such an analogical view make it possible to highlight the emergence of new forms of thought of the mutual relations between plants and the urban fabric, or between plants and human societies? Or should we on the contrary be wary of this type of conception, as being a form of naturalism which obscures the reality of social relations? How, however, can we interpret the success of imaginary constructions that symbolically associate plant and building in the vegetal cities from the Belgian urban planner Luc Schuiten or the Belgian architect Vincent Caillebaud, for example? Similarly, does the growing enthusiasm for permaculture initially idealized by Hopkins (2010) reflect a true evolution of urban and environmental aesthetics? These questions remain a field of research to be explored, and above all a

challenge for the necessary interdisciplinarity in order to situate these imaginary and intellectual productions from the city planning history point of view, while proposing a critical reading from a sociological point of view.

No doubt the shift from a peasant-dominated civilization to a predominantly urban civilization contributes to shake up the functions and roles of the gardens: They embody a privileged link to places as a nodal point between the local and the global, a link to the land and to the elements of the biosphere, whatever the scale, and a social (or socio-anthropological) link. Two issues contribute to reconfiguring at the same time the place, the forms, the functions of the gardens, and the thinking about the city: the food issue on the one hand and the conservation of biodiversity in the city on the other. These two issues constitute the two other lines of reflection of our colloquium.

The food issue, in particular, is at the crossroads of health, social, and ecological concerns. First of all, pedagogical virtues and even moral contents are attributed to gardens; those have evolved over time but basically retain the objective of "educating" the working classes. In the nineteenth and early twentieth centuries, doctors, religious, and industrial leaders, adopting a paternalistic approach, favored the development, through Europe (in the north in particular) of "working class" gardens, renamed "family gardens" during the second half of the twentieth century.[1] The aim was to provide workers not only with means of obtaining fresh food but also with healthy recreation which could keep them away from politicization or perdition places (Weber 1998). And when today's social workers and doctors find support at the highest level[2] to encourage the multiplication of kitchen gardens (in whatever form: family, collective, community, etc.) as a means of fighting against obesity and its implications, to what extent can we see it as a renewal or a reconfiguration of the ancient hygienic movement? And which are the actors, among the professions that contribute to the manufacture of the city, who promote gardening and according to what perspectives? For example, when real estate developers include gardening spaces in their programs, to what kind of public do they address and to what extent do they contribute to the promotion of an hygienistic view?

Preserving biodiversity in the city could be another factor in promoting gardens. How does this challenge contribute to the renewal of urban planning on the one hand and urban policies on the other? What is the role of urban gardeners and farmers in achieving this general objective? How and under what circumstances do some gardeners and farmers adopt or, on the contrary, resist to policies aiming at regulating the uses and treatments (in the broad sense) of plants? From standards to eliminate the use of chemical treatments, to the classification of plants (invasive/

---

[1]This terminology is a little different in the Roman countries and in the Saxon ones where the term allotment does not exactly show this particular shift in meaning and naming from one garden «type» to another (working class to family).

[2]Notably the wife of the former President of the USA, Michelle Obama, who decided to create a vegetable garden in the White House to "set an example" and encourage vegetable crops as an antiobesity tool; see also WHO report (WHO 2012).

threatened) and the political management of seeds, the dialectic of order and disorder offers a particularly rich analytical framework and heuristic approach to deal with the reciprocal relationships of plant life and social practices.

The circulation of populations (and plants) encourages the meeting of models, representations and practices in the field of plant management and the organization of gardens. At the intersection of the social and the ecological, the aesthetics of the gardens undergo notable variations that reflect different social perceptions of order and disorder, shaking up the gap between nature and culture, savage and domestic, autochthonous and nonnative.

This is a challenge for the encounter and dialogue of fields of knowledge: not only between knowledge of the natural sciences and the social sciences, but also "knowledge of everyday life," this "ecology of knowledge" (De Sousa Santos 2016) in consideration of other temporalities, other ways of doing and thinking.

As a preliminary to our questions and because of the diversity of gardening forms in the city, we propose a schematization of the factors allowing to define the urban gardens and to position ourselves in the vast array of gardening forms that result from the various combination of those factors.

1.1 Key Elements for a Typology to Characterize Urban Gardens

The diversity of gardens that the walker can observe in the same urban space but perhaps even more when he walks from city to city in the different regions of the world is obvious. During our colloquium and by bringing together the chapter texts, elements of this diversity emerged in particular when we were confronted with the ways of designating gardens in different languages and for different historical and legal contexts. As explained above, the case of the French allotments can illustrate this specific question of language as well as of history and evolution: France first had the gardens for workers, called "workers' gardens"; by mid-twentieth century, they were called "family gardens": None of these two designations can be found in the English context which designates these types of garden under the word "allotment," the family garden referring instead to the garden adjacent to the individual house. The exercise of translating texts from French to English and the narrative of garden experiments from different countries and different periods gave an opportunity to perceive this multiplicity of the conception of the gardens from a social, legal (or juridical), and economical point of view. It also led us to point out terminological difficulties in order to make it account. The term "gardens" often refers to places which forms, functions and uses, management mode, and even "contents" show intrinsic differences one from another.
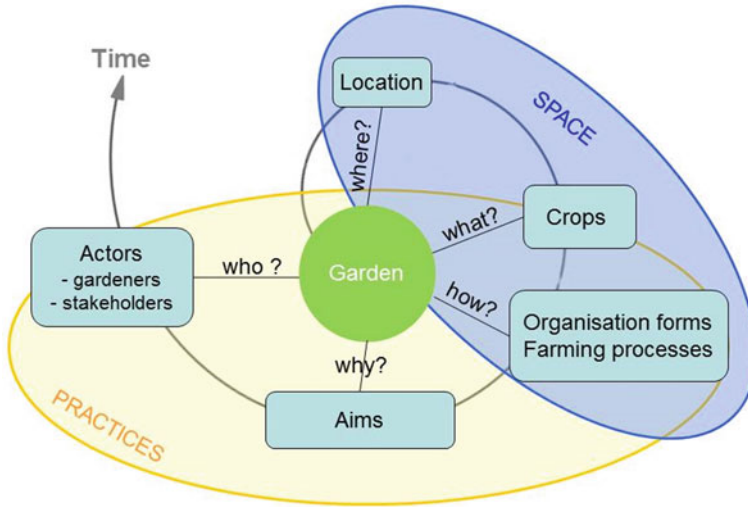
Fig. 1.1 Drivers of urban gardens characterization

As the scientific approach consists in carrying out an objectification to understand the differences, to reveal possible regularities and the relations between descriptive and explanatory variables, we propose a typological construction attempting to organize the real and the great diversity of the observable gardens, focusing on the following questions: Where are the gardens situated in the urbanized area and why are they there, what is grown in those gardens, how are the production cultivated, and who are the actors involved in these urban gardens (Fig. 1.1)? Thus, the aim is to suggest key elements to establish an analytical grid, to propose questions to classify the gardens, and to point out their differences.

1.2 Where in the Urban Area?

The relationship with grounds and soils seems essential to define the gardens: Today, in a context of strong land pressure, new forms of urban agriculture develop soilless, on rooftops and along façades, in story greenhouses or over water basins for aquaponics and hydroponics, for example. Even for the only urban gardens, the location of gardens in urban areas may have some importance in other parameters such as plot size, crop choice, and even the actors involved. For example, is the city-countryside gradient always determinant? The very morphology of the urban fabric is here at stake, both for constructed spaces and for natural or "green" interstices. Land pressure and the evolution of cities are central to the configuration of the gardens. The simple equation in which the centrality is correlated with the density and size of the gardens is partly shaken up along with the economic history

and the evolution of the modes of thinking the city. For example, the areas devoted to market gardening and food crops that feed urban inhabitants have been gradually eroded by urbanization. But in the context of the urban sprawl, even within urban areas or their fringes, recent changes have followed the gradual closure of industrial intramural spaces, sometimes with the installation of green spaces that are now very central. This is, for example, the case of the gardens of the Seguin Island in Boulogne-Billancourt, in the Paris region, installed on the very place of the Renault automobile production plant, which was closed in 1992. Another example is the landscaped park of Duisburg-Nord, Germany, a vast natural park of 230 ha which extends on the site of a former iron and steel factory closed in 1985 (Lusso 2010). Following a similar historical pattern, intra-urban wasteland has often been a favorite place for community gardens in the last century, as in New York at the beginning of the contemporary wave of creation of these community gardens in the early 1970s. Baudry (2011), for example, described this model of inclusion of the community gardens in New York. Abandoned spaces are now places of anchorage for the citizens who gather there and silently or loudly claim their "right to the city" (Lefebvre 2009). In the present book, this movement is quite replicated by the example of Rome, where the wastelands were used as an instrument of struggle against speculative promotion, appropriated by the activist inhabitants (Chap. 13). It must be noted that this geographical question is obviously a dynamic phenomenon, the location being somehow evolutionary, changing from peripheral to central as cities spread out.

Localization in the three-dimensional space is also fundamental: The height and orientation of the gardening places considered relatively to the ground make it possible to distinguish suspended gardens, gardens on balcony or window sills, on facades or on rooftops. From a spatial point of view, there is an important additional factor in the description and characterization of gardens, very much linked to their bi- and tri-dimensional location: their size. In this book, we only had example of gardens located in dedicated spaces, almost all of them resting on the ground, except for certain gardens described in the nomadic gardens of Paris (Chap. 14). The size of the studied gardens will then be very restricted, but the role attributed to these gardens has a symbolic importance. Size is also an important factor in the relationship between gardens and biodiversity, as explained in Chap. 10.

1.3 What Is Grown?

If a traditional classification of gardens differentiates them essentially according to a criterion of use, distinguishing amenity gardens from food gardens (see, for example, the definition of the Encyclopedia Britannica[3]), the border between amenity and food production is far to be hermetic. Cultivated species, even when

---

[3]https://www.britannica.com/science/gardening/Types-of-gardens.

destined for food production, are often chosen also by taking into account their aesthetic aspect in itself or by implementing combinations of edible plants with ornamental plants. The border between ornament and food is also shifting nowadays, with the use of edible plants by gardeners, such as fruit trees in cities or even stems with several colors to decorate massifs; in the same line, vegetable gardens were traditionally tidy in lines and squares but are now thought totally differently on the aesthetic and organizational level, favoring complementarities between cultures on several floors and producing a very different aesthetic. This is discussed in particular in Chap. 9.

The biodiversity order is a new criterium carefully considered by gardeners, orienting their choices of species, as an historical overview proves it in the Chap. 8, which is dealing with the rationalization and ecology point of view in the kitchen garden during half a century.

The choice of what is grown is placed in a geographical context and therefore linked to the biotic and abiotic conditions that can evolve with the influence of global changes. But it is also tightly linked to the social, cultural, and even political and economic context. Thus, diets influence planting practices, as much as the availability of plans and seeds or the laws driving the use of adjuvants, phytosanitary products, or fertilizers, as described in Chap. 6, devoted to the gardens of the king of France, Versailles. The choice of species and varieties is also subject to fashion effects and depends on the diffusion of knowledge and know-how. The time factor is very important here because the changes are rapid and constant as regards both biological and social factors. For example, the sweet potato grown locally has appeared on the stalls of the Strasbourg markets in recent years both because the natural conditions are now available and because there is a consumer demand. A more complex example of dissemination of knowledge and know-how concerns the propagation of ideas relating to permaculture and the creation of networks of experimentation and exchanges on this subject (for example, http://www.permaculture.fr/for the French network or the permaculture association in the UK https://www.permaculture.org.uk/).

Concerning food production in the gardens, one can wonder about diversity in the sense of a subject linked to biodiversity. The counting of species and varieties is one of the objectives of several research projects related to urban gardens, such as Biodiversity in Urban Gardens studies (BUGS) in England or the French Jardins ASSociatifs URBains (JASSUR). Cultural diversity is sometimes a goal of gardening, as in the case of the gardens of the king, in Versailles, whose initial vocation to propose extraordinary plants has been pursued until today by gardeners of the National School of Horticulture: They try to propose ancient varieties of patrimonial value, even if the methods of culture have changed. In the same line, urban biodiversity can be enhanced by very central gardens as shown in Chap. 7.

Vegetal associations are not trivial and sometimes very carefully carried out by gardeners. Therefore, we can wonder how flowers, vegetables, and fruits are combined, both in anthropological terms (which models are pursued, what knowledge is transmitted in this respect?) and in agronomic terms: Do garden

species and their associations contribute to an impoverishment (or at least to a strong selection and then a generalization of a small number of plants) or to an enrichment of the biodiversity? Do urban kitchen gardens favor a diversification of crops and production, especially compared to what is commercially available in particular in large retailers?

In terms of analysis, "productive" gardens are linked to urban agriculture, which has giving part to a growing wave of experiencing practices (citizen initiatives and entrepreneurial initiatives) for several decades. At the same time, urban agriculture was and is subject to many scientific researches concerning urban agriculture by itself (Mougeot 2000; Duchemin et al. 2010; Nahmias and Le Caro 2012; Granchamp 2012, for example) and various related subjects as the impact of short supply chains and food governance at a city scale.

1.4   How?

The cultivation modalities are also a variable allowing the classification of the urban gardens. Today, gardeners tend to re appropriate knowledges and know-how and to show an inexhaustible creativity leading to innovation in terms of tools, practices, and philosophy. This is reflected in the blooming of Internet forums and blogs offering uses of tools examples (like the "grelinette"), demonstration of farming method (like Lasagna bed or mulching), and the cultivation of plant species or associations such as permaculture. A few examples may be mentioned: https://www.un-jardin-bio.com/ or https://www.planetnatural.com/organic, http://grainedeparesse.canalblog.com. DYI Web sites and blogs also have gardening components that detail these innovations.

The variation of cultures and methods (farming modalities) therefore offers a very wide panorama that can be approached both from an agronomic and ecological point of view and from sociological and anthropological angles.

1.5   Why/What for?

Cultural choices and cultural methods are partly determined by "natural" conditions but also by the cultural, social, and political context as mentioned above. The objectives pursued by the actors of the gardening initiatives are an interesting point of characterization: from the search for food security to the pursuit of a better quality of life which involves the consumption of locally produced and quality plants, urban gardens are varied and very often multiple, multifunctionality being one of the characteristics of gardens and urban agriculture (see Chap. 10). Figure 1.2 shows the different objectives between which the gardens may oscillate.

Self-sufficiency or food security is the object of research and attention by city dwellers themselves, at least to certain strata of the population, but also by food
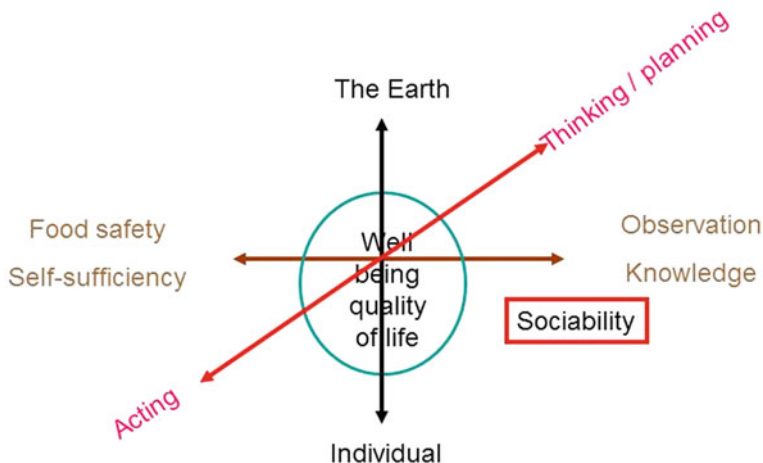
Fig. 1.2 Possible variations of urban gardens aims and objectives

programs on a global scale. It can be linked to political strategies leading to voluntary planning (as told by the history drafted in Chap. 5). At the other end of a spectrum which would contrast food gardens and amenity gardens, the pleasure of growing plants in a dedicated space, while contributing only modestly to the urban food ration, is not without impact on the quality of life and sociability and also on urban biodiversity (to name but a few of the functions of the garden): "The observation of many vegetable gardens and the ways their gardeners farm shows that these gardens are charged with intentions and symbols beyond the sole preoccupation of producing food" (Larbey 2012).

The reference models of gardeners change over the ages as shown in both Chap. 4 with the case of Switzerland during the twentieth century, and in Chap. 6 with the case of Le potager du Roi, the king's garden of Versailles, from the seventeenth century to nowadays. The gardens are invested with a lot of meaning: sometimes even the look of an era on the historically established gardens varies, clearly pointing out these evolutions in the objectives of the gardens: Chap. 2 shows through an historical approach how archaeological remains are reinterpreted through ages. What we know about Roman gardens is, somehow, the result of these overlays of readings depending on presuppositions which define gardens, at a specific moment of the history of research.

1.6   Who?

The why and how of urban gardens are declined in the same way or differently by the different actors of society who are directly or indirectly involved in urban gardens. Indeed, various stakeholders take part in gardening in the city: from the gardeners themselves, to politics, which can be declined from the "planetary" scale

(with "dogmatic" and strategic orientations) to the very local one, with the leaders of neighborhood and gardens investment.

Considering the gardeners, social and demographic characteristics are interesting to observe. Women, for example, often play a central role in culture as many gender studies have concluded (Hovorka et al. 2009; Ba and Granchamp 2017, for example). Sometimes, according to the neighborhoods where the gardens are situated, gardeners can have marked dominances: rather workmen or middle-upper class individuals with scholar diploma in the heart of our European cities, the gardening activity can appear as a facilitator for mixing population in a local context. But the social cohabitation is sometimes a challenge and shows that these social features are of importance in the success of the garden management, as described in Chap. 15. Despite extensive research on urban gardens, such as BUGS or JASSUR, cited above, social approaches are still to be developed, particularly with regard to the study of socio-demographic characteristics and the motivations of gardeners. In the present book, they are reviewed in Chap. 5 on Russian collective gardens and Chap. 12 on urban gardens in Greece.

A major feature distinguishes urban gardeners seen in their plots: the individual vs the collective. The first category mostly refers to the private gardens of single-detached houses, present in the heart of the cities, but more generally in the suburbs: The front or backyards are often aggregated in the heart of the islet or along the means of communication. Collective gardens, on the other hand, are relatively varied, in their form, but especially in their uses and functioning. In these gardens, the relationship of gardeners with the collective is studied in particular in Chap. 5 for Kazan (Russia) and Chap. 15 for Strasbourg (France) where it may appear as problematic. Urban gardens, when they are collective, are indeed privileged places for experiencing to live together. Recent reflections on the commons give the gardens a key role in rethinking the right to the city and the relationships between the various urban stakeholders (Zask 2016). On this point, see Chap. 13. The status of ownership is also a nodal point of differentiation of the gardens: It is often about this question that the access of gardeners or other city people to the garden is discussed.

Individuals, but also legal entities, intervene in the garden, such as associations that create, manage, federate gardeners and are primordial in relation with local authorities who are primordial actors. As a precious link and forum for rich debates whether on technical point or on political subjects, NGO like The National Gardening Association organize events and display documentation for gardeners; on the philosophical level, the incredible edible make public their principles and actions, thanks to the Internet and recently thanks to meetings and events they organize throughout Europe. Over the ages, one can also appreciate the importance of landscape planners in gardening projects and the articulation of these in the city, as evidenced by the garden cities, or more modestly, by the contemporary community gardens described in Chaps. 3 and 11.

1.7   Structure of the Book

The book is subdivided into four parts that are concerned with different "orders" that govern or may have governed the integration of gardens in the city: models of urban thinking, urban-nature relationship or relation to urban biodiversity, landscape and urban policies, and finally social utopias.

Insight on European urban garden models through ages focuses on the thought patterns about city, the nature, and health problems that have driven and justified the development of urban gardens over the ages and in different cultural and political contexts. In this part we travel in time and European space: since ancient Rome and the gaze of historiography on those gardens up to contemporary Russia with the family gardens of Kazan, capital of the Republic of Tatarstan, passing through France (at the time when Strasbourg was German) and French-speaking Switzerland from the second half of the twentieth century.

The section on *Urban gardens under the biodiversity order* considers how biodiversity injunctions are reflected in the gardens in the French context, again in various historical periods.

The third section, *How gardens are part of the urban landscape policies and practices,* is a brief panorama of the cityscape point of view of gardens in the city, mostly from an institutional position.

The last part *Gardening collectively: what potential places and space?* deals with the way urban collective gardens are privileged spaces for the expression of a new urbanity and of experimental forms of urban spaces and nature governance in the city. They constitute peculiar places of sociability as well as experimentation for re-territorialized food production and therefore can be seen as the roots of possible transitions in living and producing.

References

Adams D, Scott AJ, Hardman M (2013) Guerrilla warfare in the planning system: revolutionary progress towards sustainability? Geogr Ann: Series B, Hum Geogr 95(4):375–387

Ba A, Granchamp L (2017) Femmes africaines nourricières? La place des femmes ans l'agriculture urbaine à Dakar. In: Granchamp L, Pfefferkorn R (dir.) Résistances et émancipation des femmes du Sud. Travail et luttes environnementales, L'Harmattan, Paris, pp 74–96

Baudry S (2011) Les community gardens de New York City: de la désobéissance civile au développement durable. Rev Fr d'études américaines 3(129):73–86

Blanc N (2012) Les nouvelles esthétiques urbaines. Armand Colin, Paris, p 219

Caillebaud V (2015) Les cites fertiles face aux enjeux du XXIe siècle, Paris: éd. Michel Lafon

Demailly KE (2014) Les jardins partagés franciliens, scènes de participation citoyenne? *EchoGéo* [En ligne], 27 |2014, mis en ligne le 20 mars 2014, consulté le 15 septembre 2017. URL: http://echogeo.revues.org/13702; https://doi.org/10.4000/echogeo.13702

De Sousa Santos B (2016) Epistemologies of the South. Justice against epistemicide, New York: Routledge (first published by Paradigm Publishers, 2014)

Duchemin E, Wegmuller F and Legault AM (2010, Septembre) Agriculture urbaine: un outil multidimensionnel pour le développement des quartiers. VertigO—la revue Electronique en sciences de l'environnement [En ligne] 10(2)

Granchamp L (2012) L'agriculture urbaine, un enjeu de la ville durable. Revue des Sciences sociales 47:142–152

Haudricourt G (1962) Domestication des animaux, culture des plantes et traitement d'autrui. L'Homme 2(1):40–50

Hopkins C (2010) Soil Fertility and Permanent Agriculture, Boston, New York, Chicago: Ginn and Company, (digitized in 2007 http://www.archive.org/details/soilfertilityper00hopkiala)

Hovorka A, De Zeeuw H, Njenga M (2009) Women feeding cities—mainstreaming gender in urban agriculture and food security. Practical Action Publishing, Rugby, UK

Larbey V (2012) Jardins et jardiniers: les pieds dans la terre, la tête dans les nuages. Une anthropologie du potager, PhD dissertation, Montpellier3

Lefebvre H (2009) Le droit à la ville (3ème éd), Economica, Paris

Lusso B (2010) Culture et régénération urbaine: les exemples du Grand Manchester et de la vallée de l'Emscher. *Métropoles* [En ligne], 8 | 2010, mis en ligne le 30 novembre 2010, consulté le 15 juin 2017. URL

Mackay G (2013) Radical Gardening: Politics, Idealism and Rebellion in the Garden, Frances Lincoln ed, London, p 224

Mougeot LJA (2000) Urban Agriculture: definition, presence, potentials and risks, and policy challenges, Cities Feeding People Series, report 31. IDRC, Ottawa

Nahmias P, Le Caro Y (2012) Pour une définition de l'agriculture urbaine: réciprocité fonctionnelle et diversité des formes spatiales, Environnement urbain/ urban environnent, 6, http://eue.revues.org/437

Pellegrini P (2012) Pieds d'arbre, trottoirs et piétons: vers une combinaison durable. *Développement durable et territoires* [En ligne], vol 3. n° 2 Juillet, mis en ligne le 12 juillet 2012, consulté le 15 juin 2017. URL: http://developpementdurable.revues.org/9329; https://doi.org/10.4000/developpementdurable.9329

Reynolds R (2009) On Guerrilla Gardening: a Handbook for Gardening without Boundaries. Bloomsbury Publishing PLC, London, p 224

Weber F (1998) L'honneur des jardiniers. Les potagers dans la France du XXe siècle, Belin, Paris

World Health Organization (WHO) (2012) Prioritizing areas for action in the field of population-based prevention of childhood obesity. A WHO library. Available on the Web site (www.who.int)

Zacharias M, Hehl F; Halde S, Martens D (éd) (2012) Hortis—Horticulture in towns for inclusion and socialization, Publication realised within the European project n. 526476-LLP-1-2012-1-IT-GRUNDTVIG-GMP, available at www.hortis-europe.net

Zask J (2016) *La démocratie aux champs. Du jardin d'Eden aux jardins partagés, comment l'agriculture cultive les valeurs démocratiques,* La Découverte, Les Empêcheurs de penser en rond, Paris

Author Biographies

Sandrine Glatron works as a research scientist at the French National Center for Scientific Research. She is the leader of a french Long term social-ecological research network in the Strasbourg metropolis, the Zone atelier environnementale urbaine (ZAEU) and the deputy-director of the DynamE Laboratory. In march 2016, she organised, with Laurence Granchamp, an international colloquium on "orders and disorders in gardens: ecological and social stakes" (Ordres et désordres au jardin, enjeux écologiques et sociaux). She has been studying the city dwellers

representations of their living environment and of the nuisances attached to it (various pollutions and hazards) since the 2000', in the french context (Strasbourg, Paris), in relation with the political and city planning context.

Laurence Granchamp is Associate professor of sociology at the Department of Social Sciences, University of Strasbourg, and member of the DynamE Laboratory. She co-organized with Sandrine Glatron the publication of a special issue for the Revue des sciences sociales on *citizenship and the environment* (june 2016). Her researches focus on urban agriculture as a social movement highlightening evolutions of representations about urbanity, "nature" and food among urban dwellers and farmers, together with local urban policies on agriculture with special attention to the ecological and social justice issues, and on local food policies and gardening as tools for ecological transition.

Part I
Insight on European Urban Gardens Models Through Ages

Chapter 2
Building a Garden: Historiographic Analysis of "Roman Gardens" in the 19th and 20th Centuries

Ilse Hilbold

Abstract Pierre Grimal's 1943 thesis on Roman gardens, the birth of archaeology of gardens and the recent opening of museum spaces dedicated to Roman gardens are three founding moments of the modern history of gardens. Since the Renaissance period, however, successive readings of archaeological remains, and Latin and Greek texts have fed the history of Roman gardens, overlays of interpretations, intellectual disputes, opposing and enriching points of views. "Roman Gardens", as researchers comprehend the subject today, are the results of this history. The object of this chapter is to question the *construction* of the history of gardens, what we would otherwise call "historiography of Roman gardens", by bringing to light the more or less visible presuppositions which define gardens, at a specific moment of the history of research.

Keywords Roman gardens · Historiography · Pierre Grimal · Roman aristocracy *Urbs* · *Horti*

2.1 Introduction

In the field of ancient history, the subject of gardens in Roman antiquity has known an important development since the mid-twentieth century.[1] One of the key moments of this evolution is certainly the publication in France in 1943 of Pierre

---

I. Hilbold (✉)
University of Bern, Bern, Switzerland
e-mail: i.hilbold@gmail.com

Grimal's (1912–1996) dissertation entitled *Les jardins romains. Essai sur le naturalisme romain* (Grimal 1943). For the first time indeed, a monography offered an academic treatment of gardens in Roman antiquity. In a way, this work allowed Roman gardens to enter university, elevating them to the rank of studies: the subject was not "frivolous" anymore, it became academic (Marrou 1944, p. 191). Example of a first cultural history "à la française", P. Grimal's *Les Jardins Romains,* received a warm welcome overall in the academic world, and the reception of the work, very significant, was international. In Europe, the work of the British Wilhelmina Jashemski (1910–2007) constitutes a second turning point in the historiography of gardens. Both volumes of her *Gardens of Pompeii, Herculaneum, and the Villas Destroyed by Vesuvius* (1979–1993) confirm the interest of academics for gardens. This time, however, archaeology is involved through methods of excavation and analysis of the gardens' vegetal and animal remnants. A new discipline is born, archaeology of gardens (Jashemski 1979, p. 25, 1981, p. 31 s.; Von Stackelberg 2009, p. 60; Malek 2013), which Jashemski models by laying its methodological foundations with her digs in Naples Bay as of the mid-1950s (Jashemski and MacDougall 1981; Jashemski 1992). Attesting of the interest of the general public and obvious sign of the growing legitimacy of the study, the 1980s and subsequent years saw the birth of museum spaces dedicated to Roman gardens (Di Pascuale and Paolucci 2007) in parallel with the publication of art books regarding these gardens (Bowe 2004; Jennings 2006) (Fig. 2.1).

These three important moments, succinctly outlined, are part of a history of gardens which dates back in fact to Italian Renaissance when gardens of ancient Rome were rediscovered by the humanist movement. Since this time, successive readings of archaeological remains, and Latin and Greek texts have nourished the history of Roman gardens, overlays of interpretations and intellectual disputes, opposing and enriching points of views. "Roman gardens", as researchers comprehend the subject today, are the results of this history. In this logic, history of gardens in itself becomes an object of research which can be questioned with historical methods, through a point of view focused on the *formation* of the knowledge of gardens. It is precisely the purpose of this article to question the construction of the history of gardens, what we will call otherwise "historiography of Roman gardens".

The historiographic approach to the gardens which I promote has known an important precedent in the USA during the 1990s, when Dumbarton Oaks Department of Garden and Landscape Studies[2] published very abundant research

---

[2]Founded by Mildred and Robert Woods Bliss in the 1930s, Dumbarton Oaks Research Library and Collection are managed by Harvard University since 1940; divided into various departments (Byzantine Studies, Pre-Columbian Studies, Garden and Landscape Architecture Studies), the institution has become an international research centre on the art of gardens. For a history of the centre, see Wolschke-Bulmahn (1996), MacDougall (1999).

Fig. 2.1 Reconstitution of the garden of the Casa dei Vettii in the Firenze exhibition Il giardino antico da Babilonia a Roma, May–October 2007 (I. Hilbold)

on the historiography of gardens (e.g. Hunt 1992; Conan 1999). These articles certainly had a major impact on subsequent research as among the contributors, many advocated, in the strongest sense of the word, for the individualisation of gardens and landscape as objects and field of research in their own right, so as to associate them with a thinking and a method. Enforcing this position, a certain form of reflexivity was developed with a critical look on historian practices, supporting historiographic reflexion (Brunon and Mosser 2007, p. 61 s.; Beneš and Lee 2011).

In the proposed perspective, historiography is therefore not exactly a state of the art. Of course, we are firstly dealing with the analysis of what was written previously. But we are also dealing with the analysis of the more or less visible presuppositions on the history of gardens, which finally leads to the discovering of how gardens are defined at a specific time of history of research. The choice of the subjects covered, as well as the justification of their interest and their integration in the academic field, is therefore at the heart of the reflexions of the researcher in historiography, who will thus seek to identify movements of thought and historiographic trends.

In this text, I am not proposing to explain why historiography is as it is, but rather to describe by which means it was forged. Through the use of history and of its writing, it is the formation of a discipline or of an order of gardens, which is all but ancient, which I wish to bring to light. Thus, we shall see how the "Roman garden"—which I speak of using quotation marks—was constructed since the nineteenth century through to becoming a concept. To illustrate my point, I will rely on a sample of German and French history of Roman gardens, and I will analyse its biases. I shall begin with nineteenth-century authors, philologists and archaeologists, who lay the lasting foundations for the apprehension of "Roman gardens". Then I will dedicate the main part of my paper to Pierre Grimal's book, *Roman Gardens,* whose interest notably lies in the major impact which it maintains up to the present day in French-, Italian- and English-speaking countries. The application of these historiographic results leads to the formulation of a new question; I will finally elaborate on this new perspective of analysis specifically involving one of the types of Roman gardens, a very peculiar object due to its aristocratic and residential features: the *horti* of the city of Rome.

2.2 A "Prehistory" of Gardens: A Philological and Literary Nineteenth Century

It is of course understood that a "prehistory" of gardens existed before P. Grimal. We could thus trace it back to the Renaissance period, during which the gardens of Rome were rediscovered (Chastel 1990, p. 3; Comito 1991; Coffin 1999). At that time, the first excavations of ancient gardens took place and outstanding works of art decorating them were rediscovered, such as the *Dying Seneca* (*Old Fisherman*), presently in the Louvre, or the Vatican Museum's *Meleager* (Belli Barsali 1990, p. 341 s.; MacDougall 1994). At this period as well were drawn the first maps of ancient Rome presenting its gardens (Straumann 2002, col. 865).

However, it is more relevant to look into the nineteenth century, as at that period the concept of "Roman garden" is problematised for the first time, when German philologists and Italian archaeologists wrote the first history of gardens. The firsts studied Latin texts, while the latter analysed Roman topography and the remains of the city of Rome, which at the time of the unification of Italy and subsequently of "Rome capital" was undergoing profound urbanistic change (Bocquet 2001; Brice 2001; Palombi 2006). What should be retained of this prehistory can be summed up in two major points which we illustrate here with little known examples, though extremely representative.

The first point concerns the essence of an art of gardens in Roman antiquity, which researchers attempted to uncover, for instance through the use of comparison

with famous eighteenth-century and nineteenth-century parks and gardens. In his 1865 writing, Karl Simonis, a young scholar of Saxony-Anhalt (Germany), thus compares ancient gardens with Versailles's gardens, Potsdam's Sanssouci or Schwetzingen's gardens near Mannheim. He concludes that topiary art, as referred to by Pliny the Elder (*Nat.* 16.140[3]), was the result of a necessity, due to a supposed limited number of known species (Simonis 1865, p. 12):

> [Romans] sought to fill these gaps and resorted to sophistications which, in truth, easily fall into bad taste.[4] ("*Diesen Mangel suchte man zu verdecken und fiel auf Künsteleien, die allerdings so leicht in Abgeschmacktheit übergehen.*")

By referring to "gaps to be filled", to "sophistications" and to "bad taste", it is clear that K. Simonis bases his analysis on a system of valorisation of the art of gardens. Ultimately, according to Simonis, the aesthetics of gardens allow an assessment of a society's state of development, referring here to Roman society, and his conclusion is not very optimistic.

K. Woksch appears to position himself opposite in his work published in 1881 in the Leitmeritz Gymnasium's annual report, seeking through historical references and philosophical developments to valorise the art of Roman gardens. He demonstrates that the latter reflects a developed feeling of nature among the Romans ("ein wertvolles Zeugnis für ein bereits intensiv entwickeltes Naturgefühl" [Woksch 1881, p. 22]).

This idea of a "feeling of nature" joins a certain ahistoric inclination frequently found when dealing with a subject involving cultural history. This tendency consists of erasing all periodisation and historic contextualisation of events, practices or sentiments, in order to bring to light common features with the Ancients. In that respect, we can speak of "genealogical thought" with Dupont (2013, p. 18), since these historians seek to relate their period to a dreamlike and fantasised antiquity, through correspondences of tastes and sentiments. This tendency remains identifiable with Marie-Luise Gothein, whose works on the history of gardens from antiquity to Renaissance (Gothein 1914)[5] receive by the way an important interest from the part of historians of art since the last decade (De Vico Fallani and Bencivenni 2006).

---

[3]Plin. *Nat.* 16.140: «… but nowadays it is clipped and made into thick walls or evenly rounded off with trim slenderness, and it is even made to provide the representations of the landscape gardener's work, arraying hunting scenes or fleets of ships and imitations of real objects with its narrow, short, evergreen leaf.» (*…nunc vero tonsilis facta in densitatem parietum coercitaque gracilitate perpetuo teres trahitur etiam in picturas operis topiarii, venatus classesve et imagines rerum tenui folio brevique et virente semper vestiens.*) Translated by H. Rackham, The Loeb Classical Library, Harvard University Press, 1960.

[4]All German and French translations are ours.

[5]Gothein acquired academic acknowledgement for initiating study of art of gardens. Her works were translated and republished many times (Gothein 1926, 1977, 1988, 1997 for German language editions; Gothein 1928, 1966, 1979 for English versions; Gothein 2006 for the Italian version).

The second important point in the nineteenth-century history of gardens is methodological. In this period, a typological levelling of different types of gardens can be observed, caused by the exclusively aesthetic study of gardens. By not considering the fact that there could be different types of gardens in antiquity, nineteenth-century historians and archaeologists linked all available sources to the same object, the "Roman gardens". In this way, literary sources mentioning gardens included in the *domus* or *villa*, physical data originating from the city of Rome or Pompeii, as well as from some rural sites, all of them were used for the same purpose, analysing the "Roman garden" phenomenon. Analysis of encyclopaedic dictionaries' articles is in this respect utterly compelling (Lafaye 1900, p. 276–293; Olck 1912, col. 767–841; Gall 1913, col. 2482–2488).

As a consequence, "Roman gardens" became a miscellanea of biased characteristics and deceiving unity. This approach, by wrongfully unifying a plural object, is all the more confusing as taken one by one; the mentioned aesthetic elements do refer to an ancient material reality. In fact, this vision does not reflect the social reality of these different types of spaces (Fig. 2.2).

Fig. 2.2 Axonometric reconstruction of a Julio-Claudian domus (peristyle) (J.-M. Gassend, cf. Villedieu 2001, p. 35, Fig. 13)

2.3 Pierre Grimal and "Les Jardins Romains"

What happens next when, in the mid-twentieth century, Pierre Grimal, graduate of the École Normale Supérieure and former member of the French School of Rome, publishes his dissertation on gardens? Let us begin by saying that his work acquired an international acknowledgement (e.g. Toynbee 1946; Eichholz 1971; Le Glay 1971). Reissued until 1984[6] with very few modifications except for the subtitle ("Essai sur le Naturalisme Romain"), his work was welcomed as if the first dealing with the theme, the fifteen reviewers ignoring previous studies of archaeologists Virginio Vespignani, Carlo L. Visconti and Rodolfo Lanciani, German philologists and generalist art historians such as Karl Simonis, Marie-Luise Gothein, Georges Riat and others (Fig. 2.3).

But in fact, it must be said that Pierre Grimal's *Les Jardins romains*, by proposing a 600 pages monography, outstands in extent all anterior works. In four parts, the volume deals with the "Birth of the Art of Gardens", the "Gardens of Rome", the "Thematics of the Gardens" and the "Gardens in Roman Thought".

The third part on "Thematics of the Gardens" has without doubt kept its originality and validity, as P. Grimal proposed a study of gardens which includes the residence. Indeed, P. Grimal succeeds in schematising the aesthetics of gardens in a manner which is still supported to this day by archaeologists, and this ever since Wilhelmina Jashemski's works. P. Grimal thus demonstrated that the association of architecture and vegetalisation was the essential aesthetic basis of "Roman gardens".

The dissemination of built structures in a vegetalised environment creates the aesthetic of Roman gardens, which is enforced by an erudite meta-discourse linking these various built and vegetal elements: gardens are "very complex entities filled with symbols, where literature, religion, plastic art and architecture concur in offering an elaborate and learned interpretation of Nature" (Grimal 1984, p. 350). It is an interesting scheme which convinces even more when met with the works of historian Gilles Sauron (1994) or archaeologists such as Bettina Bergmann (2002). The latter offered to reconstruct the visual experience at the heart of villa gardens, bringing to light the architectural dynamics between house, garden and landscape. For example, Villa Oplontis's marble centaurs installed in front of some bushes in the North garden reappear on the parietal frescoes of a fountain stand, in an interior garden, of which the yellow background seems to reproduce daylight (Bergmann 2002, p. 114).

---

[6]There are three French editions of *Les jardins romains* (Grimal 1943, 1984; Grimal 2000² [1990] for Italian translations). Should be mentioned the study "*L'art des jardins*", published in 1954 in the "Que sais-je?" collection, reedited in 1964 and 1974 (Grimal 20053 [1990] for Italian translations), and later in the miscellaneous volume *Rome et l'Amour* (Grimal 2007), to which are added unpublished texts on the same theme. From these derive encyclopaedic articles signed by P. Grimal in the *Oxford Companion for Gardens* (Jellicoe 1986, p. 476–478, republished three times) and in the *Encyclopaedia universalis* (Grimal, s.v. Art des jardins, Encyclopaedia universalis, 1980, pp. 395–401).

Fig. 2.3 "Les Jardins
romains" by Pierre Grimal ©
Librairie Arthème Fayard,
1984 (I. Hilbold)
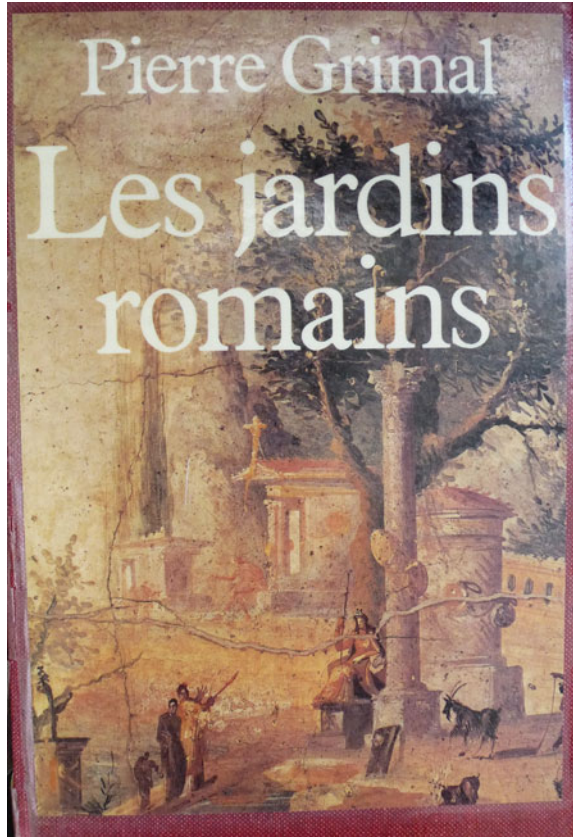
This being mentioned, we can now take a closer look at the presuppositions in
P. Grimal's study, at that which is little or not said and at that which in any case was
not sufficiently acknowledged by his readership. To begin with, it is important to
underline the fact that P. Grimal's study focuses on gardens as a Roman mani-
festation of a feeling of nature. Mankind, nature and art are united in one equation
which he calls "Roman naturalism".

P. Grimal's naturalism thus evokes all that which is beyond nature's triviality, to
concentrate on its aesthetic and spiritual potential, which in essence flourishes in
these gardens. Therefore, as gardens represent the quintessence of romanity,
P. Grimal seeks to "probe the soul of Romans", to uncover their naturalism:

> At most, a clever historian who, of a time, would only know gardens, could rediscover its
> spirit, and would certainly give an image as exact as if he would have known precisely the
> number of corpses accumulated on a battlefield, or the names of the provinces momentarily
> passing from one prince to another. A more exact image, certainly livelier and truer, more
> capable of unravelling for us this world of feelings and ideas which we call a civilisation.
> (Grimal 1984, p. 2)

> Among the objects from different archaeological and (in the wider sense) philological researches, some may be of greater interests than gardens: yet we believe there is none more *human*, none which would allow to better grasp the currents of thought and nuances of feelings which, otherwise, could only escape us. Of this importance and of this reach, we can as now give many clues. First of all the *depth* of the taste of gardens in the Roman soul. (Grimal 1984, p. 7)

> Like the gardens of Renaissance, the gardens of Antiquity express the entire system of the civilization which produced them. (Grimal 1984, p. 355–356)

Facing this metonymic approach which considers gardens as the summary of Roman civilisation, we can recall with Brunon and Mosser (2007, p. 215) "Ernst Gombrich's warning whom, after having grasped the limits of the Kulturgeschichte elaborated from Burckhardt to Warburg and Huizinga […], suggested: 'It is one thing to approach the facts through the way they relate to one another. It is another to postulate that all aspects of a culture can be brought down to one sole fundamental cause of which they are the manifestations'—the main pitfall in practicing cultural history lies in the fact that 'it is impossible to account for a culture as a whole, in the same way that it is impossible to understand each of its various elements separately'." (Fig. 2.4).

Fig. 2.4 Restitution of a garden Vigna Barberini under Hadrian's reign (J.-M. Gassend, cf. Villedieu 2001, p. 73, Fig. 51)

The second point, necessary to comprehending P. Grimal's work, relies on the fact that the garden is according to him a work of art ("As any art, gardens are firstly a choice", Grimal 1943, p. 3). In this respect, it is the transcendence of nature by man. In Roman antiquity, all gardens belong to this principle, including kitchen or domestic gardens, which represent in a way the antechamber to more ornamental gardens. Yet, defining gardens as works of art is a strong bias which has an important effect on further research and inevitably produces dead angles, particularly regarding social study.

It should be noticed as well that P. Grimal's and following researchers' definition of gardens as works of art is often supported with ethnological arguments, such as the regular use of comparison of horticultural practices—therefore in an ethnological comparatism—which furthermore confers to the Romans' feelings of love for their gardens. It can be read in various Italian, French and English researchers' works that the Romans must have had the spiritual need to cultivate gardens, that these would have been cared for with love and been considered as safe havens meeting their need for calm and withdrawal:

> It was also (expected of gardens) to satisfy other vaguer needs of 'the Roman soul', to suggest the countryside and its gods, to give its own interpretation of nature. (Grimal 1984, p. 203)

> A love of beauty and gardens was a basic part of their lives; the desire for a bit of green, a few herbs, and flowers appears to have been an integral part of their character. (Jashemski 1981, p. 4)

> It has already been suggested that gardens enabled house-owners to satisfy their love of plants, a love which seems to have been shared by the ancient peoples of Italy. (Conan 1986, p. 352)

These feelings are barely ever expressed in ancient sources, but are nevertheless common in our contemporary and especially urban societies. These essentialist approaches of gardens directly connect the ancient and contemporary gardens in a form of genealogy, in the same way that nineteenth-century authors already did. These approaches generally have as prerequisite a vision based on the form of the garden, its materiality. Prism of the vision, the aesthetic study and the spacial visualisation of gardens broadly obstruct the problematisation of its social and political aspects.

2.4   Gardens to Live in: The Residential *Horti* of Rome

It is possible to make a suggestion consisting of dematerialising the garden and rematerialising practices. In concrete terms, this means looking into what was done in gardens in terms of practices, while not focusing on their aesthetics (De Certeau 1990). This approach is particularly effective in the case of a specific type of ancient Roman garden which has not been studied much in history, the Roman city's *horti* (Frass 2006; Von Stackelberg 2009).

Bringing to focus the significance of practices allows to account for the fact that *horti* are singular historical objects. The significance in ancient texts of the change to the plural form, from *hortus* to *horti*, has already been noticed, as in fact *hortus*, the garden, and *horti*, the aristocratic residential gardens, do not refer to the same object (Purcell 1988, 2001). One is *a part* of a residence (*hortus*), and the other is *an entity*, a residence in its own right, which Romans called "gardens" (*horti*). The *horti* share some essential material characteristics of Roman gardens (e.g. the association of buildings and vegetalisation: Grimal 1943, pp. 201–351; Gleason 2010), but distinguish themselves from their belonging to very different topographic, urban and social contexts.

We can establish that *horti* of Rome are *not quite* gardens, or rather that they are a very specific type of gardens. The *horti* designate a residence in its full right in much the same way as the *domus* or the *villa,* and are integrated into the range of aristocratic residences. A well-born Roman, an aristocrat, owns a *domus* in Rome, where he can stage his family's stable implantation in the neighbourhood and where lies his political seat. He also owns several villas in the Italian peninsula or eventually in the entire empire, where intendants and slaves take care of his economic and agricultural patrimony. Finally, from the first century B.C., he also owns *horti*, these famous residences located at the limits of the centre of Rome.[7]

As these parts of Rome were very urbanised, the residential character of the *horti* is not so much attested by archaeology but rather by the texts. The corpus of residential *horti* thus results in a picture of very little vegetalised gardens, but on the contrary very inhabited. For example, in the *Horti Caesari*s, Cesar invited the people to a banquet where he was acclaimed for his victory over Sextus Pompey (Val. Max. 9.15.1). Cicero hastened to the *Horti Pompeiani* to advise the Rome consul Pompey the Great in a state affair (Cic. *Mil.* 65).

One ate there:

> And Crassus, as though to make all Rome witness of our reconciliation, set out for his province virtually from my door-step. He offered to dine with me, and did so at my son-in-law Crassipes' [gardens].[8]

One slept there:

> When meanwhile word came that the other armies had revolted, [Nero] tore to pieces the dispatches which were handed to him as he was dining, tipped over the tables, and dashed to the ground two favourite drinking cups, which he called 'Homeric', because they were carved with scenes of Homer's poems. Then taking some poison from Locusta and putting

---

[7]On the autonomy of the three types of aristocratic residences, see for instance Cic. *Att.* 11.6, where different types of property are successively listed: "As for Lentulus, he had earmarked Hortensius' town house and Caesar' [gardens] and [his place] at Baiae". *(L. uero Lentulus Hortensi domum sibi et Caesaris hortos et Baias desponderat.)* Translated by D.R. Shackleton Bailey, Cambridge University Press, 1966.

[8]Cic. *Fam.* 1.9.20: *... habui non temporum solum rationem meorum, sed etiam naturae, Crassusque, ut quasi testata populo Romano esset nostra gratia, paene a meis laribus in provinciam est profectus; nam, cum mihi condixisset, cenavit apud me in mei generi e Crassipedis hortis.* Translated by D.R. Shackleton Bailey, Penguin, London, 1986.

it into a golden box, he crossed the Servilian gardens, were he tried to induce the tribunes and centurions of the Guard to accompany him in his flight, first sending his most trustworthy freedmen to Ostia, to get a fleet ready. […] Having therefore put off further consideration to the following day, he awoke about midnight and finding that the guard of soldiers had left, he sprang from his bed and sent for all his friends. Since no reply came back from anyone, he went himself to their rooms with a few followers. But finding that all the doors were closed and that no one replied to him, he returned to his chamber, from which now the very caretakers had fled, taking with them even the bed-clothing and the box of poison.[9]

Now that [Nero] had been abandoned by everybody alike, he began forming plans to kill the senators, burn down the city, and sail to Alexandria. […] But when he perceived that he had been deserted also by his body-guards (he happened to be sleeping in [some gardens]), he undertook to flee.[10]

One lived there:

However, Pompey himself also soon gave way weakly to his passion for his young wife, devoted himself for the most part to her, spent his time with her in villas and gardens, and neglected what was going on the forum, so that even Clodius, who was then a tribune of the people, despised him and engaged in most daring measures.[11]

On his return to Rome, after introducing his son Drusus to public life, [Tiberius] at once moved from the Carinae and the house of the Pompeys to the gardens of Maecenas on the Esquiline, where he led a very retired life, merely attending to his personal affairs and exercising no public functions.[12]

---

[9]Suet. *Ner.* 47.1: *Nuntiata interim etiam ceterorum exercituum defectione litteras prandendi sibi redditas concerpserit, mensam subvertit, duos scyphos gratissimi usus, quos Homericos a caelatura carminum Homeri vocabat, solo inlisit ac sumpto a Lucusta veneno et in auream pyxidem condito transiit in hortos Servilianos, ubi praemissis libertorum fidissimis Ostiam ad classem praeparandam tribunos centurionesque praetorii de fugae societate temptavit. […] Sic cogitatione in posterum diem dilata, ad mediam fere noctem excitatus, ut comperit stationem militum recessisse, prosiluit e lecto misitque circum amicos, et quia nihil a quoquam renuntiabatur, ipse cum paucis hospitia singulorum adiit. Verum clausis omnium foribus, respondent nullo, in cubiculum rediit, unde iam et custodes diffugerant, direptis etiam stragulis, amota et pyxide veneni.* Translated by J.C. Rolfe, The Loeb Classical Library, Harvard University Press, 1970.

[10]Cass. Dio 63.27.3: ὑπὸ πάντων δὲ ὁμοίως ἐγκαταλειφθεὶς ἐβουλεύσατο μὲν τούς τε βουλευτὰς ἀποκτεῖναι καὶ τὴν πόλιν καταπρῆσαι ἔς τε τὴν Ἀλεξάνδρειαν πλεῦσαι […] ἐπεὶ δὲ ᾔσθετο ὅτι καὶ ὑπὸ τῶν σωματοφυλάκων ἐγκαταλέλειπται, (ἐν κήποις δέ τισιν ἐτύγχανε καθεύδων) φυγεῖν ἐπεχείρησεν. Translated by Earnest Cary, The Loeb Classical Library, Harvard University Press, 1961.

[11]Plut. *Pomp.* 48.5-6: ταχὺ μέντοι καὶ αὐτὸς ἐμαλάσσετο τῷ τῆς κόρης ἔρωτι καὶ προσεῖχεν ἐκείνῃ τὰ πολλὰ καὶ ὑνδιημέρευεν ἐν ἀγροῖς καὶ κήποις, ἠμέλει δὲ τῶν κατ᾿ ἀγορὰν πραττομένων, ὥστε καὶ Κλώδιον αὐτοῦ καταφρονῆσαι δημαρχοῦντα τότε καὶ θρασυτάτων ἅψασθαι πραγμάτων. Translated by Bernadotte Perrin, The Loeb Classical Library, Harvard University Press, 1961.

[12]Suet. *Tib.* 15: *Romam reuersus deducto in Forum filio Druso statim e Carinis ac Pompeiana domo Esquilias in hortos Maecenatianos transmigravit totumque se ad quietem contulit, privata modo officia obiens ac publicorum munerum expers.* Translated by J. C. Rolfe, The Loeb Classical Library, Harvard University Press, 1970.

These gardens were places of residence (Cic. *Fam.* 13.72.1; Cic. *Phil.* 2.15; Cass. Dio 66.10; *SHA Aur.* 49.1–2). However, we *do not* read among these ancient authors that the *horti* included a house, because the house is the *horti*; the *horti* semantically include the residence.

One last thing could be added about the sources' silence: all garden historians expect while working on *horti* to see emerging in the texts data on the vegetalisation of these spaces. For my part, looking into the residentiality of the *horti*, I expected to find numerous elements precisely materialising or naming domestic spaces, as can be seen in literary descriptions of Italian villas. Yet the *horti*, despite their undoubtful residential character, tend to evade the reader's expectations of spacial visualisation. Curiously enough, this is a distinctive characteristic, unique to Rome's *horti*. It is plain to see through the texts what was done in these places and how they were used, particularly as locus of power, as potential crowd gathering facilities and in a more symbolic way as "argument of romanity". Their form nevertheless generally eludes the Ancients' commentaries.

This can be explained by putting forward various elements. The *horti* are the result of an architectural and aesthetic hybridisation between the *villa,* the *domus* and the simple vegetalised space, the *hortus*. Greek and Latin authors which we know recorded these typological liberties without further elaborating. Yet they precisely described the "way of inhabiting" these residences, as in these gardens essential practices of power took place regarding the *urbs*'s political life; for, living in *horti* marked the social status and demonstrated membership in political life, in the exact same way as the aristocrats did in their villas or in their *domus*.

2.5   Conclusion

This article's first purpose was the presentation of a method of analysis based on historiography, which we developed through its application to the ancient object, in this case Rome's residential *horti*. Historiographic study focused here on a term largely used in research, the word "garden", demonstrating how this term, far from being objective, was in fact *constructed* by historiography. This historiographic study therefore sought to deconstruct the concept by uncovering its presuppositions and bias.

The presentation of the residential *horti* of Rome in situ, in their political and social context, then presented more tangible historical results, by showing that an approach with the perspective of social and political practices allows *horti* to enter the city. We thus reintegrated the *horti* into the residential history which takes into account the fact that, for a Roman aristocrat, inhabiting a space is in itself an expression of power (Hurlet 2012; Guilhembet 1996a).

In a broader sense, history of gardens having strongly evolved in the last fifteen years and having included social and political aspects in its problematics, it can be hoped that the Roman *horti,* considered as political places because inhabited rather than as purely aesthetic environments, will take a new position in history.

Bibliography

Belli Barsali I (1990) I giardini di statue classiche nella roma del'500. In: Morganti G, Tomei MA (ed) Gli Horti farnesiani sul Palatino. Convegno internazionale, Roma, 28–30 novembre 1985. École française de Rome e Soprintendenza archeologica di Roma, Roma, pp 341–372

Beneš M, Lee MG (2011) Clio in the Italian garden: twenty-first-century studies in historical methods and theoretical perspectives. Dumbarton Oaks Research Library and Collection, Washington, D.C

Bergmann B (2002) Art and nature in the villa at oplontis. JRA (suppl 47):87–120

Bocquet D (2001) L'archéologie à Rome après 1870. Une lecture politique et spatiale. In: Antiquités, archéologie et construction nationale au XIXe siècle, Journées d'études, Rome 29–30 avril et Ravello 7–8 avril 2000, MEFRIM 113, Roma, pp 759–773

Bowe P (2004) Gardens of the Roman world. Getty Museum, London

Brice C (2001) Antiquités, archéologie et construction nationale en Italie (1861–1911). In: Antiquités, archéologie et construction nationale au XIXe siècle, Journées d'études, Rome 29–30 avril et Ravello 7–8 avril 2000, MEFRIM 113, Roma, pp 475–492

Brunon H, Mosser M (2007) L'enclos comme parcelle et totalité du monde: pour une approche holistique de l'art des jardins. Ligeia: dossiers sur l'art 73–76:59–75

Burckhardt L (2003) ‹Zu Hause geht Alles, wie wir wünschen…› – Privates und Politisches in den Briefen Ciceros. Klio 85:94–113

Chastel A (1990) La conjoncture et les enjeux. In: Morganti G, Tomei MA (eds) Gli Horti farnesiani sul Palatino. Convegno internazionale, Roma, 28–30 novembre 1985. École française de Rome e Soprintendenza archeologica di Roma, Roma, pp 1–5

Coffin DR (1999) The study of the history of the Italian garden until the first Dumbarton Oaks Colloquium. In: Conan M (ed) Perspectives on garden histories. Dumbarton Oaks Research Library and Collection, Washington, D.C, pp 27–36

Comito T (1991) Le jardin humaniste. In: Mosser M, Teyssot G (eds) Histoire des jardins de la Renaissance à nos jours. Flamarion, Paris, pp 33–40

Conan M (1986) Nature into art: Gardens and landscapes in the everyday life of ancient Rome. J Gard Hist 6(4):348–356

Conan M (ed) (1999) Perspectives on garden histories. Dumbarton Oaks Research Library and Collection, Washington, D.C

De Certeau M (1990) L'invention du quotidien. I: Arts de faire, Paris

De Vico Fallani M, Bencivenni M (eds) (2006) Rileggendo la storia universale dei giardini. Atti della presentazione dell'opera 'Storia dell'arte dei Giardini' di Marie Luise Gothein (1863–1931). Uguccione Ranieri di Sorbello Foundation, Perugia

Di Pascuale G, Paolucci F (eds) (2007) Il giardino antico da Babilonia a Roma. Scienza arte et natura, Sillabe, Livorno

Dupont F (2013) L'Antiquité, territoire des écarts. Albin Michel, Paris

Eichholz D (1971) Compte rendu de: Pierre Grimal, Les jardins romains, Paris, 1969. Class Rev 21(1):112–114

Frass M (2006) Antike römische Gärten. Soziale und wirtschaftliche Funktionen der Horti Romani. Horn, Wien

Gall R (1913) Horti. In: Pauly A, Wissowa G (eds) Realencyclopädie der classischen Altertumswissenschaft 8, col 2482–2488

Gleason K (2010) Constructing nature. The built garden. With notice of a new monumental garden at the Villa Arianna, Stabiae. Bollettino di Archeologia 1:8–15

Gothein ML (1914) Geschichte der Gartenkunst. Diederich, Gotha

Gothein ML (1928) A history of garden art (trans: Archer-Hind). J.M. Dent & Sons, London

Gothein ML (2006) Storia dell'Arte dei Giardini (trans: De Vico Fallani, Bencivenni). Olschki, Firenze

Grimal P (1943) Les jardins romains à la fin de la République et aux deux premiers siècles de l'Empire: Essai sur le naturalisme romain. De Boccard, Paris

Grimal P (1954) L'art des jardins. Presses Universitaires de France, Paris

Grimal P (1984) Les jardins romains, 3rd edn. Fayard, Paris

Grimal P (2000) I giardini di Roma antica (trans: Abrate). 2nd edn. Garzanti, Milano

Grimal P (2005) *L'arte dei giardini: una breve storia* (trans: Magi). Donzelli, Roma

Grimal P (2007) Rome et l'amour, des femmes, des jardins, de la sagesse. Laffont, Paris

Guilhembet JP (1996a) Recherches récentes sur les domus à Rome et en Italie (IIe siècle av. n. è. - Ier siècle): grandes lignes et perspectives. In: La maison urbaine d'époque romaine en Gaule narbonnaise et dans les provinces voisines. Actes du colloque d'Avignon (11–13 novembre 1994). Association pour la recherche archéologique en Vaucluse, Avignon, pp 53–60

Guilhembet JP (1996b) Les résidences urbaines des sénateurs romains des Gracques à Auguste: la maison dans la ville. L'information historique 58(5):185–197

Hales S (2003) The Roman house and social identity. Cambridge University Press, New York

Hunt JD (ed) (1992) Garden history: issues, approaches, methods. Dumbarton Oaks Research Library and Collection, Washington, D.C

Hurlet F (2012) Représentation(s) et autoreprésentation(s) de l'aristocratie romaine. Perspective 1:159–166

Jashemski W (1979–1993) The gardens of Pompeii, Herculaneum and the villas destroyed by Vesuvius, vol 2. Caratzas Brothers, New York

Jashemski W (1981) The Campanian peristyle garden. In: Jashemski W, MacDougall E (eds) Ancient Roman gardens. Dumbarton Oaks Research Library and Collection, Washington, D.C, pp 27–48

Jashemski W (1992) The contribution of archaeology to the study of Ancient Roman gardens. In: Hunt JD (ed) Garden history: issues, approaches, methods. Dumbarton Oaks Research Library and Collection, Washington, D.C, pp 5–30

Jashemski W, MacDougall E (eds) (1981) Ancient Roman gardens. Dumbarton Oaks Research Library and Collection, Washington, D.C

Jellicoe G (ed) (1986) The oxford companion to gardens. Oxford University Press, Oxford

Jennings A (2006) Roman gardens. English Heritage, London

Lafaye G (1900) Hortus. In: Daremberg C, Saglio E (eds) Dictionnaire des Antiquités Grecques et Romaines 3, pp 276–293

Le Glay M (1971) Compte rendu de: Pierre Grimal, Les jardins romains, Paris, 1969. Revue archéologique: 144

MacDougall E (1994) Fountains, statues, and flowers: studies in Italian gardens of the sixteenth and seventeenth centuries. Dumbarton Oaks Research Library and Collection, Washington, D.C

MacDougall EB (1999) Prelude: landscape studies, 1952–1972. In: Conan M (ed) Perspectives on garden histories. Dumbarton Oaks Research Library and Collection, Washington, D.C, pp 17–26

Malek AA (ed) (2013), Garden Archaeology sourcebook: methods, techniques, interpretations and field examples. Bern

Marrou HI (1944) Compte rendu de: Pierre Grimal, Les jardins romains à la fin de la République et aux deux premiers siècles de l'Empire. Essai sur le naturalisme des Romains, Paris, 1943. Revue des Études Anciennes 46:191–197

Mencacci F (2005) Im gläsernen Käfig. Frauen und Räume im Geschlechterdiskurs der augusteischen Literatur. In: Harich-Schwarzbauer H, Späth T (eds) Gender Studies in den Altertumswissenschaften: Räume und Geschlechter in der Antike. WVT, Trier, pp 211–231

Olck F (1912) Gartenbau. In: Pauly A, Wissowa G (eds) Realencyclopädie der classischen Altertumswissenschaft 7, col 767–841

Palombi D (2006) Rodolfo Lanciani: l'archeologia a Roma tra Ottocento e Novecento. L'Erma di Bretschneider, Roma

Purcell N (1988) Serene Abodes? The Horti Lamiani. JRA 1:132

Purcell N (2001) Dialectical gardening. JRA 14:546–556

Simonis K (1865) Ueber die Gartenkunst der Römer. In: Programm des Gymnasiums zu Blankenburg für das Schuljahr von Ostern 1864 bis Ostern 1865, Blankenburg, pp 1–24

Straumann B (2002) Rom. Der Neue Pauly 15.2, Stuttgart-Weimar, col 865

Toynbee JM (1946) Compte rendu de: Pierre Grimal, Les jardins romains à la fin de la République et aux deux premiers siècles de l'Empire, Paris, 1943. JRS 36:210–213

Villedieu F (2001) Il Giardino dei Cesari. Edizioni Quasar, Roma

Von Stackelberg KT (2009) The Roman garden: space, sense, society. Routledge, New York, London

Winterling A (1999) Aula Caesaris. Studien zur Institutionalisierung des römischen Kaiserhofes in der Zeit von Augustus bis Commodus (31 v. Chr. - 192 n. Chr.). Oldenbourg, München

Woksch K (1881) Der römische Lustgarten. Jahresbericht des K.k. Staats-Ober-Gymnasiums zu Leitmeritz in Böhmen für das Jahr 1881, Leitmeritz, pp 1–22

Wolschke-Bulmahn J (ed) (1996) Twenty-five years of studies in landscape architecture at Dumbarton Oaks: from Italian gardens to theme parks. Dumbarton Oaks Research Library and Collection, Washington, D.C

Author Biography

Ilse Hilbold is post-doc-researcher in the project *Helvetic Translations of Antiquity* at the University of Bern. She received her Doctorate from the Universities of Strasbourg and Bern; in her dissertation, she studied the political background of Roman gardens and in particular the *horti* as third residential type of the Roman aristocracy. Her dissertation "*Habiter dans des jardins*": *Pratiques sociales et politiques des horti résidentiels de la Ville de Rome, Ier siècle avant J.-C. – Ier siècle après J.-C.* is forthcoming.

Chapter 3
Vorgärten, Privative Green Spaces in Neustadt (Strasbourg, France). A Century of Practices in the Heart of the City

Cathy Blanc-Reibel and Olivier Haegel

Abstract The Neustadt, a "new town" which was erected in Strasbourg after the annexation of Alsace-Moselle by the German Empire (1871–1918), presents a typical urban design including small gardens. Vorgärten in the German language, literally "front garden", are usually delimited at the front by the public road (sidewalk) at the back by the building, and on the sides by the boundaries. Integrated into the layout of public roads and particularly visible from the street, these gardens are privately owned and located on the property rights-of-way. Thus, in a few streets of urban extension, they form shallow green spaces (about 3 m) and border the facades of the buildings. Sanitary conditions in the city were indeed a new societal issue, which led to restructuring in urban planning models. The very history of the evolution of urban stakes is materialized in this specific area of Vorgarten and summarizes to some extent the intersections of public policies and habits. Thus, Vorgärten conceived in hygienist vein have undoubtedly evolved from their origin to our days. Our research allowed us to note the following two break points: On the one hand, the issues related to hygiene have been reconverted to those related to ecology—in this sense we can speak of mutation; on the other hand, their appropriation varies according to the frontier zones and the territorial characteristics within the Neustadt, between the busier and the more residential streets. Note that the degree of appropriation is decisive in maintaining the "green" dimension of these gardens. On this point, the fate of foster gardens is quite opposite to that of totally mineralized gardens. These concrete and significant examples have made it possible to highlight the evolution of these spaces.

C. Blanc-Reibel (✉)
Dyname UMR 7367 and AMUP EA 7309, University of Strasbourg,
CNRS, Strasbourg, France
e-mail: cathy.blanc.reibel@misha.fr

O. Haegel
Service of the Inventory of the Cultural Heritage, Strasbourg, France
e-mail: Olivier.HAEGEL@grandest.fr
URL: http://www.patrimoine.alsace/

3.1 Introduction

The Neustadt, a "new town" which was erected in Strasbourg after the annexation
of Alsace-Moselle by the German Empire (1871–1918), presents a typical urban
design including small gardens. Vorgärten in the German language, literally "front
garden," are usually delimited at the front by the public road (sidewalk) and at the
back of the building, and on the sides by the boundaries (Fig. 3.1). Integrated into
the layout of public roads and particularly visible from the street, these gardens are
privately owned and located on the property rights-of-way. Thus, in a few streets of
urban extension, they form narrow green spaces (about three meters large) and
border the facades of the buildings. This grip which results from the withdrawal of
the alignment can be today mineralized or vegetated. Over time, the Vorgärten
evolve and become an urban management device when designing neighborhoods
and a popular element in some architectural programs; they acquired a legal, urban,
and architectural meaning in the nineteenth century.[1]

A century after these private gardens were created in Strasbourg, this article aims
to trace their origins and their evolution until today and to answer the following
question: From their creation to the present day have Vorgärten preserved their
original aspects and functions, those of an ornamental garden? How do the
inhabitants occupy and these spaces? In a nutshell, we want to retrace the evolution
of this specific space supported by concrete and significant examples that illustrate
different choices of use. In support of historical data resulting from the study out by
the Neustadt district inventory department, and with a contemporary point of view
at the practices of its inhabitants,[2] we will attempt to take stock of the situation in
order to understand their conservation status or, where appropriate, their mutation
processes.

First, the historical framework for the emergence of these urban gardens will be
drawn up, then we will focus on the specific context of the city of Strasbourg, and
finally, we will endeavor to explain their current use with particular attention to the
practices of its inhabitants.

---

[1]The term appears gradually, but very timidly, in publications devoted to architecture and town
planning. The DWDS gives its first mention of the term in 1878, although it is certainly not the
oldest, the manual of architecture of Germano Wanderley (1845–1904), where it appears more
than modestly in a plan legend! It was present in most encyclopedias and dictionaries of urbanism
and architecture, as in that of Wasmuth.

[2]Observations carried out in 2016, and systematically recorded in four streets in the summer of
2017, interviews conducted as part of Cathy Blanc-Reibel's thesis on living practices in the
Neustadt.

Fig. 3.1 Vorgärten in the Neustadt, Strasbourg, © Blanc, 2016

3.2   The European Hygienist Trend: A Context Favoring the Creation of Gardens and Green Spaces

European cities have undergone major changes since the middle of the nineteenth century for two major reasons. On the one hand, the opening of the fortification walls of medieval towns, corseted in their walls and characterized by their hyper-density, made it possible to enlarge the urban fabric significantly, as evidenced by the work initiated by Hausmann in Paris (1853), by Cerdà in Barcelona (1860) and Hobrecht in Berlin (1862).[3] On the other hand, the changes in the cities can also be explained by the hygienic conditions which have been worsened, in particular by the presence of a new and increasingly polluting industry and by overpopulation. The cholera epidemic that struck Europe between 1830 and 1832 and, more generally, the high mortality amplified by the hygienic conditions in the city were among the reasons behind the broader reflections in order to create new means of preventing diseases from spreading.

---

[3]The specific case of Strasbourg will be declined later.

In this context, public health issues have proved to be crucial and formalized in hygiene. As a reminder, this trend took root in the eighteenth century and was amplified in the nineteenth century with lettin air, water and light circulate in the city. Acting on the environment, hygienists and engineers focused on air quality, water, and waste treatment. The organization of international congresses on the theme of hygiene, at this time, testifies to the importance of the issue at the European level if not worldwide. International meetings were held, for example "International Sanitary Conferences" (Paris, 1851 and 1859) and "International Congresses of Hygiene" (Brussels, 1852). These events made it possible to discuss both scientific and practical questions and to facilitate in a general way the transfer of knowledge between professionals (Rasmussen 2001). In response to this industrial and unhealthy city, new urban planning rules were enacted to mitigate urban nuisances. Among the tools advocated, the use of waste bins introduced in 1883 (Barles 2011) and the global organization of waste removal proved to be a new challenge at the turn of the century in European cities.

The gardens and the vegetation have had a significant place in the urban devices dedicated to sanitation: Green spaces have been created and even reworked in the cities. Great Britain contributed to this reflection by setting up innovative urban projects in order to mitigate the misdeeds of an industrialization that was too quick. In capitals, parks such as Regent's Park (opened in 1845), Victoria Park (opened in 1845), and Battersea Park (opened in 1858) were created in London. This model found its counterpart in Paris, in the guise of the town planner Eugène Hénard who mapped the parks of the French capital; he was attributed the paternity of the notion of green space (Arnould 2011). Forests have been redeveloped on the outskirts of cities such as the Bois de Boulogne (1853) and the Buttes-Chaumont (1867), where they became central lungs in the heart of the city, such as the Tiergarten in Berlin (Volksgärten). The tree thus becomes an element of the urban device: Even if the term oxygen is not yet explicitly mentioned, it is known that vegetation is a factor of improvement of the air, as Sabine Barles explains in her works: "The perception of the tree then changes radically: formerly considered as a factor of humidity, and therefore of insalubrity, it becomes, on the contrary, a source of health" (Barles 2011/4, p. 33). During the redevelopment of the roads, always with a view to get some fresh air into the city, the streets are now enlarged and trees are planted with the aim of improving the air quality, while participating in the aesthetics of the city in general and the street in particular.

The place of the garden is also declined in specific projects as shown by the concept of garden cities inspired by the works of the urban planner Howard (1898); the objective was to create urban complexes intended to accommodate from 30,000 to 50,000 residents, on the outskirts of city centers, with the principle of self-sufficiency. From utopia to reality, his town planning ideas took shape in the garden of Letchworth (1903) and at Welwyn cities north of London in 1919. This new way of thinking the city widely deployed in the Mittel Europa in Dresden, Wrocław, Budapest, and Strasbourg (Jonas 2004). This movement of urban utopia targeted precarious and/or laboring populations, and the social housing intended for them was the best possible combination of the city and the countryside. In

Strasbourg, a garden city was created south of the city in Stockfeld, covering an area of 24 ha. Set up between 1910 and 1912, the purpose of this project was to house the very poor population of the old center expelled from the city center after the great breakthrough in the city center, in houses built in the "Heimatschutz" style. The architects who participated in the competition were influenced by pre-existing examples in Great Britain and Germany. Other garden cities were erected later like this of Leon-Ungemach (1920). In the old food-producing areas of Strasbourg, which have become suburbs of the Große Stadt, the gardens essentially keep their nourishing character.

The creation of Vorgärten is part of this larger program of hygiene planning at European level, which places an important emphasis on vegetation and finds local applications in voluntary policies at local level. Indeed, they are increasingly used in the booming cities of the nineteenth century and are part of the new urban European programs and more specifically in Germany. Their emergence is directly linked to this historical context of the mutations of cities where the plant has taken an important place in the urban space and which contributes to the new configuration of cities.

3.3 The Vorgarten, an Example of an Urban Planning Tool Established in Strasbourg

The specific case of Strasbourg is that the town planning project for the extension of the city and the entire hygiene program was implemented by the German administration (1871–1918). Indeed, Strasbourg became the capital of the Reichsland Elsaß-Lothringen (Land of Empire of Alsace-Lorraine) after France was defeated its conflict with Prussia. It should be noted that the German states and then the German Empire experienced a wave of urban development in the second half of the nineteenth century, which led, among other things, to the realization of urban extensions. This dynamism then makes this country one of the pioneers in urban planning.

The urban project in Strasbourg is gradually elaborated the day after the siege of the city and validated by the municipality in 1880 (Pottecher 2017). The final plan, the *Bebauungsplan*, results of a complex process of elaboration, which includes three projects due to the municipal architect Jean-Geofroi Conrath (1824–1892), and to the governmental architects August Orth (1828–1901) and Hermann Eggert (1844–1920). If the final version, although unsigned, is most probably due to Conrath, it is based on the proposals of his past and current colleagues. In support of these plans, the new city is built around the city inherited from the Middle Ages and modern times. This major project had a double aim: on the one hand, it was to transform Strasbourg into a showcase of the Empire by means of a monumental typified architecture; on the other hand, it aimed at sheltering the growing population caused in particular by the wave of German immigration. The opening of the

city walls allowed to enlarge the center Strasbourg stuck in its medieval fortress, up to three times the initial surface. The new status of the German Reich, which the German administration intended to give Strasbourg, had to break with an over-populated and unhealthy city, even more since the hygienist vein already prevailed in Germany.

The Neustadt was the occasion to deploy a whole range of devices on several levels in order to turn Strasbourg into a model of healthiness: the new hospital, the building of municipal baths with its thermal and medicinal buildings (1904–1911), the construction of the sewage system in 1880. With regard to the management of the construction of private property, it is worth noting the importance of the regulations formalized in the Baudordnungen (1892, 1895, and 1910) which formalized a set of construction rules (height, width, etc.) and equipment in buildings. For example (place devoted to the pantry, and bathrooms in particular is highly increasing: "In 1900, 4% of the houses in the old town have one, compared to 38% in Neustadt") (Lefebvre 2017). Even today, this program is perceived as a major step in terms of hygiene, as the words of a current resident referring to the constructions of the Neustadt indicate: "This hygiene, ah! Already the bathrooms in all this Neustadt is something. I think that's what hit the spirits. Hygiene."[4]

Vorgärten was designed to ventilate the main avenues and bring greenery to these modern urban complexes, in the same way as the gardens surrounding villas and individual houses. Vorgärten really made its massive appearance in Strasbourg during the urban expansion, even if it was already present before but rather sparse. The Vorgarten thus made a massive entry into the urban extension of Strasbourg, of which it is an intrinsic element (Fig. 3.2). Its use, although it does not seem to be an issue, is nevertheless very variable numerically according to the authors, especially since the matter is of interest to some key figures. The projects of Conrath and Eggert merely represent the road network, the islets, and a few streets planted with trees, but it is true that the scales of their maps do not allow this level of precision. Nevertheless Eggert, whose program for the Fishermen's Gate campus had been endorsed since 1876,[5] wanted Vorgärten to be established along the streets bordering the campus in order to protect university from nuisance (Pottecher 2017). Orth, who is the only one to publish his work, is the most maximalist in the field. He planned the planting of trees along the tracks and suggested green spaces set back from the road around the buildings of the Imperial Square and Vorgärten in the streets bordering the university campus (Orth 1878).

Mayor Otto Back (1834–1917) seems to follow Orth in this direction, since he wants a massive use of this device, but he does not have the law on his side. He may impose it only along the streets built on the former municipal lands. The district doctor and hygienist Josef Krieger (1834–1905), who was one of the mainsprings

---

[4]Remarks collected during the meeting *Rendez-vous de la Neustadt*; 2015, http://patrimoine.alsace/wp-content/uploads/2016/02/RDV-NEUSTADT-2015-PROG.pdf.

[5]For example, we note withdrawals associated with bourgeois residences and addressed rue Brûlée and rue du Dôme, or else a housing unit is set back from the alignment of the other buildings of Quai Kléber (1855).
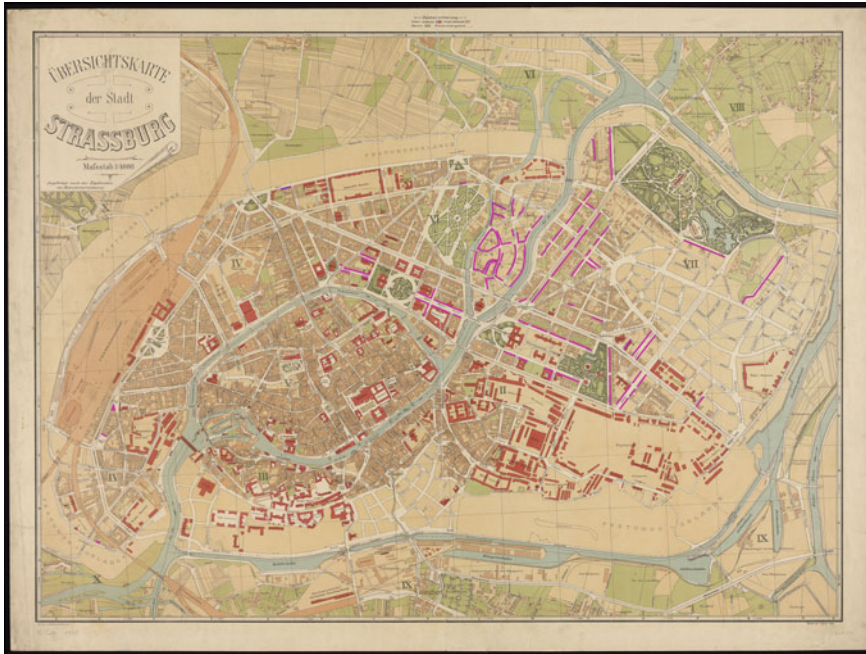
Fig. 3.2 Map 1913 with Vorgärten © Bibliothèque Nationale Universiataire_M. Carte.1.278 surcharge Audrey Schneider © Région Grand Est—Inventaire du patrimoine culturel in pink, we can see the planned Vorgärten

of the extension project. He recalls in his medical topography of Strasbourg (1885) (Krieger 1885) the hygienic character of Vorgärten. It is true that the practitioner was familiar with hospital and clinical programs, where the Vorgarten was then used extensively, as the first extension of the Strasbourg municipal hospital beginning 1874. The absence of Vorgarten can be criticized, as with the Imperial Palace after its construction. The situation changed in 1898 with the new plan of alignment in the eastern parts of the extension.[6] The layout of the streets was revisited, straight streets were replaced by new curves, and Vorgärten were planned on land that had previously been private property (Fig. 3.2).

A new extension was designed in 1909 to extend the city to the south[7]: The municipal services under the direction of Fritz Beblo still foresaw some streets lined with Vorgärten, but they become scarce, the district being planned for dense buildings with a high concentration of inhabitants. On the other hand, the Vorgarten/house combination has been a great success in the Villenkolonien since the nineteenth century. This urban development is particularly evident in operations such as Tivoli (1905) and the Conseil des Quinze (1912), which give rise to two

---

[6]Sources: Archives of the city «Eurométropole of Strasbourg»: 876 W 66.

[7]Archives de la Ville et de l'Eurométropole de Strasbourg: 311 MW 11.

new districts in Strasbourg, with to house single or multi-family houses for the small and medium-sized bourgeoisie. Although the vast majority of it was built up during the interwar period, its roads consist of straight and curved streets, bordered by Vorgärten. But this phenomenon is peculiar to this period and to this type of districts with detached houses.

The Vorgarten takes part in the picturesque quality of the streets, and there are few cases where the withdrawal of alignment imposed to the architect is used beyond its function of passage between road and building. Nevertheless, in some of the elevations lodged with the Building Police Department in Strasbourg to obtain a building permit, a few contractors designed the Vorgarten in an elaborate way. These drawings have no contractual value and are not acknowledged by the town civil servants. Beyond the mere entertainment of the architect, these designs enable us to grasp the formal importance of this device and the imagination that can be associated with it. More marginal, are the cases where the Vorgarten is intimately connected with the elevation. However, it is the case of a building built by the architects Lütke and Backes in 1902 for the merchant Georges Cromer,[8] registered as a historical monument on October 29, 1975, for the originality of its Art Nouveau décor (Fig. 3.3). The ornamentation of its façade on the street is devoted to nature. From the Vorgarten substrate emerges a sculptured decoration magnifying the Earth and water in the lower part, which itself gives rise to an abundant vegetation mixing conifers and leafy vines climbing on the walls, before spreading in a ceramic floral coating with vivid polychromy on the upper part. These main architects worked at the diffusion in Strasbourg of this aesthetics mixing artistically real and artificial nature.

The Vorgarten can be also individual, it takes a strong and extended character with the creation of districts of detached houses, like those of Tivoli or of Conseil des Quinze. Here, it is connected to a garden at the back of the house, but above all it is associated with an aesthetic individualization of buildings that is based on the construction of garden structures, often visible from the street such as fountains, pergolas, terraces. Accessibility to the Vorgarten by the occupants of the building varies according to the type of the latter. It is closed by fence of different heights and made of various materials. In the case of a single or multi-family house, it is not necessarily closed laterally, even if some cases have been listed. In the case of investment property, it seems that it is almost systematically closed laterally, a gate giving access from the street to the entrance. On the ground floor, some buildings have a balcony (median or lateral) whose right-of-way bites into the garden. In a few cases, this balcony has a staircase leading to the Vorgarten. This last element gives us information about its use: The resident of the apartment on the ground floor would therefore enjoy it and would ensure *a fortiori* its maintenance. However, this is not a rule, especially when there is no communication between the outside (garden) and the interior (apartment).

---

[8]It is located at 56 Allee de la Robertsau.

Fig. 3.3 House by the architects Lütke and Backes in 1902 © Frédéric Harster Région Grand Est— Inventaire général

The new urban regulations of 1910 tell us about the rules and uses that are related to it. The oldest documents inform us that it takes the form of a garden with plants of low sizes and possibly a few hedges, shrubs and in some cases fir trees be planted also. In fact, it is similar to the typology of a park in miniature. It may also consist of one or more vegetalized or mineralized squares, including metallic, ceramic, and rubble edges to limit the spaces.

Thanks to our historical research, we found out that the municipality met with resistance when it wanted to make the Vörgarten a green and aerated planning element applied to the whole of the city. On the other hand, some architects (or buildings) have invested the Vorgarten as an element of distinction, adopting a larger shrinkage from legal alignment—or in other words by choosing to increase the Vorgarten, in this case the gardens are reported as "tolerated" in the ground plane.

In addition to Vorgärten, the vegetation takes place in the urban roads, which are arranged with trees like the boulevards of the European capitals. The vegetation is organized in the following way: Linden trees, plane trees, and chestnut trees are

planted on the sides of the streets, and maples are intended for the parks.[9] Finally, in Strasbourg at the beginning of the last century, in addition to the planted places and parks, these gardens at the front contribute to this green aspect of the new urban spaces: "This succession of gardens and squares thus creates a 1.500 metre- walk that, as soon as it was laid out, aroused admiration" (Pottecher 2010).

3.4   Today: Toward a New Environmental Order?

Even today, the Neustadt is known for its greenery as stressed by some of the people on a survey we conducted in 2016 et 2017. At the Rendez-vous de la Neustadt,[10] we asked the participants of the event to qualify the urban complex of the Neustadt in three words: The green aspect was mentioned several times, the Neustadt is perceived as (nine times) and characterized by its "green" aspect (eight times) and its "greenery" (twice), and these two notions of vegetation and aeration were sometimes directly linked together (three times). It is called a "green city and nature," or even a "friend of vegetation" and "sustainable." These factors can also be explained by the fact that Strasbourg has been ranked third in the national list of green cities by the observatory of green town,[11] a list of cities at European level that is part of the European Green Capital Award.[12]

From the late 1960s to the present day,[13] the environmental cause has become increasingly prominent and has resulted in changes in lifestyles. In addition to the hygienic debates of the end of the last century, the ecological transition has consequences on practices and policies carried out at the city level as well as for the choices made by the inhabitants. The modification of lifestyles and the integration into daily life of practices related to environmental issues is reflected the new functions of Vorgärten. The place of waste and the number of bins for sorting waste, the evolution toward alternative means of transport, or ways of eating are all factors that have an impact on the way Vorgärten are considered and used.

The invitation to sort waste has intensified in recent years, and individual domestic composting, which until now has been practiced in peripheral neighborhoods by house dwellers with a garden, tends to be adopted by an increasing

---

[9]Source: DRAC, 1992.

[10]Annual event organized from 2010 to 2016 by the General Inventory of Cultural Heritage Department of the Greater East Region, 355 people raised awareness of the patrimonial question interviewed during the 4 days of the event 2014 edition.

[11]Among the indicators taken into consideration are the number of m^2 of green space accessible to the public and protected vegetated areas, the vegetated roof surfaces, number Alignment trees: http://www. observatoirevillesvertes.fr/wp-content/uploads/2015/01/PALMARES-DES-VILLES-VERTES-VDEF. pdf.

[12]http://ec.europa.eu/environment/europeangreencapital/.

[13]According to the proposed dating in the emergence of the sustainable city in Europe, Atlas of Sustainable Cities, p. 10.

Fig. 3.4 Bins and green space in Vorgarten, © Blanc, 2016

number of households in the city center. The practice of composting is strongly encouraged by the policies of the city and Eurometropolis, in particular because it reduces the volume of waste on the household scale as well as on the urban scale. The introduction of selective sorting of waste had already forced the inhabitants to find solutions to store the sorting containers; Vorgarten has been commonly considered as the most convenient location. Composters are added to selective sorting containers and sometimes require to rethink of the layout of the space. For example, more than 70% of Vorgärten in the streets we studied have visible waste street containers. The presence of the sorting bins in this space is more or less hidden according to the attributes given to the Vorgarten. Some inhabitants opt for a development dedicated to sorting bins which allows to preserve the aesthetics (Fig. 3.4), while others deposit them just in the aisle that serves the entrance and in the "green" part. This exhibition of waste can be an issue, as the practice of an inhabitant attests it. She declared she was hiding her composting box to preserve the garden function of pleasure (Fig. 3.5).

As the evolution of waste management shows, residents adapt their daily practices to the standards imposed by third parties. The policy of the mail post in terms of mailboxes is another illustration, on a different scale, of the evolution of the Vorgarten developments. Indeed, the standardization of larger mailboxes has been a reason for congestion of the space at the front of the buildings: As one resident explained, the old mailboxes were located inside the buildings, but were considered too narrow: "The mail is distributed outside in boxes that are fixed to the grid, because we have Vorgärten." In this case, the Vorgarten is invested by the

Fig. 3.5 Compost and garden tool © Blanc, 2016

space that it proposes according to contemporary needs and thus supports the weight of the installations not envisaged in the initial construction.

The changes in the way of life also affect transports. New urban transport modes modify the original functions of Vorgärten. At the time of the creation of this new district at the turn of the nineteenth century, the car was not the most common means of transport and its strong deployment from the 1960' to 1970' impacted the hold of the Vorgarten by the creation of garages, parking place, or passage under the building to access an inner courtyard. In spite of the strong development of the automobile, Vorgärten have been relatively preserved. It is different with the development of bicycle use. Indeed, in this area too, the city has a long-standing policy,[14] rewarded in 2017 by the Copenhagen ranking.[15] Vorgärten are much more "impacted" by the development of the bicycle, in particular because its ease of access is favored by cyclists who use them daily. Spaces dedicated to bicycles have multiplied (hoops, shelters) in Vorgärten which does not prevent the so-called "wild hooking" on the gates or the railings. This last point seems to be a knot of in regard to many signs prohibiting their hooking with the words "parking forbidden to bicycles" (Fig. 3.6).

---

[14]Bicycle master plan of the Eurometropole of Strasbourg: 1978, supplemented by a charter of the bicycle in February 1994.

[15]Strasbourg fourth place in the classification of European cycling cities, according to http://copenhagenize.eu/index/ http://copenhagenize.eu/index/04_strasbourg.html. accessed on August 31, 2017.

Fig. 3.6 Parking forbidden to bicycles © Blanc, 2016

All these points have an impact on the Vorgarten, but the evolution of an initial pleasure garden destination in the city to an area that now hosts other functions is not unique in Strasbourg. On the international scale, several documents show tensions between contemporary evolutions and the initial destinations. Nevertheless, in the context of the outre-Rhin, it seems that conservation concerns are more present. In Frankfurt am Rhein (Hessen), Vorgärten built around the same period (1912) are the subject of special attention. For example, residents organize themselves in an association to ensure the maintenance of this space.[16] The same is true for Munich, which offers its residents the documentation that shows the possibilities for fitting out garbage cans and vehicles.[17] Unlike the organization outre-Rhin, Vorgarten is not the subject of special attention in Strasbourg either by the local authorities or by the inhabitants themselves, despite a favorable context in terms of heritage issues—UNESCO World Heritage awarded to Neustadt in July 2017 and creation of an Urban Nature Park. Our field observations also show us Vorgärten which have lost their vegetated appearance in favor of mineral or asphalt installations, with the aim of eliminating the maintenance constraints of a garden. Yet, these transformations (at least part of them) have nevertheless been submitted to the rather protective opinion of the architect of French buildings because they are

---

[16]http://www.aktionsgemeinschaft-westend.de/category/vorgaerten/, consulted on August 31, 2017.

[17]https://www.muenchen.de/rathaus/Stadtverwaltung/Referat-fuer-Stadtplanung-und-Bauordnung/Lokalbaukommission/Kundeninfo/Vorgarten.html consulted on August 31, 2017.

located in the Plan of Enhancement and Safeguard (Plan de Mise en valeur et de Sauvegarde). Thus, we note that the maintenance of this space and its facilities are largely dependent on the practices of the inhabitants and their desire to keep it—or not—in its function of garden.

3.5 The Place of the Inhabitants: Between Hyper-appropriation and Neglect

The question of the maintenance of Vorgärten is, in fact, at the heart of their survival in their function of amenity. Like any garden, the Vorgarten requires maintenance as one inhabitant testifies to avoid: "the climbing vegetation sometimes along the facades that begins to eat a little on the balconies on the upper part of the building." Grass mowing, flower planting, shrub sizing and all the daily practices related to garden development need care (Dubost 1997). In this case, the whole question is to define by whom, because there are several people (owner or tenant in the same building). Several types of maintenance were identified during our survey and can be classified in three main categories: by a professional whose costs are assumed by the co-ownership in the annual expenses, by a volunteer of the condominium who gardens and takes care of the space for the collective, or, lastly, a "privatization" of one of the inhabitants, in particular the occupants of the first floor or the garden level. This "arrangement" can be revoked at any time, depending on the evolution of the inhabitants and their investment; thus, a Vorgarten maintained voluntarily for some time was suddenly mineralized following its abandonment. Other forms of mineralization have appeared in some bourgeois and passing streets as evidenced by Zen-like mineral gardens in buildings mainly occupied by offices (Fig. 3.7). This solution allows to preserve the garden spirit but with a minimum of constraints. In more modest streets, a much less expensive type of development has emerged, embodied by a green synthetic surface which gives a garden illusion (by color) but is maintenance-free and inexpensive.

On the contrary, the overgrowing or even invasive vegetation of certain Vorgärten can have two meanings: either neglect or paradoxically an excessive appropriation. Vorgärten can also be seen from the street and is sometimes hidden by vegetation (Fig. 3.8) or other supports (cladding, cannisses, etc.) to guarantee privacy and enjoy privately the garden in the city, vegetation being used as a means of guaranteeing a protected area from the look of passersby. From a pleasure garden without real additional function, this space has become a new inhabited space fully appropriated by its inhabitants. The latter case is moreover deplored, as evidenced by a person we met during our surveys who regretted this privatization. According to her, the street was a few years ago more convivial when the gardens were more open. In general, we found that in the passing streets close to official buildings, this space tends to become a simple storage place (bicycles, containers for selective sorting) or maintenance-free gardens, whereas in more residential areas of the
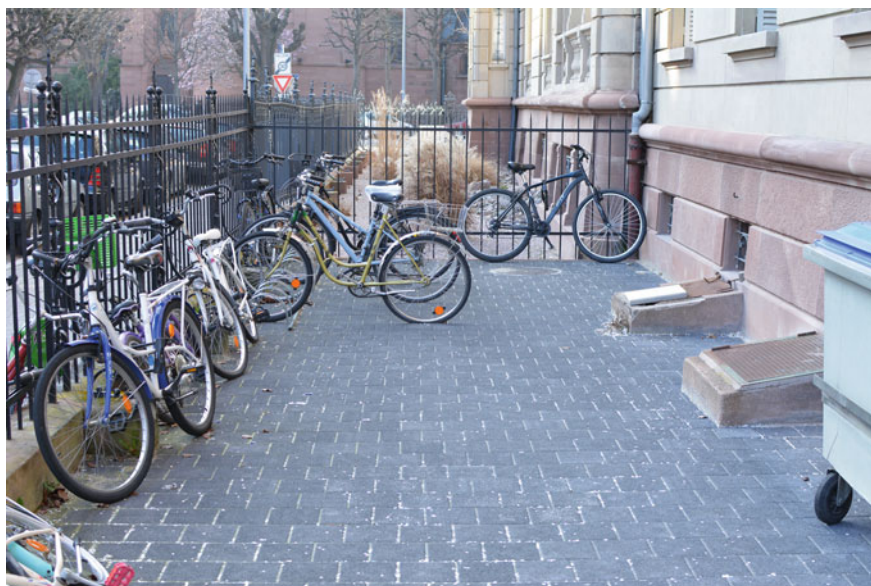
Fig. 3.7 Mineralized garden and "Zen"-like mineral gardens © Blanc, 2016

Fig. 3.8 Vorgarten hidden by vegetation © Blanc, 2016

Fig. 3.9 Swinging chair used in a Vorgarten © Blanc, 2016

Neustadt, this area is invested by garden practices or other leisure activities such as a play area for children, relaxation areas equipped with chairs, tables, or even barbecues. Composters, gardening tools, and other garden furniture are all marks of the new use of this space. These material elements show that this amenity garden that contributes to the urban landscape and the visual pleasure of passersby, a priori little occupied, has transformed over time into a real space of life (Fig. 3.9).

Some gardens can also accommodate nurturing functions in a context of changing food behaviors where the self-production of fruits and vegetables takes on a new meaning in the history of food. Thus, Vorgärten shelter modest planting spaces with aromatic herbs, berries such as cherry tomatoes or small vegetables to the creation of larger vegetable gardens with cabbages or salads. This production can be perceived as a "food ideal" (Quellier 2004), as a desire to eat healthy food and to modify the modes of supply favoring short circuits and self-production. An inhabitant interviewed expresses this desire to be in step with new ways of life and production: She planted raspberries in the garden, and a compost has been installed, but all this is "hidden" so as not to distort the function of origin which is the pleasure garden.

To sum up, the pleasure garden function remains globally present, but it is accompanied by other nourishing and storage functions, which leads to the redevelopment of this small space.

3.6   Conclusion

In the second half of the nineteenth century, urban living conditions led Europe to take measures on a citywide scale to counteract general insalubrity. Sanitary conditions in the city were indeed a new societal issue, which led to restructure models urban planning models. The very history of the evolution of urban stakes is materialized in this specific area of Vorgarten and summarizes to some extent the intersections of public policies and habits. Thus, Vorgärten conceived in hygienist vein have undoubtedly evolved from their origin to our days. Our research allowed us to note the following two break points: On the one hand, the issues related to hygiene have been reconverted to those related to ecology—in this sense, we can speak of mutation; on the other hand, their appropriation varies according to the frontier zones and the territorial characteristics within the Neustadt, between the busier and the more residential streets. Note that the degree of appropriation is decisive in maintaining the "green" dimension of these gardens. On this point, the

Fig. 3.10 Two way of taking care of the garden © Blanc, 2016
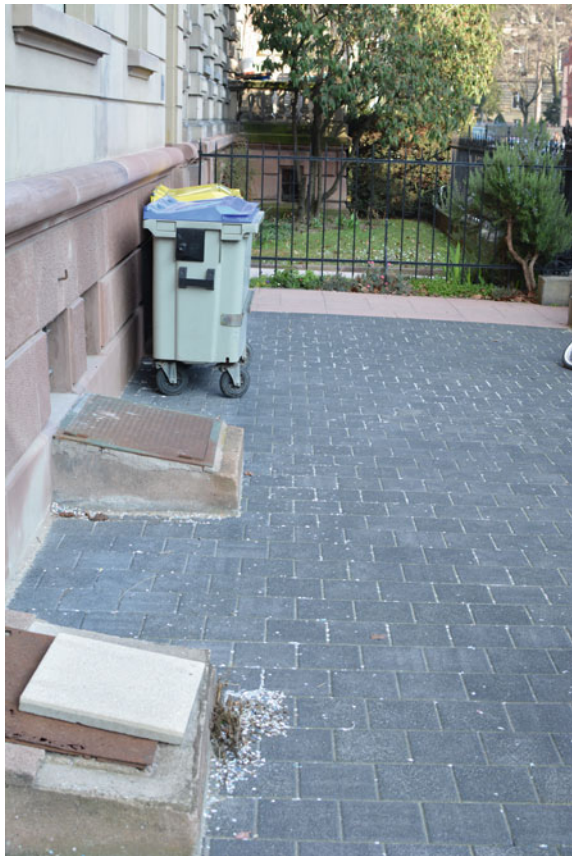
fate of foster gardens is quite opposite to that of totally mineralized gardens (Fig. 3.10). These concrete and significant examples have made it possible to highlight the evolution of these spaces, between those who maintain a state similar to that of their origin and those who have undergone major transformations to take into account the evolution of uses and means of transport in Strasbourg. In addition to its functions, further work deserves to be carried out at the level of the vegetation planted there. Like the "Aliens im Vorgarten" exhibition in Wiesbaden (Baden-Württemberg, Germany), the study of the vegetable occupation of these spaces would make it possible to distinguish between plants that are "imported" and those of origin, an element of urban biodiversity.

Bibliography

Arnould P (2011) «Les espaces verts en ville» in Veyret Y et Le Goix R (dir.) Atlas des villes durables: écologie, urbanisme, société : l'Europe est-elle un modèle ? Paris, France, Autrement, pp 48–49

Barles S (2011) «la ville et l'hygiénisme» in Veyret Y et Le Goix R (dir.) Atlas des villes durables: écologie, urbanisme, société : l'Europe est-elle un modèle ? Paris, France, Autrement, pp 18–19

Barles S (2011/4) «Les villes transformées par la santé, XVIIIe - XXe siècles». In Les tribunes de la santé (n° 33), p 33

Dubost F (1997) Les jardins ordinaires. L'Harmattan, 174 p (Logiques Sociales)

Howard E (1898) To-morrow. A peaceful path to real reform. Swan Sonnenschein & Co., London, 176 p

Jonas S (dir.) (2004) Les cités-jardins du Mitteleuropa: étude de cas de Strasbourg, Dresde, Wrocław et Budapest. M. Képek, Budapest

Krieger J (1885) Topographie der Stadt Strassburg nach ärztlich-hygienischen Gesichtspunkten bearbeitet. C. F. Schmidt, Strassburg, 496 p (Archiv für öffentliche Gesundheitspflege in Elsass-Lothringen; 10)

Lefebvre D (2017) Le quartier impérial de Strasbourg Historia, vol 842. http://www.historia.fr/evasion/le-quartier-impérial-de-strasbourg

Orth A (1878) Entwurf zu einem Bebauungsplan für Strassburg bearbeitet im Auftrag der Stadtverwaltung. E. A. Seemann, Leipzig, pl. III, fig. 3, 7

Pérouse De Montclos J-M (2011) Architecture: description et vocabulaire méthodiques. Éditions du patrimoine, Centre des monuments nationaux, Paris, p 56 (Principes d'analyse scientifique

Pottecher M (2010) «Jardin et urbanisme, 1870–2000». In Inventaire Général, Alsace. Jardins en Alsace: quatre siècles d'histoire. Lieux Dits, Lyon, p 94

Pottecher M (2017) «La voirie, tracé et esthétique». In La Neustadt de Strasbourg: un laboratoire urbain/1871–1930. Éditions Lieux Dits, Lyon, p 190

Quellier F (2004/3) «Le jardin fruitier-potager, lieu d'élection de la sécurité alimentaire à l'époque moderne». Revue d'histoire moderne et contemporaine (no 51-3), pp 66–78

Rasmussen A (2001) «L'hygiène en congrès (1852–1912): circulation et configurations internationales». In Bourdelais P (dir.) Les hygiénistes: enjeux, modèles et pratiques. Belin, Paris, pp 213–239

Veyret Y et Le Goix (dir.) (2011) Atlas des villes durables: écologie, urbanisme, société : l'Europe est-elle un modèle ?, Paris, France, Autrement, 87 p

Sources

Archiv of the Eurométropole de Strasbourg.

Author Biographies

Cathy Blanc-Reibel studied history of art. She is now a Ph.D. candidate in urbanism at the University of Strasbourg and French National Center for Scientific Research (CNRS)? Her research focuses on the Neustadt, which is a German word which means the "new town." In Strasbourg, it refers to the urban extension planned and raised during the German Annexation of Alsace (1871–1918). Today, the local institutions decided to highlight this part of Strasbourg, and since July 2017, this part of the city has been listed as a UNESCO World Heritage. In the context, she works at the appropriation of the heritage by the inhabitants and their common practices of monumental heritage.

Olivier Haegel is a researcher in the service of the inventory of the cultural heritage site of Strasbourg for 20 years. He realized in particular the study of various rural townships and works at present on Neustadt of Strasbourg (architect; way of living; actors (masters of work and sponsors). He collaborates regularly with patrimonial departments—City; State—on questions of expertise in the field of the civil architecture (XVIth—the beginning of the twentieth century), gardens, or Alsatian patrimonial history.

Chapter 4
The Two 'Ages' of Modernisation of Allotments: Changing Moral and Aesthetic Models

Arnaud Frauenfelder

Abstract This chapter sheds light on the principle transformations to allotments taking place in Western Switzerland since the middle of the twentieth century. Based on a methodology combining an analysis of both written and spoken sources, it focuses on two periods (1950–1960 and 2000–2010) characterised by notable regulatory changes, demonstrating the extent to which the action taken by 're-formers' of these green spaces is grounded in different moral and aesthetic models, the nature of which mutates over time. Firstly, faced with the spectre of the rural wasteland in an urban setting, this chapter documents the transition, in the mid-twentieth century, of the traditional allotment into a clean, tidy familial pleasure garden. Secondly, we see how, throughout the 2000s, these reforms are undertaken with a view to rethinking the spectacle of the formal garden (in favour of a much more fluid style), and its use ('less privatised') in a context where new forms of urban gardening (community gardens), 'taking up less space' and 'more integrated into the urban fabric', continue to thrive. Finally, the chapter seeks to understand how the social history of these two 'ages' of modernisation of allotments can be interpreted as a long process of dual construction based, on the one hand, on a succession of off-putting images produced by the ideological and moral configuration dominant from one historic context to another and, on the other hand, on a process of social regulation and normalisation applied to communities perceived as marginal to or unaffected by mainstream concerns.

Keywords Historical sociology · Allotment · Social regulation
Metamorphoses · Moral and aesthetic categories · Urbanism · Western Switzerland

Many studies have already shown how family gardens—once known as 'allotments'—were initially the result, within Western societies, of the work of a char-

A. Frauenfelder (✉)
HES SO Genève, University of Applied Sciences and Arts Western
Switzerland, Geneva, Switzerland
e-mail: arnaud.frauenfelder@hesge.ch

itable venture designed to provide stability for mobile and uprooted populations—former agricultural workers—who had migrated away from their region or their country because the land could no longer support them (Corbin 1995; Weber 1998). The idea behind this means of regulating and managing people (Foucault 1976) has its origins in the transformations brought about by industrialisation at the end of the nineteenth century. It seems that these were peasants and farm workers who had been 'uprooted', leaving behind their traditional life worlds for an uncertain future in rapidly expanding urban centres; they became classed in the discourse of the time as 'waifs and strays, or vagabonds', an extremely 'dangerous' social class (Chevalier 1978). Envisaged by philanthropists as a space in which recent rural to urban working-class migrants would feel at home, these gardens were effectively created around the first part of the twentieth century in Western societies in answer to social issues of the time (Castel 1995). This response was at once both hygienic (fresh air rather than unhealthy miasmas), nutritional (fresh vegetables rather than alcohol), economic (an income-generating pastime) and political and moral (a group of working-class families rather than a group of male manual workers) (Frauenfelder et al. 2015; Weber 1998).

However, by the second half of the twentieth century, due to diverse social transformations, it would seem that the 'virtues' of these gardens were perceived in a different light. If the 'modernisation' of allotments in the middle of the twentieth century has been well documented, research on the transformation of gardens on the cusp of the twenty-first century, at a time when our towns were starting to rediscover a new relationship with nature (Hajek et al. 2015; Salomon 2005; Walter and Bergier 1990), was more rare (Frauenfelder et al. 2012, 2014; Guyon 2008). This article therefore aims to contribute to this field of research through a socio-historical study carried out in Western Switzerland which focused on the principle metamorphoses of allotments in the region which have taken place since the 1950s. Rather than attempting to cover the entire period, it concentrates in fact on two exemplary periods of such profound changes. In analysing social change, we recognise that the law—as Durkheim (1893[1990]) had already shown—can sometimes provide an heuristic indication. Thus, at the end of the 1960s, a 'Law for the protection and development of allotments' was adopted by the Genevan cantonal parliament (*Loi pour la sauvegarde et le développement des jardins familiaux* or LSDJF, 25 November 1960). The outcome of a shared agreement between the state and the Federation of Community Gardens of Geneva (Fédération genevoise des jardins familiaux or FGJF), this legislation also facilitated the renewal of long-term leases in order to maintain a presence on the territory and offer certain guarantees concerning the future for those families benefiting from the scheme. Over fifty years later, on 20 September 2013, the cantonal parliament of Geneva adopted a 'Master Plan 2030'[1] aiming, in particular, to 'promote new forms of community garden and to encourage the creation of planting schemes [community gardens]' by 2030 and implying that 'abolishing or else modifying the

---

[1]This 'plan' was approved by the Federal Council (the executive body of the Swiss Confederation) on 29 April 2015.

1960 LSDJF' was a possibility. On the strength of an analysis of these two iconic periods (1950–1960 and 2000–2010), this chapter will reveal the normative and axiological background to these changes in the law and the role played by the institutional actors involved in garden reform. It will show how much the actions of these 'reformers'[2] are based on the different aesthetic and moral models the content of which changes from time to time and contributes to a process of symbolic dis/re/qualification of gardens, of their use and of those for whom they are destined. Finally, the chapter will question how much the social history of these two 'ages' of modernisation of allotments can be interpreted as a long process of dual construction based, on the one hand, on a succession of off-putting images produced by the ideological and moral configuration dominant from one historic context to another and, on the other hand, on a process of social regulation and normalisation applied to communities perceived to be marginal to, or unaffected by, mainstream concerns.

4.1 Approach and Questionnaire Survey

Within the framework of an historical sociology of public action and problems, this contribution aims to revisit and shed light on transformations which took place over a relatively prolonged period of time. The argument put forward is that the reform of allotments which took place during the second half of the twentieth century is not a simple reflection of an objective situation. It is the fruits of a series of 'reworkings of the issue (of allotments) which resulted in reforms' (Tissot 2007: 11), from whence the need to question the doubtful work undertaken by an amorphous grouping of agents all more or less involved through a host of partly different but also similar arguments and concerns. This 'reforming nebula' (Topalov 1999) was made up of representatives of communal gardens, public services, elected officials, professional and architectural landscapers and town planners. The methodology employed in our research is based on a review and analysis of both oral and written sources. Thus articles in voluntary-sector (for allotments) reviews, legal texts, press cuttings and official documents (such as action plans for land development) were all intermingled. For the period under review, the analysis is based, *inter alia*, on in-depth qualitative interviews carried out with a member of the FGJF,[3] a landscape architect and a town planner. The global body of analysis refers back to discourses uttered by diverse actors each occupying specific and hierarchical positions in the field of land use and spatial planning policies, caught up in an activity at once cognitive (the construction of frameworks of analysis of 'social problems'), social (creation of networks through which to promote them) and also 'militant' (Dubois 2014; Tissot 2007: 12–13). Additionally, faced with what would appear to be, at a

---

[2]These institutional actors are not always known as reformers, even though they spontaneously agree with the notion of garden reform and the 'urgency' of it.

[3]Federation of Community Gardens of Geneva.

given moment in time and in a given society, a self-evident problem, sociological research tends to deconstruct the way in which the problem is constituted (Blumer 1971).

From this perspective, we will first reveal the transformations that took place during the first modernisation, in the 1950s, in which allotments were given a new name (and from then on would be known as 'community gardens') and were tidied up. We will then set out the changes that were evident at the turn of the twenty-first century, whereby these community gardens were increasingly competing with new ways of gardening in an urban setting (shared gardens, plantations, urban vegetable plots, *community gardens*) and were, at the same time, their own aesthetic and moral benchmarks. In this ideal-typical sketch of the history of these gardens, we will see each time how much the various transformations of the allotments consolidate around symbolic considerations[4] (What constitutes a good grouping of allotments? For whom are these gardens destined? What use will be made of them?) where uninspiring sites and garden plans to be followed overlap with proposals from reformers, sometimes resulting in revisions.

4.2 The Mid-twentieth-century Modernisation of Allotments

By the end of World War II, with the role of allotments in supplying the country's food no longer deemed indispensable, many associations disappeared. Allotments had, in fact, enjoyed a golden age under the Wahlen plan (1940–1945). In assuring the extension of field crops in Switzerland, the aim of the plan drawn up by the Swiss agronomist and politician Friedrich Traugott Wahlen was to increase agricultural production during the war thanks to the country's indigenous resources, in this way responding to the risk of an imports embargo and to Switzerland's particular situation. The dominant argument of the allotment as a response to the risk of food shortages was no longer valid once this particular moment of crisis was over. This change of context—characterised, *inter alia*, by a phase of economic, demographic and urban expansion[5]—ended with the closure of many allotment sites. Set up in March 1950, the Western Swiss review of the Swiss Federation of

---

[4]The expressions of which are sometimes quite concrete, as at the beginning of the twenty-first century: revisions to the space allotted to the vegetables plot/sheds, revised layouts and access to the plots and a rethinking of the links between them and their immediate surroundings.

[5]Between 1950 and 1970, Switzerland went through a phase of impressive economic expansion: its gross national product grew four times as quickly as it did before World War II (an average of 4.5% per year). The population grew from 4.7 million inhabitants to 6.3 million by 1970 thanks, in part, to international migration. In 1950, 62.2% of the population lived in communes of more than 2000 inhabitants (compared to 52.1% in 1900). By 1970, the rate of urbanisation reached 77.7% (Thomas 2013: 107).

Home Gardens—*Le Jardin familial* or *Communal Garden*—which publishes the concerns of those authorities seeking to maintain these gardens, calls this situation deplorable:

> The issue of small-acreage plots was only seriously considered in Geneva as the need arose or under pressure from the federal authorities. It was only in times of trouble that small-scale gardeners began to be understood and to receive a little support from the authorities […]. As soon as the Wahlen plan came to an end, the land was repossessed […]. 23 allotment groupings have disappeared in recent years to make way for buildings or sports facilities […]. In spite of great encouragement, no new ground has been given to us nor, to date, has any plot been granted long-term rights of use (*Le Jardin familial*, No. 7, September 1950: 9).

Thus, in Geneva, of nearly 50 allotment groups existing in 1943,[6] almost half were closed down between 1945 and 1950, with similar closures taking place elsewhere in Switzerland, especially in Basle (see Colon 1985). In August 1951, the review *Le Jardin familial* published a list of the groupings which had disappeared/been wound up/were soon to disappear; the list took the form of an obituary. The article stated that 23 groupings had disappeared since the end of the war, three had been dissolved in 1950 and two would disappear in 1951.

In response to this denunciation of the closure of many groupings, a resolution adopted in August 1951 by the FGJF demanded of the cantonal authorities of Geneva that 'new grounds [be] made available' in order to 'compensate for the disappearance of many dissolved groupings'. Under the rubric 'What the Genevan press thinks', a mix of stances taken by the local press, of various political leanings (*Tribune de Genève, Voix Ouvrière, La Suisse, Courrier de Genève*) was published, as a way of implicitly suggesting that there was some consensus over the good cause that the allotments represented:

> During the war, the Federation of Allotments was inundated with encouragement and congratulations. The authorities were not slow in lauding this ancilliary activity of many workers – all good citizens working for the good of the community and contributing through their efforts to the economic security of the country. So what of today, now that these difficult times are just a distant memory? It is easy to see that, nowadays, the very existence of these allotments is threatened. Why? Regardless of their popularity in the lower social classes, these allotments do not receive the support which they deserve ('Resolution', in *Le Jardin familial*, No. 8, August 1951: 1).

In many respects, the transformation of these allotments in Geneva in the mid-twentieth century occurred de facto, but is only recognised through the reactions which they generate, the uses which are made of them and the appropriations

---

[6]A grouping is a body of the FGJF or Federation of Community Gardens of Geneva. Each grouping consists of a committee ensuring the proper management of the plots (location and granting of plots, admission of new members, exclusion, etc.) within the statutory limits of the FGJF. The terms of the lease determine the length of time for which an allotment is granted or how long the land is available. Each person renting a plot becomes a member of the grouping, membership which ceases when he or she no longer rents the plot. Each member renting a plot also becomes the owner of a garden shed.

to which they are subjected. We will see that these discourses will contribute significantly to the direction taken by the process of reform in the decade.

The spectre of the rural wasteland in an urban setting: clean and tidy gardens which are pleasing on the eye

Archival analysis (reports and lawsuits of the FGJF) confirms the extent to which the decade from 1950 to 1960 (the first modernisation of allotments) was progressively marked by the importance accorded to the issue of the aesthetics of the allotments and any buildings thereon. If the dominant public formulation of allotments as a response to social questions was a crucial issue of the first half of the twentieth century, the visual appearance of allotments was at the heart of problematisations from the 1950s onwards. Here, it was the absence of economic crisis which, paradoxically, triggered the crisis surrounding allotments[7] and constrained their spokespersons to find new means of legitimising their presence on the territory and a cleaning up of the allotments. Having gardens which are 'pleasing on the eye' stems from an eminently strategic option on which depend both the continued existence of current groupings and the desire to acquire new territories, as expressed by an FGJF report in the 1950s:

> It is on the beauty of our allotments, of their appearance, of how they are maintained, that the making available by the local authorities of new sites and their integration in urban development plans depends (Official body of the Cantonal Federation of Allotments, Editorial 'To the reader', in *Le Jardin familial*, No. 7, July 1951: 1).

> It is clear that, to survive and to flourish, we need the backing of the authorities; these latter will offer neither ground space nor support to poorly managed projects which will destroy the scenic beauty of the outskirts of the town. It is therefore vital that, alongside our negotiations with the local authorities to promote these allotments, the different groupings make a conscious effort to ensure that the allotments are well-maintained and rendered more attractive. If they do not, our allotments run the risk of being closed down sooner rather than later (*Le Jardin familial*, official journal of the Western Swiss Federation of Allotments, edited by the Genevan Federation of Home Gardens, Geneva, No. 10, November–December 1958: 11).

For Weber (1998: 48), the theme of the tidiness and cleanliness of the allotments has been interpreted differently since the 1950s: 'From enthusiasm for this moralistic undertaking, with its promising future, combined—up until 1950—with the relative good will of those gardeners who saw it as a way of building an honourable reputation, the clearing up of these gardens has become an argument for the preservation of some of thesm'. This concern is clearly spelled out by the local press of the period:

---

[7]More generally, the changes which took place during this period were innumerable. Without going into detail, we can mention 'the historically exceptional increase in income; the unprecedented educational development; the setting up of a welfare state with its extended coverage of health and housing needs, protection of the family and, little by little, drop-outs from society as a whole; the disappearance of urban slums […]; the start of mass consumption and access for ever-expanding segments of society to household appliances, television, telephone, holidays, etc. The list is never-ending, but the crucial point to mention is the context of full employment' (Chauvel 2010: 65).

We cannot be expected to shed a sentimental tear for a suburb easily critiqued for its garden sheds, its patchwork of small buildings and its air of false abandonment […]. But do you find the current appearance of the Bouchet crossroads any more attractive? There is a solution: lease to the Cantonal Federation of Allotments any plots of land which are suited to this type of culture. The plots being on a long lease means we could ask lease-holders to pay rent, especially concerning their buildings. We have, in fact, been assured that a small one comes in at around 1,000 francs. Again, we need a guarantee that these plots will be available for some time to come (*Journal de Genève*, 14 April 1953: 6).

Criticism over the poor maintenance of the gardens, brought up at annual meetings of the FGJF, arose following formal visits to these allotment groups. The idea behind these visits is to 'identify and heap praise on deserving gardeners' and maintain a controlling hand over their practices, while sometimes needing to action 'the expulsion or voluntary departure' of any 'undesirables' (Weber 1998: 31–32). Some FGJF reports of visits are quite evocative in this respect, such as this next extract reporting on a visit to a group of allotments on the Right Bank of Geneva in July 1954:

Account of a visit to several groups of allotments on the Right Bank on 17 July 1954: […] we were welcomed by committee members who showed us round the allotment, where some of the gardeners had undertaken the enormous task of levelling the ground and improving the uncultivated plots; on the whole, these allotments are flourishing and well-maintained. However, we were shocked, when we arrived in front of Mr. Z's hut, to find that it was surrounded by an overwhelming mess; this member was served with a serious warning and told that he must immediately turn this house of horrors into a presentable plot. Other members have installed chicken-runs without permission. […] On arrival at Château-Bloch around 18.45, we were received by three committee members who showed us round; we saw that great efforts were being made by this group of allotment-holders to spruce up their plots and noticed the good taste shown in their choice of buildings and how clean the surroundings were. We were told of the obstructive behaviour of certain members of the grouping which was having a negative effect on the good running of the allotments. After having been guests at a richly appointed table, we took our leave of Mr. R, whom our president congratulated for the great effort made by the committee to restore this important group of allotments […]. The under-secretary [of the FGJF].[8]

Defenders of the cause, while confirming high and wide their belief in the values of law and order ('well-built sheds', plots that are 'well-maintained and something to be proud of'), still link allotments to the post-war period of modernisation characterised by unprecedented social and economic development and by an explosion in population. This aim can be found in other national contexts, for example in France, as Weber (1998: 62) underlines in his study: 'To earn their place on the outskirts of the modern town, allotments must offer to the eyes of the public a neat and tidy appearance—an ornament for the neighbourhood. This is the price of their future […]. Modern allotments must, with their "arbours and shelters", both set themselves apart from the slum area—a sort of degree zero, impoverished and ill-equipped, of the housing estate—and resemble a green space with

---

[8]Report of the Cantonal Federation of Allotments, 17 July 1954, in the archives of the Genevan Federation of Home Gardens'.

"well-maintained pathways, well-trimmed hedges, a well-decorated entrance to the group of plots (flowers, etc.)", as stated in the questionnaire survey'. Thus, the original huts, usually thrown together from salvaged materials and criticised for their slum-like appearance, would give way to elaborate, good-sized chalets, the design of which was submitted for planning permission, as covered by building regulations. In Geneva, in 1957, two new groups of allotments appeared ('Le Grand-Chêne' and 'Le Temple'),[9] groups held up as the model to follow:

> Among the encouraging outcomes of the recent exercise is the continuation of the landscaping of the new 'Grand-Chêne' group of allotments, which is now looking great. Federation-style chalets are now plentiful and contribute to the overall pleasing and harmonious aspect of this attractive site. How far we are from the old 'urban wastelands' of the past with their 'rabbit huts' decorating these unofficial allotments […]. Another project has been the organisation and the development of the 'Le Temple' group. This group of allotments, opened this year on a magnificent piece of ground offered by the Federation on a long lease is almost completely full. These 91 plots, superbly placed, with the Salève in the background and their neat rows of chalets, will be the delight of many a family (FCJF, *Le Jardin familial*, *op. cit.*, No. 1, January 1958: 2–3).

By the end of the decade, this strategy for the upgrading of allotments seems to have spread to all groupings.

> A welcome change has gradually taken place in the allotment buildings too – the '*gloriettes* or little rooms' as our French friends have so aptly named them. Little by little the jumble of rusty corregated iron sheds has disappeared, making way for simple but elegant buildings where the family can enjoy spending time together (*Le Jardin familial*, *op. cit.*, September 1959: 6).

In many respects, this upgrading of allotments appears to be a meeting-point between the obligation imposed by local authorities to clear up the plots and the FGJF's struggle to gain recognition of and, in a context of unprecedented social, economic and demographic development, a stable future for such an institution. In a bid to enforce the 'good maintenance' of these allotment groups, the terms and conditions of use of these grounds offered to the FGJF by the local authorities were fixed in a law adopted in 1957. The agreed measures consist in transforming the plots so they no longer look like 'urban wastelands', as lauded by some local newspapers: 'Clever redesigning has removed all traces of 'urban wasteland' and the little chalets which the tenants have been authorised to construct are of the style agreed upon' (*Journal de Genève*, 10 September 1957). When necessary, the state can also remind tenants of these agreements, as the state is actually still the real owner of these allotment groups, as stated in a law of 17 February 1966 concerning 'the leasing of land as allotments to the Genevan Federation of Home Gardens'.

As well as the care taken by leaseholders over the appearance of the allotments and chalets and the maintenance of the vegetable gardens, we will later see that this

---

[9]To respect the anonymity of the three sites under investigation, we are obliged to use pseudonyms. Thus, 'Le Temple', 'Le Grand-Chêne' and, later, La Plaine-des-Renards' are completely fictitious names. Note that, just as the work was published in 2015, two of the afore-mentioned groups ('Le Temple' and 'La Plaine-des-Renards') were moved to new emplacements.

modernisation also crystalises around the new way of defining the target population. However, here too, behind the promotion of a new selection process for tenants and their practices, we also see a renaissance of 'old-style' allotments. These 'ancient' plots represent, through the distinctive struggles to which they are henceforth committed (Bourdieu 1979), a figure of ugliness, as we will see below.

4.3 Promoting the Family Garden: Upward Social Mobility?

In the 1950s, the Federation changed its name. If the name Federation of Workers' Gardens was still in use at the beginning of the decade, the qualifier 'worker' progressively disappeared in favour of the term 'family'. Why? This evolution is due to the transformation of the economic situation, which would alter the expectations of gardeners:

> With the improvement in the economic situation, the post-war years saw a significant reduction in the number of amateur gardeners. However, what is pleasing to note is that a number of employees and workers, who previously were required to work the land, now take pleasure in cultivating their plots and continue this culture, which not only provides them with often appreciated crops, but also a healthy pastime and a degree of clean air which they cannot hope to find during the long hours spent in the polluted atmosphere of offices or factories (FCJF, 'A cry for help! Calling on public opinion – Our briefing on the situation of allotments in Geneva', in *Le Jardin familial*, April 1953: 3).

Entitled 'Combining business with pleasure: vegetable gardens or family plots?' the case study selected from the Western Swiss review *Le Jardin familial* clearly explains what is at play at the end of the decade.

> Over the years the conception of the allotment has evolved to become less utilitarian. We now see very few plots exclusively devoted to the growing of household crops. A worthwhile annual yield is (certainly) still the goal but, next to the lines of vegetables, it is nowadays quite common to find a relatively large plot reserved for flowers. The vegetable garden is increasingly becoming the family garden not only where the amateur gardener can grow seasonal vegetables but also a place where the whole family can find pleasure, tranquility and beauty (*Le Jardin familial*, Official Western Swiss journal of the Swiss Federation of Home Gardens, Geneva: Cantonal Federation of Home Gardens, No. 9, September 1959: 6).

Garden competitions: how to rank cultivation?

Reading through the articles published in *Le Jardin familial*, we can see that the extent of actual garden produce, as depicted in the review, will increasingly be competing with other preoccupations which go way beyond vegetable growing. In the mid-1950s, visitors to the allotments in question (forming a 'commission' composed of 'a professional', a 'qualified colleague from another allotment group' and a 'committee member', none of whom are

entered in the competition) felt it necessary to introduce a 'tiered scale', as they explain in *Le Jardin familial* published in June 1954.

'How to rank cultivation? A scale of 1–10 results in a surfeit of *ex-aequo* scores. It would be far better to attribute scores on a scale agreed in advance: 10 points for cultivation (care, diversity of the crops, distance between the rows, treatments), 10 points for the orderliness and cleanliness of the plot (pathways, weeds, compost heap) and 10 points for the pleasure aspect (flowers, chalet, arbour, children's play area)'. However, the review leads us to believe that some of the criteria reserved for the evaluation of allotments are not universally applied: 'This way of attributing points is often criticised by its opponents, who feel that our allotments are for growing vegetables and that this is the only perspective that should be considered in the competition'. However, as the review explains (slipping into the argument the view of the Federation), 'We do not agree at all. We are not looking for vegetable gardens but HOME GARDENS where the whole family can experience pleasure each time they visit. It is not a beautiful bed of cabbages, however exceptional, which will endear the plot to the housewife and her children. On the contrary, a beautiful garden, with a perfumed flower bed, an arbour where the children can have their tea in the shade, and a chalet covered in climbing plants. Or, quite simply, a bench in the shade where the family can relax in the evenings. This is what makes a HOME GARDEN so agreeable, and this should be taken into account' ('Garden competition' in *Le Jardin familial*, No. 6, June 1954: 9).

However, this change in the classification of the target population is again part of the social transformations to which the groups are aspiring—in particular, *vis-à-vis* the rest of the world. In liberating themselves gradually from the sordid image often associated with the working classes (Grignon and Passeron 1989), they are bringing to public attention a new perception of the role of allotments. It is a question of suggesting that, from now on, the allotment serves 'other purposes', the group hastens to add. Although previously in response to the need some years earlier for the growing of vegetables, seen as a necessity for working-class households as it provided them with the means to be self-sufficient and to meet their own consumer needs, the allotment is increasingly seen as a space of relaxation and leisure. Changes in the assessment criteria during gardening competitions organised by some allotment groups in order to reward particularly deserving gardeners reveal the dynamics of reconfiguration of the functions associated with plots which are mutating from the 'vegetable garden' to the 'pleasure garden' (see the box below).

This new representation of the home garden is completely in keeping with societal transformations engendered by the shortening of the working day and the development of the 'leisure industry' (Corbin 1995; Lalive d'Epinay et al. 1983). The image of the 'family leisure garden' is often invoked as an argument in the struggle for recognition of the cause: the image of the gardener is often compared

with that of sportspersons or music lovers. The situation of these other 'contributing groups' is more favourably viewed by the FGJF, which reveals one of the difficulties it encounters in trying to safeguard its place in the social space. Over and above this form of social competition for urban space, the federation intends to symbolically ascribe the development of home gardens as a new, flourishing social issue.

> A whole class of citizens, mostly of modest means, does not understand this indifference on the part of the local authorities towards home gardens, while so many other contributing groups, such as sportspersons and music lovers, seem to automatically obtain the developments they seek (FCJF, 'A cry for help! Calling on public opinion – Our briefing on the situation of allotments in Geneva', in *Le Jardin familial*, April 1953: 5).

However, this expanded concept of the function of allotments, concerned to no longer use these forms of self-sufficiency as the main argument in their defence, goes hand-in-hand with a broader vision of the targeted population. It is as though the category of 'worker', once an official term used by the federation, was now seen as too limited and reductionist *vis-à-vis* the new roles conferred on the allotment and elements of the population potentially involved (notably public sector employees). Where vegetable gardening remains very important, those defending the cause of allotments hasten to explain that it is just a pretext for self-fulfillment and leisure activities, and not a survival strategy. In federation discourse, maintaining this distance from utilitarian gardening seems juxtaposed with conspicuous consumption (Veblen 1970): it is not only the products of one's labour which are consumed, but fresh air, sun and free time. No doubt suppressing use of the term 'worker' should be put into perspective following the reconfiguration of the gardening population (Schwartz 2011) and the lower classes in general. During the second half of the twentieth century, we know that the working classes for the general category of salaried workers in the world of the proletariat (Castel 2009: 364). The category of employee is increasing numerically while workers—usually 'skilled'—are seeing their way of life transformed thanks to a loosening of economic constraints and the opening up of social opportunities. By the 1960s, workers and employees will both benefit, thanks to collective claims, social protest movements and the development of the welfare state—from progress either in areas linked directly to employment (accident insurance, health, pensions, social insurances, the right to work and wage increases) or in their private lives (access to mass consumption and to leisure activities, as well as to collective assets such as health, hygiene, housing, training and some participation in social ownership) (Alonzo and Hugrée 2010: 21–22; Castel 1995: 519–620). Note, however, that the survey which we carried out in Western Switzerland in the early 2010s in three allotment groups seems to confirm this specific social and historical relationship with the garden. We were able to show how closely the garden represents, for many keen gardeners among employees (usually those in the 60+ age bracket), some of whom worked in the public sector (policemen, inspectors, bus or tram drivers, home-helps, office

workers) a space for leisure, friendships and entertaining (Frauenfelder et al. 2015).[10] According to this logic, growing vegetables is a seasonal occupation. These gardeners do not store or freeze their crops, but spend considerable sums on gardening products; they do not perceive the garden as saving them money.

Furthermore, in lauding the pleasurable aspects of an allotment, the reformers were seeking to distance themselves from forms of charitable guardianship which saw allotments as a means through which to control and alleviate social poverty and disorder. In many ways, the FGJF newsletter symbolically drives the idea that the allotment is more a space appropriated by gardeners who have come together to form an association than a means to morally elevate and civilise those social categories recently urbanised. Seen initially as a 'good cause', allotments would progressively take on a different meaning, gradually turning into 'gardening associations'. One tangible indication of this metamorphosis: where once these plots of land were offered as a gesture of goodwill, those with the good fortune to be working them would soon be required to pay an annual subscription. Through these changes, those to whom the allotments had been graciously granted originally would be able to shrug off the symbolic mantle of the deserving poor (and the notion of the allotment as a sort of charitable gesture) and virtually return to a social security regime because they have transformed these plots 'to which they have every right' thanks to their licence fee (Weber 1998: 94). The desire to distance themselves from the supervisory relationship initially established between local authorities and the workers themselves—often played out in the discourses of those promoting allotments in the first half of the twentieth century—is very evident, for example, in the tone of the first volume of the Western Swiss journal *Le Jardin familial*, published in March 1950. Created at the insistence of the FGJF's members and symbolically equated to a sort of 'companion you would be happy to meet up with again, in your old shack, between sowing seeds and a break for a snack', the journal thus clearly indicates its desire to distance itself from certain moralising goals whose aim is not so much to provide 'wise advice' as to keep up with any interesting 'titbits'.[11] The rubrics 'Ramblings of an old gardener' and 'Father Gaspard's ramblings', which reappear regularly in the volumes of *Le Jardin*

---

[10]According to our analysis of FGJF (2010) statistics, of the 1335 gardeners who had indicated their profession at the time of their application for an allotment in Geneva, 78.4% were working class (employees and workers), 17.2% were middle class and 4.4% were categorised as 'other' (homemakers, small-business owners and the unemployed). Other surveys came to the similar conclusion that there is an over-representation of the working class in these places. Weber (1998: 70) notes, for example, that, of the two sites visited during her ethnographic survey, three-quarters of the employees were in the public sector: the electricity board, the RATP transport company, the railways, welfare, the police and local authorities. She concluded that '[…] thus a portrait is revealed of a respectable working class with stable employment'.

[11]Cantonal Federation of Allotments (Genevan section). *Le Jardin familial*, *op. cit.*, No. 1, March 1950: 1. Similar developments have been noted in France: Although at the turn of the century the rhetoric used by members of the League highlighted social distance (e.g. in the use of the term 'those good people'), familiarity is today emphasised (e.g. in the term 'the lads') (Florence Weber, *op. cit.*: 100).

familial from the mid-1950s, bear witness to the need to reinforce the idea that the preoccupations of the core membership are represented. With the obvious need to both keep members of the FGJF informed of the stakes at play in a critical context characterised by the closure of many sites and to strengthen internal solidarity between them, the journal plays its part more generally in the strengthening of the associative dimension of the movement, by the same token seeing those responsible more as spokespersons for the FGJF's members than as representatives of state authorities or funding bodies.

Furthermore, this distancing of the practical aims associated with vegetable gardens reflects certain ethical transformations in the homestead. The idea of creating workers' homesteads—a philanthropical concept very common in the first half of the twentieth century with the creation of allotments[12]—resurfaced periodically during the 1950s. In the first half of the twentieth century, the allotment was first and foremost seen as a way of encouraging the working classes to 'live as a family' in order to drag the proletariat off the streets and away from social disorder (alcoholism, nightclubs, strikes) to a life of domestic bliss (Donzelot 1977). However, during the 1950s, the family values attached to the allotment start to perceive it—in a context of relative loosening of economic constraints—as a self-referenced end in itself: the space becomes a place of leisure and relaxation for the whole family. Yet here, again, it is a question of those in favour of allotments turning their back on the 'old-style traditional' allotment and looking resolutely to the future. Of course these symbolic strategies of re/presentation of the group echo those objective and thorough transformations taking place in the working classes. We know that the turn of the 1950s seems to have represented a sort of golden age of grassroots familialism where the family is at the heart of social life; concrete proof of the perfect daily life, the 'home, sweet home', while remaining privileged spaces of sociability and solidarity (Hoggart 1970: 53). This relationship with the private sphere will grow in strength, amongst the lower classes, throughout the Glorious Thirties, particularly within those elements which are stable or socially upwardly mobile (Frauenfelder 2009; Schwartz 2002[1990]).

By the end of the 1950s, the allotment reform movement—obliged to modernise if it is to survive—will benefit from a sort of public blessing. Effectively, on 25 November 1960, a 'Law for the protection and development of allotments' was unanimously adopted in the Genevan Cantonal Parliament, giving defenders of the modernisation of allotments some recognition of their commitment to the cause: the state undertakes to ensure 'the safety and development' of allotments by taking responsibility for 'the building of allotments' and facilitating the 'conclusion of long-term leases'. At the institutional level, while the state remains the true 'owner' of allotments,[13] the FGJF is now recognised as credible and knowledgeable in the

---

[12]Philanthropical motivations are behind the upgrading of family values at the heart of the federation's official designations. For example, in France and Belgium, *Ligues du coin de terre et du foyer* (*Leagues of Earth and Hearth*) were set up in 1896.

[13]'Genevan Federation of Allotments, 75 years', *op.cit.*: 5.

management of this public utility. Thus, through this first modernisation, the old-style allotment becomes the modern allotment—the home garden.

4.4 The Second Modernisation (2000–): New Models of Home Gardens

From the 1980s, the issue of allotments has been the subject of many debates, both in Switzerland and in other European countries; increased public and political attention has focused particularly on the issue of urban gardening (DAT 2006; Guyon 2004; Monédiaire 1999; Weber 1998). It is seen as an opportunity for towns to redeem themselves by restoring 'a lost link with nature' (Kebir and Barraqué 2014; Salomon and Ernwein 2014) through experimenting with and developing forms of gardening which take up less space and are more integrated into the urban fabric. Influenced by new frameworks of public action and urban representation (green towns, urban agriculture, urban nature, biodiversity, eco-neighbourhoods and sustainable towns), sometimes codified as 'urban marketing' (Breviglieri 2013) under the banner of 'sustainable development',[14] the original concept of the allotment is revisited. In Geneva, this tendency can be seen in the promotion of allotment reform in the 2000s, presented as 'necessary' and 'inevitable' by the local authorities.[15] New garden concepts make an appearance during this decade, and the 'urban vegetable garden' (or 'plantings')—which correspond to the 'shared gardens' model found in France or the 'community gardens' of North America (the US, Canada)—is increasingly used in public debates to indicate a new form of gardening space, sited at the base of buildings, of a reduced size (6–50 m^2 as opposed to 250 m^2) and with no shed. Appealing to the political and institutional authorities of the State of Geneva, to local authorities, town planners and landscape architects alike, urban vegetable plots are, however, only given a muted welcome by the FGJF, even if it is encouraged by local authorities to accept planned changes. Effectively, the focus of the new Genevan cantonal master plan adopted by the local authorities on 30 September 2013 is the future development of the territory through 'promoting new forms of allotment and encouraging the creation of plantations', referring to the possibility of 'revoking' or 'modifying' the 'Law for the protection and development of allotments' (25 November 1960). Responding to certain concerns at once pragmatic (the very limited and highly urbanised Genevan territory, inciting the authorities to develop 'spatially restricted' allotments) and ecological (linked to the litres of petrol needed to travel to the allotment outside the town just

---

[14]With their increased public visibility at the turn of the twenty-first century, these environmental and managerial concerns promote the urban trend towards 'sustainable development', a concept which received a great deal of publicity after the Rio Summit of 1992 (Dubost 2010) and which plays an important role in the structuring and legitimation of public action at the level of urban planning (Lafaye and Thévenot 1993; Lascoumes 1994; Ollitrault 2001).

[15]The next section draws on Frauenfelder et al. (2014).

to grow 'a few lettuces', as well as the 'overfertilisation' of the soil which, according to some studies, is too high),[16] urban vegetable plots fit the bill entirely. The enthusiasm of the political and associational world of Geneva for this type of allotment has not ceased to grow, as suggested by the half a dozen motions deposed and/or adopted in the State of Geneva parliament and some communes. The titles of these motions, the initiative for which stems from the centre-left 'Green Party',[17] are revealing of the ideological investment in this new type of garden: 'In favour of vegetable gardens close to homes' (accepted by the canton in 1988) and 'In fashion, plantations *à la mode*' (accepted by the city in 2003). These policy demands will be welcomed by local authorities as they offer solutions to a number of objective and legal constraints. With their surface area well below that of existing allotments, urban vegetable gardens also have the advantage of being sited near to people's homes. Traditional allotments, on the contrary, tend to be situated on the outskirts of the town,[18] are harder to access on public transport (thus less ecologically sound) and vie with other pretenders to the space (market gardening and sporting venues). Apart from being favourably considered by politicians, such concrete undertakings have also been initiated by some town halls. Since 2006, Genevan—together with three suburban communities—have had their own plantations. According to their sponsors, these urban allotments are destined more for people originally from the country (who appreciate working the soil—often full-time—and who thus prefer allotments) rather than for urbanites who have less available time. The fact that all the political actors we met often borrowed ideas from other national contexts bears witness to how these ideas circulate when it comes to creating urban vegetable plots.

> Because, and we should not be afraid to admit it, we copied to some extent what was happening in Lausanne and in France, the book '*Les jardins partagés*' – '*Communal Gardens*' – was published (in France) but it's exactly the same thing, gardens surrounding blocks of flats, I liked the word 'plantings' in order to distinguish them from allotments (Mr. Belloz, 40, Mayor of Vernier, socialist).

Note that the story of 'community gardens' should not be confused with that of allotments which originated initially, as we saw in the introduction, as a charitable project, dating back to the end of the nineteenth century, designed to boost the morale of recent rural to urban working-class migrants. The model of the shared garden, however (Baudelet et al. 2008), mentioned by some of the interviewees in our study, was a different story altogether. It originated in the community gardens

---

[16]From 2003, the coverage in the media of certain studies supports the 'academic' legitimisation of the negative image of the 'polluting gardener' (see '*Des jardins familiaux pas très bio*'—'The not-so-bio allotments'—http://www.rts.ch/video/emissions/abe/396748-des-jardins-familiaux-pas-tres-bio.html.

[17]This party's influence on the promotion of this type of allotment would seem to originate in a grass-roots movement. Dubost (1994: 1) highlights that the fashion nowadays for gardens and horticulture is 'in line with the ecological movement'.

[18]A situation which will only get worse with the outward spread of towns and cities and the relocalisation and resettlement of many groupings.

of the US, and New York in particular, in the 1070s, with the appearance of the first gardens in Manhattan following an urban and financial crisis in which many abandoned buildings were demolished, leaving great swathes of wasteland. On the pretext of clearing and replanting these wastelands, a whole new world will be explored by a cultural and artistic *avant-garde* keen to throw off the shackles of the traditional *bourgeoisie* (seen as cultivating a form of grouping which is very divisive in wealthier neighbourhoods) by developing in more diverse quarters a whole new way of life—centred, in particular, around gardening. In the communal gardens surrounding their blocks of flats, these 'promoters of diversity' (Tissot 2011: 271–272) cultivate not so much vegetables as 'flowers, fragrant herbs and some tomatoes', a use of the space which is evidence of a 'movement of reform, this time for the upper classes and not the working classes' (ibid.). More than mere self-display, relations with others—spaces where people meet up with others from different social spheres more than spending time with the family in the home garden —seem a highly distinctive way of life: 'Enhancing the mix at the level of the neighbourhood, cosmopolitan, […] they represent a way of life which is less exclusively focused on the family circle […], breaking away from the image of the *pater familias* and of the good little wife at home' (2011: 13).[19] In Geneva, it is the Rue Lissignol, a street right in the centre of the city which, in the 1990s, introduced the current wave of 'urban gardening'; a while later, in 1994, ethno-planners, journalists and councillors at the town hall—drawing up an inventory of projects carried out on French territory with the aim of promoting, through practical advice, this new and ecological utopia—reported that a similar experience had seen the light of day in Lausanne (Baudelet et al. 2008: 139–142).

Presented as an alternative to the traditional allotment, urban vegetable gardens seemed to satisfy diverse concerns and interests. Taking their inspiration from the new models created 'as examples' to be copied, institutional actors such as urban planners and landscape architects involved in the reform of allotments in Geneva have a tendency, when working on displacement and resettlement projects, to rely —over and above any rational and ecological concerns—on tried and tested aesthetic and moral designs.

From the avoidance of 'cumbersome', 'uninteresting' layouts …

From our interviews with the various actors involved, we can see that it is the aesthetic design of the well-thought-out, well-laid-out allotment which comes under scrutiny at the turn of the twenty-first century. Created during the twentieth century as an alternative to the spectacle of the rural wasteland in an urban setting, the well-kept appearance of the allotment acted as a foil in the discussions of those planners and architects involved in the creation of new forms of allotment when the time came to relocate two sites. This is what Mr. Robert (57 years old, architect,

---

[19]This is why, in France, the idea of the 'shared garden' is preferred over that of the 'community garden', a term which could cause some confusion: a garden that is 'communal or of the community' could wrongly be perceived as belonging to a single community, which is in complete contrast to the spirit of this type of collective garden.

project manager for the cantonal department of planning and development of land (DAT) suggested, insisting that, in future,

> … we will break up the plots a bit, this rather cumbersome grid pattern, these groupings … they really have a extremely boring appearance, they do nothing to improve the look of the area, let's be clear about this, I don't find them very attractive, I find them ugly…

Compared to new norms of aesthetic evaluation employed by competent actors who had the professional skills to allow them to justify their idea of 'good taste', and to present it as desirable and preferable, it turns out that both the 'orthogonality' of the layout of the groups of allotments (having had their finest hour when plots were laid out in lines and squares cross-cut periodically by several main entrance paths which crossed over lengthways) and the 'chalet-style' allotment appeared to be 'problematic':

> Everything is standardised, the tiles on the roof of the sheds are all the same colour, […] thus there is one aspect which is extremely repetitive, just like neighbourhoods full of blocks of flats where each block is the same as the next. We would say 'Goodness, how horrific is this?' because the design is so offputting, so ordinary, repetitive, concentrated into one small space – there is no spatial expansion! […] In itself it is not interesting as it has no pastoral charm; which ever way you look at it, it's always the same' (Mrs. Romy, 53 years, DAT architect).

Landscape architects deplore current FGJF conventions, with their too-standardised and monotonous appearance, in favour either of gardens redesigned without sheds—which have the advantage of being smaller and taking up less space—or of allotments with some sort of shelter but less 'chalet'-style, with a sloping, slightly curved roof in order to stop it looking like a pretty basic, straightforward hut. With a proposition which still has to be negotiated with representatives of the FGJF, these professionals are demonstrating that they are taking on board the wishes of the end-users (see also Dubost 2010).

In accordance with what would seem to be a new urban-style model, it is also sometimes a reference to a 'natural' garden, to a messy space where here and there tall grasses grow, symbolising the forces of 'informal living' (Lizet 2010: 599), as uttered by some reformers. A model which also strongly contrasts with the aesthetic ideals of a well-tended. One landscape planner highlighted, during the presentation to potential users of a new development of allotments, the need to plant hazel, copses, forsythias or grasses in order to give the site a more natural feel. More generally, this new relationship with nature will manifest itself, according to the landscaper, in the creation of kitchen gardens which blend in with the characteristics of the landscape rather than to simply apply a formal design:

> Nowadays there is a sort of overall logical landscape! We now bring back in some of the characteristics of the landscape […] What is perhaps new in the ideas which are part of it, is that plants can bring in something more important than was thought up to now […]. What were prevalent in cityscapes of the nineteenth century were trees, certainly, but planted very formally along the main roads. It is typical of our town centre! And it's a language which is now somewhat losing ground (Mr. Forster, 50, independent landscape architect).

However, behind this evaluation of the natural framework for allotment sites, with a more liberal planting scheme[20]—more than a simple evaluation of unspoilt nature in itself—lie perhaps all the ambiguities felt towards contemporary nature. Welcoming the workings of nature but taking control of them, an ambiguity where the 'wilderness' remains, if it is to be completely accepted, very 'socialised' (Lizet 2010). In parallel with this 'aesthetic criticism' which the reformers favouring allotments have put forward, their private use is also questioned.

... to the desire to decompartmentalise familial inward-looking attitudes

If the importance of family is an ethico-moral virtue of allotments which was enshrined in the state's adoption of the law in the 1960s, this form of familialism is today criticised for the insularity it can engender. The new models of allotments are designed as a response to this criticism. While retaining the garden shed, some of the new sites under construction should 'open up' the group of allotments to the public in order to avoid their being off-limits to the rest of the population:

> It's a question of not allowing this sector in society to become cut off, [to become] increasingly marginalised [or] too shut in, closed (Mr. Forster, landscape architect).

This concern can be seen in the layout of the pathways designed to bring gardeners closer to the population of the neighbourhood via other public amenities —such as footpaths which are always open, with their public benches—in order to avoid allotments becoming 'isolated plots'. Another idea is to construct, alongside the individual plots, some training spaces as requested by teachers keen for their pupils to be aware of the benefits of nature and of an ecological mindset. We can see these concerns outlined in different ways by government officials:

> … to try and find ways [..] which are more flexible compared to other uses of green spaces, which can be open to the general public (Mr. Robert, architect, DAT project manager).

> …reintroduce our dear grandchildren to the workings of the earth, the cosmos, how things grow, why… (as underlined by a DAT town planner).

Other allotment developments saw the light of day a few years ago, even if they were not wholly appreciated by the end-users—these allotments had no shed on each plot but instead an enclosed building in the centre of the group—and, as some cantonal DAT planners recalled, it was once again a bid to 'break away from the private or individual sphere' and to 'try to get users to share materials instead of having each for their own'. Thus, these ethical criticisms (where the value of working together with one's neighbours is compared unfavourably with the notion of each allotment holder working for him or herself alone) draw some of their strength no doubt from the fact that they strongly justify economic criticisms which

---

[20]'Unlike the dream of taming nature, which we find in French-style gardens, in squares laid out by Haussmann and even in the green spaces of the 1970s, shared gardens offer an abundant, freer and wilder vegetation […]. The hand of the gardener is there, but the imprint is more gentle (Baudelet et al. 2008: 16). In other words, the landscape is the result of a cultural vision and of a certain 'artialisation' of nature (Paquot 2016) rather than a constant presence in all cultures.

underline the necessity, due to the pressures of a large number of people on a small patch of ground, of developing allotments which take up as little space as possible. Embodied in the new style of allotment being built, a perfect example of this issue, which echoes the conception of the 'shared city' much favoured by urban planners (Grafmeyer 1994: 107) can be seen in the urban kitchen gardens which, even in their name (shared garden), reflect this spirit of openness, constructed as an ethical and distinctive imperative.

> The spirit of the allotment … it's still the idea of having a little house on one's plot, it is really [each] having one's own bit of land: 'It's mine and I will not share any of it'. I have never heard this said in the plantings [in the city] (Mr. Belloz, Mayor of Vernier).

Seen as anti-privatist, this social philosophy anchors the issue of social links, conviviality and exchange (intergenerational, intercultural, interclass) between neighbours in the same area at the heart of the action. The target audience is no longer quite the same in the shared gardens: now it is not the family but the relations between residents in the same block of flats/neighbourhood which are a central concern. The focus of urban reformers on the issue of social bonds, of ties to be (re)created between residents, cannot be dissociated from the liberal transformations typical of our advanced capitalist societies, in which the 'relational' skills are highly valued (Boltanski and Chiapello 1999). In line with public actuation policies (Castel and Duvoux 2013), the mayors in the towns nearby propose certain material developments which are deliberately designed to 'instigate' (Donzelot 1997) good neighbourhood relationships such as 'picnic areas' (offering the possibility of creating a convivial space to be shared by all) rather than 'offering the possibility of each person setting out their own barbecue and grill on their individual plots' (an 'each to his own' outlook). Each time, the material structures employed are designed to 'facilitate exchange', we are told, while being reminded of the indirect benefits in terms of the struggle against 'feelings of insecurity' that these structures can help to quell, at a time when this issue has begun to come to the attention of the general public and is often raised by town mayors. In many ways, contemporary complaints about the current model of allotment (individual use[21] and monotonous appearance) and their authorised spokesperson are evidence of attempts to resolve criticisms in which the virtues once extolled of allotments (sheds carefully lined up, the value of being 'at home') are nowadays shunned. As for FGJG managers, they are sceptical about the principle of collective management invoked by those in favour of shared gardens. They fear the problems that the absence of an explicit structural framework might induce. Note that the reservations of the FGJF are essentially focused less on reformed allotments currently under

---

[21]From a legal point of view, the state guarantees the existence of allotments and takes responsibility for managing their construction or demolition, as well as for collecting rents. The state remains the true owner. For those families who have been granted an allotment, this creates a somewhat ambiguous situation: lessee of their plot, but owner of their shed, given that they bought it when they took over the allotment or will pass it on to the next lessee when they give up the plot (on the basis of an FGJF estimation).

construction than on urban vegetable gardens (shared and community gardens), no doubt because these latter stand out from the traditional family allotment (through the absence of a shed, the reduced size of the cultivatable plots or the more flexible type of social organisation that characterises them) and are more publicly visible:

> I have to admit to having some reservations about this type of thing. We don't normally work within frameworks so what happens after a while? […] Because there are no basic rules, from what I can see, the plantings in Lausanne … [in some places] it would have been better to leave them as grass as the alternative was somewhat catastrophic! […] Live and let live, […] there's a little leeway but there is nevertheless a structure in place (in allotments) and after a bit we say 'Stop, it's not working' […] while in the urban vegetable plots there is no structure, no one in charge, no responsabilities! (Mr. Suter, former president of the FGJF).

Elsewhere, the absence of sheds on urban plots is seen in a negative light by FGJF management and the gardeners. If such material infrastructures are both a practical amenity (sheltering from the rain under a pergola) and a framework for socialising (feeling at home with those on the neighbouring plots, within the intimacy of the family circle which acts as a form of protection), access to this type of substitute for owning your own small property has a social and cultural significance, particularly for the working classes. Considered by some as the 'poor man's mansion', we can see that, in this opportunity to have 'one's own place' is also the desire to create a permanent group, united in their stable social relations, while at the same time being a space that each person can make their own, as outlined by Schwartz (2002[1990]: 31), to the extent of making them into spaces of 'self-belonging' in which to create a certain 'relationship with the self'. Finally, the much smaller surface area of the shared gardens (compared to that of allotments) means that the former are sometimes ironically equated, by some of our FGJF spokesperson interviewees, to 'tiny herb gardens'. Without wishing to offend anyone, they are generally keen to stress that these urban vegetable plots are too small to allow any 'proper' gardening to take place.

> I am not fundamentally against these plantings, I think they offer an alternative for those people who want to be able to pick a couple of bunches of parsley, and for that one does not need to jump in the car and travel 20 kms to one's allotment, it's true! Now […] if it's just for growing a couple of things or some herbs, I cannot see that this is a problem, but it's clear that I would no longer call this gardening, but just a bit of DIY! You could grow them just as well on the balcony! […] The advantage of that would be that no one can see the mess from outside at least! (Mr. Suter, former president of the FGJF, in his sixties, retired, former head of IT for a national company).

This reaction is not meant to undermine the importance placed by the appropriate body representing allotments—together with those lessees from diverse working classes of rural origin—on a certain ideal of self-production and self-consumption (the main economic aspect of allotments) which cannot be dissociated from the notion of a form of productive leisure activity the results of which can be seen in the crops grown, a source of pride. Finally, the concern of town planners to 'open up' the area may meet with some resistance from those gardening families involved. Commenting on a recent project whereby a new group of

reformed allotments had benefited from development which would render it, in future, 'more open to the outside world', one of our interviewees led us to believe recently, on the subject of the absence of fencing around the site and of a footpath crossing through which is used by the general public, that 'I am personally not in favour of this, it's as though they were planning to throw peanuts at us' (Mr. Jeanneret, 55, retired, member of the federation, interview notes, November 2014). From our interview with a landscape architect working on a redevelopment project for an allotment, it is easy to see how the genuine desire to open up allotments to the outside world, 'to not allow this section of society to be shut off from what is going on, or to become more and more marginalised [or] too shut in, closed' can have a number of undesirable side-effects whereby the physical proximity to the outside world can contribute to the widening of some social gaps (Chamboredon and Lemaire 1970).

4.5 Conclusion

With our focus on the two defining periods illustrative of the transformation of allotments in Western Switzerland (the 1950s and the 2000s), as in other countries of Europe, we have seen the extent to which the moral and aesthetic benchmarks set by the redevelopers of these allotments have undergone considerable change. We first set out to document the transformation, in the middle of the twentieth century, of the traditional worker's garden or allotment into a tidy, well-kept family leisure garden, a new conception of a garden wishing to disassociate itself from the utilitarian, uninspiring functions and slum-like image attributed to allotments since World War II. We then looked into the documentation on allotment redevelopment which took place during the 2000s and the way in which—through the adoption of new planning guidelines—people were encouraged to consider this new image of the beautiful garden and its use in a context in which new ways of urban gardening (shared gardens) 'which took up less space' and which were 'more integrated into the urban fabric' now had the wind in their sails. Under the influence of these new models, styles of allotment which were more open to the outside world (the invention of 'teaching plots' available to schools, community spaces, etc.) while being associated with a less boring appearance (new pathways, redesigned sheds, etc.) were being recommended in planning discourses and tried and tested occasionally as part of relocation projects. Through these metamorphoses, we have seen how—thanks to the use of some very clever ideological tricks—some old values once conferred on the traditional workers' allotment (sheds carefully lined up, the sense of belonging) were now being revisited; a recycling of the image of the garden which was almost certainly not without displeasing some spokespersons of the FGJF: 'We are now criticised for doing what we were asked to do' (Mr. Jeanneret, member of the FGJF).

Furthermore, analysis of the role of FGJF management in the urban reform process would seem to suggest that these advocates for the cause are caught up in

arguments which are more 'reactive' than 'proactive'. This hypothesis, which would need to be tested more thoroughly, appears to reveal that the fragile status of allotments depends on their historical context. Their legitimate presence on urban territory stems from the struggle to get allotments recognised, arguments which changed over time and in different power relations, but in which the state seemed to represent each time a way of recognising the main style of garden in fashion in the different public arenas.[22] The work of the FGJF largely bears witness to these symbolic struggles, with the federation's management seeming sometimes to be in a bit of a delicate situation, caught as they are between those at the top (government bodies, urban development professionals) and those at the bottom (the gardeners) (Frauenfelder et al. 2015; Weber 1998). Although sometimes sceptical about the outcome of current transformation projects (which brings them closer to the basics), they are obliged to go along with certain external requirements, and to pass on more general ecological advice: one that comes to mind is the need, since the beginning of the twenty-first century, to see some current allotment practices modified as far as their use of fertilisers and pesticides is concerned.[23] More recently, in 2015, a change in the law in Geneva on public houses, making the selling of drinks much more strictly controlled, was seen as a threat to the informal social occasions on which gardeners set up little '*troquets*' or 'pop-up cafés' in the public areas of allotments at weekends, and which would no longer be permitted.

Finally, our analysis has revealed how much the aesthetic and moral categories found in the discourses of allotment reformers about the form which these gardens should take and promoting the use that should be made of them are always situated within the framework of social relations: in many respects, we are talking here of social valuation categories reinterpreted as moral and aesthetic ones (Bourdieu 1979). In this case, Corbin (1995: 455–466) reminds us how much the allotment reforms undertaken prior to the 1950s were also the expression of a highly ambivalent social relationship with the peasant classes. This latter social group appears to have served both as a model for allotments (as was the case at the end of the nineteenth century) and as a foil (as would be the case in the mid-1950s). 'The cultivated garden has successively been praised, feared and mocked by those in favour of allotments. These latter, motivated by the fear of seeing immigrants arriving from the countryside having to break away completely and suddenly from the land and its values, initially wanted to see a continuation of familiar gardening practices, to act as an antidote to the rural exodus and a way of calming the immigrants' fears. However, quite quickly, they became aware that the continuation

---

[22]Holding the monopoly as far as legitimate symbolic violence is concerned, it embodies in our highly differentiated societies a moment of recognition of 'public interest' via a formalisation and dramatisation blessed with a non-negligible symbolic efficacy (Bourdieu 2012).

[23]Together, in the early 2000s, the FGJF and the FSJF (Swiss Federation of Allotments) edited a brochure designed to make gardeners aware of the damage caused by the use of fertilisers and pesticides (FSJF 2001). About ten years later, the FSJF once again published a brochure on the same topic entitled 'Allotments in harmony with nature' (Müller et al. 2010), which was intended to support its members 'in making their allotments more eco-friendly'.

of these rural practices might hinder their integration into urban life. The 'small farmstead' might encourage the proliferation of hutches and an increase in livestock thefts. The model favoured the building of sheds. The spectre of the rural shack and slum area took root in the minds of many working men who were against the transformation of the allotment's gazebo into a permanent construction in which to live'. Today, the allotment reforms carried out by town planners and landscape architects aim to promote new forms of gardening activities by combining both environmental and production concerns. Based on experiments with a style of urban garden which aims to represent the town–countryside–agriculture nexus[24] and to avoid inevitable classic opposition (Salomon 2005), the 'good cause' of allotments is thus symbolically and ideologically revisited. Even if the public diffusion of these societal concerns—more or less passed on by the bodies representing allotments—is differently received depending on the end-users (as some of our observations will confirm—see Delay et al. 2014; Frauenfelder et al. 2015), their benchmarks remain socially situated. They appear to indirectly resonate with the move towards the reformulation of upper-middle-class values according to which the expression of a certain preference for 'authenticity' is very famous (Régnier et al. 2006; Tissot 2011: 306) and is seen as a particular type of refinement (Coulangeon 2011: 129) associated with the enlightened strata of the *Creative Class* (Florida 2004; Ley 1996).

References

Alonzo P, Hugrée C (2010) Sociologie des classes populaires. A. Colin, Paris

Baudelet L, Basset F, Le Roy A (2008) Jardins partagés. Utopie, écologie, conseils pratiques. Terre vivante, Mens

Blumer RH (1971) Social problems as collective behavior. Soc Probl 18(3):298–306

Boltanski L, Chiapello E (1999) Le nouvel esprit du capitalisme. Gallimard, Paris

Bourdieu P (1979) La distinction. Critique sociale du jugement, Minuit, Paris

Bourdieu P (2012) Sur l'Etat. Cours au collège de France (1989–1992). Seuil, Paris

Breviglieri M (2013) Une brèche critique dans la 'ville garantie'? Espaces intercalaires et architectures d'usage. In: Cogato-Lanza E, Pattaroni L, Piraud M, Tirogne B (eds) De la différence urbaine: le quartier des Grottes/Genève. Mètis Press, Geneva, pp 213–236

Castel R (1995) Les métamorphoses de la question sociale. Une chronique du salariat, Fayard, Paris

Castel R (2009) La montée des incertitudes. Travail, protections, statut de l'individu. Seuil, Paris

Castel R, Duvoux N (2013) L'avenir de la solidarité. La vie des idées/PUF, Paris

Chamboredon J-C, Lemaire M (1970) Proximité spatiale et distance sociale. Les grands ensembles et leur peuplement. Revue française de sociologie 11:3–33

Chauvel L (2010) Le destin des générations. Structures sociales et cohortes en France du XXe siècle aux années 2010. PUF, Paris

Chevalier L (1978) Classes laborieuses et classes dangereuses. Pluriel, Paris

Colon C (1985) La quatrième dimension: les jardins familiaux genevois. Université de Genève, Mémoire de licence en géographie

---

[24]See Le Caro et al. (2016).

Corbin A (1995) L'avènement des loisirs 1850–1960. Aubier, Paris

Coulangeon P (2011) Les métamorphoses de la distinction. Inégalités culturelles dans la France d'aujourd'hui, Grasset, Paris

DAT (2006) Jardins familiaux. Recherche de nouveaux sites. Rapport final. Direction de l'amenagement du territoire, State of Geneva

Delay C, Frauenfelder A, Scalambrin L (2014) 'On sait ce que l'on mange': jardin familial et mode d'alimentation populaire. Sociologie et sociétés 46(2):37–57

Donzelot J (1977) La police des familles. Minuit, Paris

Donzelot J (1997) Le déplacement de la question sociale. Sociétés et représentations 5:87–95

Dubois V (2014) L'action de l'Etat, produit et enjeu des rapports entre espaces sociaux. Actes de la recherche en sciences sociales 201–202:13–25

Dubost F (1994) Vert patrimoine: la constitution d'un nouveau domaine patrimonial. Maison des sciences de l'homme, Paris

Dubost F (2010) Les paysagistes sous la bannière de l'écologie urbaine. Ethnologie française 40 (4):629–638

Durkheim E (1893[1990]) De la division du travail social. PUF, Paris

Florida RL (2004) The rise of the creative class and how it's transforming work, leisure, community and everyday life. Basic Books, New York

Foucault M (1976) L'histoire de la sexualité 1. La volonté de savoir, Gallimard, Paris

Frauenfelder A (2009) Le rapport des classes populaires à la famille: une affinité non élective. In: Schultheis F, Frauenfelder A, Delay C, Pigot N (eds) Les classes populaires aujourd'hui. Portraits de familles, cadres sociologiques. L'Harmattan, Paris, pp 311–348

Frauenfelder A, Delay C, Scalambrin L (2012) L'Etat et les jardins familiaux. Enquête sociologique d'une réforme urbaine et de ses enjeux sociaux, CERES/HETS, Geneva, Rapport final financé par le Fonds stratégiques HES-SO

Frauenfelder A, Delay C, Scalambrin L (2014) Potagers urbains versus jardins familiaux? Réforme urbaine et controverses autour du 'beau' jardin et de son usage 'légitime'. Espaces et sociétés 158:67–81

Frauenfelder A, Delay C, Scalambrin L (2015) Joindre l'utile à l'agréable. Jardin familial et modes de vie populaires. Antipodes, Lausanne, publié avec le soutien du Fonds national suisse de la recherche scientifique (FNRS)

FSJF (2001) Jardin-conseils. « De la terre à la table » . Action « reconversion » , suggestions pour un jardin proche de la nature. Zurich and Geneva: Bioterra and Fédération Suisse des Jardins Familiaux

Grafmeyer Y (1994) Sociologie urbaine. Nathan, Paris

Grignon C, Passeron J-C (1989) Le savant et le populaire. Misérabilisme et populisme en sociologie et en littérature, Gallimard/Seuil, Paris

Guyon F (2004) Les jardins familiaux: miroirs des politiques de la cité. Loisir et société 27 (2):529–546

Guyon F (2008) Les jardins familiaux aujourd'hui: des espaces socialement modulés. Espaces et sociétés 134(3):131–147

Hajek I, Hamman P, Levy J-P (eds) (2015) De la ville durable à la nature en ville. Regards croisés nord/sud. Presses universitaires du Septentrion, Villeneuve d'Ascq, Entre homogénéité urbaine et contrôle social

Hoggart R (1970[1957]) La culture du pauvre. Etude sur le style de vie des classes populaires. Minuit, Paris

Kebir L, Barraqué B (2014) Editorial. Espaces et sociétés 159(3):9–12

Lafaye C, Thévenot L (1993) Une justification écologique? Conflits dans l'aménagement de la nature. Revue française de sociologie 34(4):495–524

Lalive d'Epinay C, Bassand M, Christe E, Gros D (1983) Temps libre. Culture de masse et cultures de classes aujourd'hui, Favre, Lausanne

Lascoumes P (1994) L'éco-pouvoir, environnements et politiques. La Découverte, Paris

Le Caro Y, Jousseaume V, Poulot M, Rouget N (2016) Town and agriculture: new linkages. Special issue of Annales de Géographie 712(6):553–692

Ley D (1996) The new middle-class and the remaking of the central city. Oxford University Press, New York

Lizet B (2010) Du terrain vague à la friche paysagée. Le square Juliette-Dodu, Paris Xè. Ethnologie française 40(4):597–608

Monédiaire G (ed) (1999) Agricultures urbaines et ville durable européenne. Droits et politiques du jardinage familial urbain en Europe, PUL, Limoges

Müller C, Becherer H, Kammermann S (2010) Jardins familiaux en harmonie avec la nature. Fédération Suisse des Jardins Familiaux, Pfäffikon

Ollitrault S (2001) Les écologistes français, des experts en action. Revue française de science politique 51(1–2):105–130

Paquot T (2016) Le paysage. La Découverte, Paris

Régnier F, Lhuissier A, Gojard S (2006) Sociologie de l'alimentation. La Découverte, Paris

Salomon JC (2005) La ville, mal-aimée. Représentations anti-urbaines et aménagement du territoire en Suisse: analyse, comparaisons, évolution. PPUR, Lausanne

Salomon JC, Ernwein M (2014) La ville fertile, un mythe fondateur pour l'agriculture urbaine à Genève. In: Donadieu P (ed) L'agriurbanisation, rêves ou réalités? Editopics http://www.editopics.com/livre/series/l-agriurbanisation-reves-ou-realites-/4

Schwartz O (2002[1990]) Le monde privé des ouvriers. Hommes et femmes du Nord. PUF, Paris

Schwartz O (2011) Peut-on parler des classes populaires? La vie des idées, 13 September. Online http://www.laviedesidees.fr/Peut-on-parler-des-classes.html

Thomas M-P (2013) Urbanisme et modes de vie. Enquête sur les choix résidentiels des familles en Suisse. Ed. Alphil, Neuchâtel

Tissot S (2007) L'état et les quartiers. Genèse d'une catégorie de l'action publique, Seuil, Paris

Tissot S (2011) De bons voisins. Enquête dans un quartier de la bourgeoisie progressiste. Raisons d'Agir, Paris

Topalov C (1999) Laboratoires du nouveau siècle. La nébuleuse réformatrice et ses réseaux en France. EHESS, Paris, pp 1880–1914

Veblen T (1970) Théorie de la classe de loisir. Gallimard, Paris

Walter F, Bergier J-F (1990) Les Suisses et l'environnement: une histoire du rapport à la nature, du XVIII siècle à nos jours. Ed. Zoé, Geneva

Weber F (1998) L'honneur des jardiniers. Les potagers dans la France du XXe siècle, Belin, Paris

Author Biography

Arnaud Frauenfelder (Ph.D.) is Professor of Sociology at the University of Applied Sciences and Arts, Western Switzerland (HES SO) and Director of the CERES/HETS Geneva research centre. He specialises in the study of forms of regulation of the working classes and their way of life and of deviance. His fields of research are social welfare, allotments, naturalisation, child protection and the juvenile justice system, using a mixed qualitative methodology combining interviews, participant observation and literature reviews.

Chapter 5
Russian Collective Gardens: A Story of Institution and Remembrance

Frédérick Lemarchand

> «In His life, a man has to build a house, plant a tree, father a son» Russian Proverb.

Abstract Starting from a fieldwork carried out in the Republic of Tatarstan (Russia) on industrial pollution and the necessity to support gardeners in changing their practices, the present research opens a socio-anthropological perspective on the (sub) urban garden. The datcha is first and foremost a Soviet institution that has now spread to all Russian cities to become a social, cultural, and intergenerational phenomenon.

The collective garden, as a part of the Soviet roots of nowadays Russia, turns out to be a good vehicle of social structures exploration as well as a great tool to analyze the development of the relationship between men and nature, as the works of Hervouet (2009) or Gessat-Anstett (2001) have shown. This is why we consider it a *social fact,* in other words a *collective, institutional, and imaginary* production. This socio-anthropological approach, characterized by its double perspective ranging from the microscopic to the macroscopic scales, and referring to the study of both its symbolic and local aspects (depictions, attitudes, beliefs, practices) and the social and historical movements and structures surrounding those particular realities, appeared to be particularly relevant to grasp the intricacies of a subject located at the crossroads of culture, nature, and technique. The target program had to balance the reality of environmental and health issues by mobilizing best available scientific knowledge with another reality, namely the symbolic and socioeconomic reality, that of the complex, aesthetic, memory-based relations that the people of Russia have with these gardens. In the face of the projects to adapt to the environmental and health risks, the *dialogical* perspective, based on the idea of an eventual parallel between affinity scientific knowledge and social knowledge and on the assumption of their equal validity, seemed to be the most relevant one (Figs. 5.1 and 5.2).

F. Lemarchand (✉)
MRSH-b Pôle risque, Université de Caen, Esplanade de la Paix,
14032 Caen Cedex, France
e-mail: frederick.lemarchand@unicaen.fr

Fig. 5.1 Woman posing in her garden

TRADITIONAL FARMING GARDEN

Anatolie, a 50-year-old worker, grows tomatoes, cucumbers, zucchinis, beans, cabbages, potatoes, etc., in the so-called Runo garden in Kadisheva (150 plots). In this garden, which he bought in 1980, you can find the whole range of vegetables available in this region of Tatarstan. In front of the house, a few flowers grow for decorative purpose, next to medicinal plants (mint, lemon balm) which the Russians use extensively. He even used to raise pigs and rabbits for a long time, thus making his garden a mini-farming business. The products from his garden and the breeding of his animals provide for all the food basics he and his family need all year long. He grows seeds in the city and plants them in June. The vegetables are then canned to last over the winter period. Anatolie goes to the garden every evening from the beginning of May and until the harvest; he also spends his weekends there.

The datcha, and above all the garden, has an essential economic function in his budget balance. He comes to the datcha "to work, not to rest" except in winter, when he can enjoy the *bagna* (a traditional sauna-like Russian bath). As a child, he used to observe his parents, who also have a garden, but he prefers saying he learnt the farming techniques on his own. Anatolie only has very little contact with his neighbors; they sometimes exchange knowledge and know-how tips to avoid pests or to grow this or that plant, but there is nothing constant or regular in these conversations which he sees as little compliance talks and basic good manners.

Fig. 5.2 Location of the study-targeted gardens

5.1 The Collective Garden as a Tool for the Analysis of the Changes in the Imaginary Representations of Nature in Contemporary Russia

The collective garden is an institution that dates back to the first years of the Soviet Union and that enabled urban people to purchase a plot of land—with an average size of 600 m^2—in order to start an agricultural activity for domestic purposes. At the very start, each garden depended directly on the institution to which it belonged: This was sometimes a factory, a specialized university, an administration, a hospital, a school, etc. The concept first appeared under Staline and allowed urban citizens to receive minimum wages by their own means of production based on the model of the pieces of land that were distributed to the kolkhoz workers. The collective garden got its real kick start in the two last decades of the Soviet Union (Ortar 2005). It played a major role in the economic survival that came along with the huge transition crisis of 1990 and 1991; however, its vocation cannot merely be confined to the economic sphere, as we are going to see further on. Nowadays, more than twenty-five years after the collapse of the USSR, it remains an important part of the Russians' *lives* as it provides around ten million urban dwellers, that grew up in the urban-industrial age, with the only possibility of finding a path to stability and of getting back in touch with nature. "*Gigantic and soulless cities, endless lines outside the shops, individual freedoms trampled upon, poorly insulated homes and small flats in which entire families cope with promiscuity the best they can, authorized food which we know is contaminated since it comes from Chernobyl… What is the meaning of life in such a world? Against overwhelming odds, the building of small houses and overnight shelters makes its inhabitants forget, for a weekend at least, about their worries*," this is how Ronan Hervouet chronicles the genealogy of an original institution which prefigures what we will now call "urban farming," whose early form is the collective garden. To be precise, 65 to 80% of the Russian population is involved in suburban farming nowadays. Although geographically situated in the outskirts of big cities, sometimes up to ten kilometres away, the collective garden is a little bit like a "green town" right beside the metropole: There are main "avenues" from which smaller driveways merge, that contain many plots—sometimes many thousands—on which the famous *datcha* can be found inevitably, as a new version of the former garden shelter, which the landlords initially built themselves with the help of family members and friends, and which has now become a family home, or at least a secondary home in which families get together at weekends, between May and September. It is not uncommon for mothers to settle there for the holidays. People work there side by side, regardless of the social background, there are all kinds of crops, such as vegetables, fruit, flowers, plants, people literally live there, sometimes part of the year, particularly women and children, families and generations gather to participate in a series of activities that are prohibited in the city.

A WARMLY CONVIVIAL DATCHA (collective garden of *Sotchi*, 700 plots)

Galina, a 56-year-old retired woman, used to work as a corporate official in a Kazan-based firm. The company in which she worked provided her family with this land in 1990. When they first arrived, they had to build it all up and arrange everything on this sand field that had been created after the building of a bridge. Twenty-five lorries full of land materials were needed to make the ground livable. After that, her husband started building the house and she started setting up the garden. "Men take care of physical work, such as pickaxing for instance. The distribution of domestic work is not systematic, but gardening is rather something for women. Gardening is thought of as a female task." The garden is first and foremost a living place where she can rest and spend time with her family (children, grandchildren) and her friends. Since they have arrived at the time of the great crisis caused by the break-up of the former Soviet Union, there has been an obvious increase in capital gains from the datchas (upstream from the city, on the banks of the Volga, where there is a micro-climate), which have become more and more valuable financially.

As soon as they started planting fruit trees and the bushes; the rest of the vegetable crops have been gradually developed (potatoes, cucumbers, tomatoes, etc.).

Galina's garden is much more diverse and richer now that she is retired and that her children are grown up and on their own. She keeps remaining seeds from one year to the next and buys some more from a catalog (she grows more than ten tomato varieties). Before planting, she has a look at the lunar calendar (in specialized magazines and publications). The quantity she produces is enough to avoid buying basic products (tomatoes, cucumbers) in the warm season, and she can even preserve food for the winter months. Galina lives on the plot for the whole "season," from June to October; her husband (who still works) joins her in the evening. Their grandchildren spend most of the school holidays there.

Her garden does not really have an economic function, and the experience of gardening has a rather hedonistic and aesthetic dimension and serves the "love of beautiful things." Therefore, the garden is of course a place to rest, but also a place to experiment new things. The experience gathered year after year allows her to test new ways to grow crops in association (this plant grows faster next to that plant, etc.), to test biological control (this plant moves away the parasites that affect that type of fruit) and even agroecology (ashes or soap-based mixtures as substitutes to artificial fertilizer). Galina learnt gardening with her parents who had an individual house with garden. She has not had the opportunity to pass on her knowledge and

skills to her children yet, because of their lack of interest in the matter. However, her grandchildren sometimes help her in small tasks. She maintains good relations with her neighbors who share their experience with her, exchange seeds, etc. However, they are not friends but "garden neighbors."

5.2 A Primary Role as a Familial Institution

Most of the gardens we have visited date back to the 80s' sometimes even to the 70s' which means that two and sometimes three generations get together there. The first generation, that had been given the plot in the Soviet period, is slowly dying; however, the challenges concerning the future and the development of those gardens still remain an issue for all three generations. So there is obviously more than one single kind of relation to collective gardens, and there is obviously no "model garden," but rather a typology of agricultural practices, of expectations, of social relations, that are deeply rooted in the historical development of collective gardens. The first "pioneer" generation (ours date back to the 80', which is quite late on the history scale of the collective garden) has been given gardens "for free" in the framework of collectivism, whereas the following generation had to, and still have to, invest heavily to acquire a plot. In terms of size, the collective gardens differ from one another (ranging from a few dozens to several thousands of plots), just like their quality also differs: the garden of *Sotchi*, in which we carried out our investigation, near the built-up area of Kazan (1.2 million inhabitants), and at the same time upstream from the city, on the Volga riverside, on a sand island on which there is direct and private access to the river; this has become a "must" for the inhabitants. However, those recreational and aesthetical qualities will not make the happiness of those who wish to make a food production profitable; these people will have to look for a richer land with less frequent flooding, and nevertheless less expensive. *Roughly speaking*, the historical movement that we wish to describe here ranges from productive gardens to leisure gardens, and all hybrid and intermediate forms. However, other characteristics may arise, as we will see. Therefore, it is quite tricky to fully understand the collective garden *institution* without considering its historicity, without interviewing different generations of Russians, pioneers, heirs, or buyers of these precious plots; actually, this is prerequisite to draft an exploratory typology of the gardeners in line with their values and expectations (Fig. 5.3).

So these are the generations we will consider throughout this study, even if these categories cannot be held as representative of the all individuals who are supposed to belong to these generations.

– The 60–80-year-old generation: the "pioneers," characterized by their deep rural and farming roots; strongly attached to the food productive use of the gardens
– The 40–60-year-old generation: the "heirs," urban generation whose "farming culture" was acquired in the garden

Fig. 5.3 Datchas and gardens along the Volga

– The 20–40-year-old generation can be of two types: on the one hand, the "new Russians," who tend to develop the occidental-model-based pavilion datcha, this means that it has no vegetable garden; on the other hand, the "young ones" as bearers of new aspirations, and quite reluctant to garden cropping, encouraging new recreational and aesthetic purposes of these gardens.

Following the same logic as for social classes, all age groups have a role to play, both categories being at least of equal importance and historically speaking striving to understand the habits and practices of garden-work. The perspective of the intergenerational transmission of gardening is a crucial factor: Inheritance, whenever accepted, is seen by most people as a moral duty to carry on the work begun by the parents who cleared the land, fortified and cropped it, planted trees, built a house (the datcha), etc. The weight of this burden to perpetuate *ancient family traditions* may seem paradoxical when seen through the perspective of current aspirations of the heirs to transform the garden and sometimes even getting rid of it. Hélène took over the datcha and the garden based on the moral duty to respect the legacy of her parents, in order to live "in accordance with traditions" even though

this has never been her own personal choice. "This garden is like a suitcase without a handle: a heavy load that you cannot leave or even just lay down for a while."

5.3   The Economic Role: Distinguishing Discourse and Facts

In the early 1990s, as Russia was deep in economic crisis, the gardens have played a significant and essential role in daily nutrition; however, it is surprising to note that, when asked, most gardeners today tend to deny the economic basis of their work. It has often been said that if we had to take calculations of inputs (buying or hiring of the land, buying of agrochemical products, of fertilizers, eventual buying of plants and seeds, etc.) on the one hand and of outputs on the other hand, the balance would be negative; except perhaps for monoculture plots (potatoes for instance). But these are extremely infrequent and usually grown whenever a family finds itself in the situation of inheriting two plots: One of the plots can be used in essentially productive "business" activities; in other words, it is dedicated to selling agricultural products on local markets. It is important to add that the agricultural products delivered by the kolkhoz are cheap and generally of good taste quality (when the extensive cultivation is carried out on good soil conditions).

The gardeners readily admit that the garden products provide varied and healthy food, thus denying the true health hazards arising from pollution of the river in the present case, but at the same time, they all agree to say that it would be more profitable for them to buy vegetables on markets or from the kolkhoz, particularly in the season when the prices are low. But these are only *words* intended to show the non-utilitarian nature of the gardens and no one *really* tried to make such a calculation, since it would only be of limited relevance here. We shall note here the existence of the *rhetoric of economic disinterest*, which means that the real purposes of the gardens are to be found somewhere else: keeping in touch with nature (banned notion in the Soviet industrialist speech), convivialism, recreational and educational activity, etc.

From the economic point of view (in the sense of exchanges), we could state that the gardens are places "for free" following the logic of giving. Here, the use of the adjective "free" refers to the work of nature that human beings have been selling and buying since Neolithic times: All we have to do is plant or seed to harvest the fruit. We then save the seeds, and the cycle goes on. This has indeed become a key issue of careful thoughts given to "nature-provided services," also known *as environmental amenities*.

This principle of free availability is directly linked to the very logic of living beings reproduction and results in another socio-anthropological principle: It is possible to give out the harvest of nature (through our own work), without losing it, just like we can duplicate computer files or share knowledge. This is how the release for free circulation of crops including seeds, beans, plants (especially in

spring), but also of empirical knowledge and know-how, occurs between neighbors, family members, or friends. These exchanges/gifts were theorized by Marcel Mauss and gained widespread acceptance (Caillé 1989); they involve a concept of reciprocity—which also fosters biodiversity!—through barter trade practices and all kind of non-monetary transactions such as neighborly goodwill. We had the opportunity to experience this logic of gift every time we visited the gardens; we left back home with arms full of flowers, fruit and vegetables each time and were also often kindly invited to use the *bagna*.

THE ANTI-CRISIS GARDEN

In 1980, Tamara and Victor, 48 and 52 years old, were "pioneers" in their garden in Sotchi, which today counts 400 plots, each of 400 m^2. They wanted a garden to bring up their children in the middle of nature, while the falling living standards resulting from the perestroika did not allow any vacation or even leisure time in the State's various recreational centers. He uses to work 20 days in a row in the garden and then takes ten days' rest. She spends all her free time there, that is to say from May to September, taking paid vacation here and unpaid time off there. The production of tomatoes, cucumbers, salads, berries, condiments provides partial food self-sufficiency. The economic function of the garden emerged gradually along with the drastic fall in living standards and the declining purchasing power of the working class that started ten years ago. A great part of the production is consumed locally (to the most possible extent), at least during the summer season. Fresh fruits and vegetables are said to taste better; the remainder products are preserved for the winter season. Tamara belongs to the urban generation and has learnt gardening "spontaneously," reading books and magazines, taking her colleagues' advice, and experiencing things. The children and grandchildren have been socialized through garden work; the grandparents take care of their grandson there all summer long. The aesthetic function of the garden is present but secondary. Paradoxically enough, it was much more present at the beginning, when the economic function of the garden was not yet the first concern. The datcha was built up by the husband, with the help of his friends. It was the first step, the garden followed.

Proximity network, automatic solidarity among neighbors. Exchange of products and seeds. Mutual assistance, particularly for hard work and household repairs.

Work, social links

The issue of work is central in the garden. Work here refers to an activity that involves high-intensity exercise dedicated to change the world—change the land in the present case—to get a product out of it. Gardening a 400–600 m^2 plot is an activity that consumes time and attention, sometimes tedious, that could be a

full-time job for a single person, from spring to autumn. This is what happens in "permaculture" micro-farms that have developed in Europe for the last few years. It should be noted that some people, like retirees, unemployed or part-time workers, take this time. Some others, like employees or freelancers, spend all their free time there, including holidays and weekends. The value of labor occupies a prominent place. The act of gardening is particularly described as a teaching medium for young children: The harvested fruit and the freedom to enjoy consuming it is the product of the work dedicated to nature as a reward for our labor. Older people often use the following proverb to express this connection "You cannot have bread without stalks of wheat!" Just like in the rest of the society, in Russia, the act of gardening is a reality that happens to have a division by sex: Women (sometimes men) take care of the crops. It is fairly rare to see both being simultaneously "masters" of the house. Following a period of empirical observation, we were led to think that the garden is rather a place for women, as it is part of the imaginary continuity of the house. This does not mean that men are inactive, since they have responsibility—with the support of neighbors and family members—to build and maintain the datcha and its "outbuildings" (toilets, sauna, greenhouses) and to perform the hardest household chores (plowing, ensure manure supply). In some gardens, at the very beginning, it was necessary to import the whole of the arable land; this was a typically masculine task (Fig. 5.4).

"The datcha is not a place to develop friendships," says Hélène, "In the garden, you get to know people but you do not make friends." The idea that the sociability networks among gardeners are different or even distinct from the urban friendship

Fig. 5.4 Leisure, family, nature

networks is not uncommon. Alfia also emphasizes this distinction between the friendly relations she developed in the city and those she developed in the datcha since, she says, "at the datcha, you socialize with your direct neighbors, you do not choose them; in the city, friendship is more selective but the relationships are richer." This is how people regain the ancestral automatic solidarity, particularly in mutual assistance practices, without really considering their neighbors as heart friends. Nevertheless, Alphonso keeps on insisting, like many others, on the existence of convivial moments (the people from his garden often share grilled meals), with a traditional meal to celebrate the end of the season in October. According to him, the relationships are "easier at the datcha than at the Institute, you can talk to people without bothering about social status." Hence, the garden is at the same time a social marker (having a "great" garden is ego-boosting), but also, paradoxically, an eraser of social status, particularly in huge gardens where all social strata from the ex USSR work side-by-side (ranging from the skilled—or not—worker to the director). It goes without saying that the "new Russians" who belong to the financial oligarchy take over other places. However, there is a great deal of socializing going on there; the whole time we were there, our hosts have made real efforts to invite friends to join in and thus create the opportunity to show us the inimitable, old-fashioned Samovar, and of course invite us to stay and get a taste of the traditional Russian barbecue meal. The meal ritual refers to other various ritualistic procedures from the early customs, just like in western practices: the use of fire, alcoholic beverages, the investment of the outside world, etc.

THE DATCHA—(ecological) COUNTRY HOUSE
Raphael and Alfia, 42 and 45 years old, respectively, builder in the building industry and biologist, live in Kazan and own a 600 m^2 plot on which they grow potatoes, tomatoes, onions, cucumbers, beans, mainly in summer. Raphael built his datcha step-by-step, starting in the 90s', when they bought the garden. In the case of this family, the products grown in the garden have absolutely no economic value. Alfia is the only one taking care of the garden, since Raphael is busy building the house. Raphael works in the private sector and has no time to work in the garden and enjoy it. They could easily "cover the yard with asphalt and place decorative plants," she says. But the interesting thing about the garden is to "watch the crops grow," says Alfia, insisting on the recreational side of the garden for children: One of the main goals of the garden is to "bring the children back to nature" by making it a mini-environmental education center. Alfia has never learnt gardening and her knowledge in biology and her job only help indirectly. She says that she can "feel" what plants need just by looking at them, even though she learnt a few basics from her parents. The datcha may in time become a real holiday house; this is how they bought the plot. For them, the garden is above all a means to forget about their routine work in the city, which, they think, is

tedious. Social relationships there are limited and "urban," except for a few close friends that they know from the garden. The datcha is modeled on the French country house, where they meet friends that are "external" to the garden. Their three young children even have little summer friends here, that they meet each year.

5.4 The Garden as a Work of Art Dedicated to Remembrance and as a Vector for the Transmission of the Farming Culture

During this investigation, we found evidence that could possibly validate the assumption that the garden could be a place of memory and transmission of the farming culture in the Soviet and post-Soviet society. Indeed, many gardeners from the pioneer category admitted that they spent their childhood in the country, in small villages, in connection with the land, the land of the kolkhoz, in connection with animals and with the last Russian farmers, before the Soviet system declared the peasant society as a completely insolvent social class. When asked "where did you learn gardening?", older people frequently answer: "in the village where I grew up," whereas others tell us about their family life in city houses with gardens (there are still a few of those houses in some parts of Kazan, as in many old Russian cities. What we call "memory of the farming culture," is much more than just a series of skills and know-how: It is a collection of concepts and representations of the world, based on particular values and around a collective memory; it is common to all farming cultures that developed on several continents from the year 1000 to the twentieth century. The perpetuation of family structures, the predominance of individual socialization models over secondary socialization models, the development of non-monetary trade, the direct transmission of skills and know-how, the precautions to preserve the environment, the connection to the land, the preservation of collective memory, the development of self-production and home consumption, and finally, the will to maintain places of personal freedom are the main characteristics of the memory of the farming culture, the ones that industrial and technical modernity simply swept aside, supposedly "for reasonable reasons" (Bitoun and Dupont 2016). The sacrifice of the whole farming population on the altar of productivism and modernity has, indeed, played a particularly violent part in the Soviet experiment that preached for their anthropological change into a working class; to that aim, they were locked into factory farms named kolkhoz, to fit in with the ruling ideology. The repression of peasant movements and the planned destruction of rural societies even turned into a real genocide, in the initial times of the Russian revolution (De Crisnoy 1978).

This is how one may understand the keen interest of Russians in the gardens, since they serve as a support for the inscriptions of remembrance that has never been fully erased from the farming culture, even though the social, economic, and political class structure of the "peasant society" finally disappeared, as it did in Western Europe (Mendras 1995). Beyond the materiality of things, our investigation led us to discover the extremely rich and complex side of the existing memorial relations, through the testimonies of the three or four generations, the oldest of which still holds the living memory of the Soviet system experiment, and even of the twentieth-century totalitarianism, from the garden institution and the memory of peasant societies. The farming culture, in terms of ethos (a set of values) and praxis (set of historically oriented practices), can be found at different levels of the practices and representations of the gardeners, especially of the "pioneers," who were the first to colonize the land, sometimes with a heavy hand. Its main characteristics are (open-ended list):

– The development of non-monetary trade
– The act of giving excess production to neighbors and friends
– Mutual assistance for tedious tasks and the building of the house
– The limitation in the development of the garden's productive capacities
– Ecological awareness (more or less implicit)
– The establishment of a relationship between working the land and freedom
– Direct transmission of experience
– Inputs self-production and family consumption of the products.

The purposes of the French family or professional use of the garden, whose institutional codes are historically varied, are quite the same. From this point of view, the garden is a symbol of the essential downside to urban and industrial modernity whereby the practices, skills, and social logics that the institutions of modernity have erased in the name of Reason (and economic profitability) can be updated. It is somewhat reminiscent of the reflections undertaken by Jean Baudrillard (1968) on the dialectic that seem to underlie our world of domestic objects: "*A whole category of objects seems to evade the rules of a system that we have just analysed (functional): these are baroque, folkloristic, exotic, antique objects. They seem to contradict the requirements of a functional numeracy in response to wishes of another kind: testimony, memory, nostalgia, escape. There is always a temptation really to mean that they represent the survival of a traditional and symbolic order. Although these objects are different, they are all part of modernity, and this is where their double meaning emerges.*" Wouldn't it be the same logics for collective gardens? It was instituted at the beginning of the twentieth century, essentially for economic reasons, and over time, it has become an institution of remembrance of a relation to nature that got lost in the development of the urban-industrial project; however, it is dedicated to social remembrance. Though it was genuinely *a support* for memory, at least, this is what the aesthetic and theory of the gardens teaches us (Yates 1975), the garden would now find its place in the Art of Remembrance. Since it provides *landscape captures*, that is to

say that the landscape can be understood in its aesthetic and nature-sensitive meaning (Berque), the garden could possibly be seen as a medium between an *un-overtaken* past seeking for modernization—the pre-modern anthropological inheritance—and a present that cannot respond to anthropologically fundamental needs such as rooting, giving "for free," and living a "good life." Our interview with the painter Ildar Zaripov (exhibition at the Tretiakov Museum of Moscow) has brought much like to this subject.

THE GARDEN OF AN ARTIST

Ildar Zaripov, a 54-year-old Tatar painter, is a well-known figure of Kazan. His 400 m^2 garden is located in Kadisheva, on the edge of the city, near the factories, in the south part of Kazan. In 1980, Idar visited a friend in this garden and he saw a "for sale" sign on the datcha. It was love at first sight. Since then, he has grown tomatoes, onions, garlic, various flowers… he has a good standard of living and does not need to earn money from the garden. However, it cannot be denied that his production of vegetables is a direct advantage for his own economy; his wife always cans the excess production to keep food for the winter season. In fact, for Ildar more than for others, his garden has become the continuity of his workshop, or even "a workshop per se" as he says, a kind of vegetal workshop in which the movement of the work of art and the movement of nature both commune: "When I am surrounded by plants, I can rest, ideas cross my mind and I draw them on the canvas, it opens my eyes and nature is right here, I can hear the birds singing; this is the truth about my life."

The transmission of the "art of gardening" shall be done through the work of art more than through social relationships themselves. Hence, some canvas include remnants from the old wheat fields that used to surround the garden, and some others contain representations of garden flowers. According to his own sayings, he learnt gardening through the farming culture that his father left behind him. He had settled in Kazan in the 30s', in an individual house with garden, in which he reproduces the organization of rural life (gardens, trees, farmyard, animals, etc.).

The aesthetic vocation of the garden seems to be a particularly vital concern and does take here a really specific dimension in which the garden stands as a symbol for much more than a "beautiful place," but for the place itself in which beautiful things can be created. Ildar hangs out with neighbors and close friends, with whom he has more "intellectual" than practical relations. In that sense, the word datcha is returning to its original meaning that is a second country home in which the ruling class invited people from good society.

Ildar's conception of the garden goes deep into the "Russian mind" in its relation to nature. The garden is "intrinsically pure" and helps balance physical and psychological health; this is an image that can also refer to Japanese gardens: "Garden work can also be a way to rest; physical activity brings inspiration and creativity. When I work in the garden, I think."

5.5 Collective Garden, Landscape, and Transmission

We now have to consider the anthropological challenges of the contemporary garden properly speaking, by means of an empirical analysis whose limits we are well aware of. To put it in a nutshell: It has a very poor economic value, except in cases of acute crisis. It is definitely a place to socialize, but it is more appropriate to develop "mechanical" relationships with neighbors than real elective friendships. It remains a place for meditation that is deeply rooted within the central community, that is, family, in which people can work/meditate on their own from time to time. Finally, it is only inhabited a few months in a year and remains, most of the time a familial or personal "rustic utopia" of a production obtained from a small "nature monument" which structures expectations. In the garden of Sotchi, Hélène thought that "gardens need to be kept alive because they represent nature, they shall not disappear, men need nature." At this point of our analysis, we think it is helpful to highlight the theoretical contributions of landscape aesthetics and of the art of gardening with the aim to underline the epochal dimension—hypothetically, of course—that structures the connection between gardeners and their terroir/territory (Fig. 5.5).

Let us quickly recall what A. Berque stated: "Societies organize their environment according to their own interpretation of it and, conversely, they interpret it according to the way they organized it." Therefore, the aesthetic connection we are interested in right now finds its roots at the limits between cultural and biological history, at the place in which the gardener finds himself literally "engaged" with his environment. This *affordance* (the French borrowed the word from the English language), according to Berque, is at the same time of ecologic and cultural nature and enables an attachment to the landscape, a possibility to inhabit this world (from *habere*: to hold, to take, in Latin). There are only few institutional representations of the garden—*in contrast*, painting of nature landscapes—except for the individual domestic iconography containing family portraits, since the garden stands out as a separate landscape category per se (just like literature and painting). By opposition to the administered and streamlined universe of the Soviet city—the standardization of which still remains stunning to western people—the garden rises out of the earth to create intimate spaces and build relationships between the self and others through

Fig. 5.5 Lakeside landscape «à la Tarkovski» in the garden of Sotchi

the cropping of the land. The point here is that modernity, and most particularly the Soviet scientism that dedicated a boundless passion to the artificial, had distanced itself from nature and founded its anthropology *outwardly* from it. From the Renaissance onward, landscapes start being set apart from nature, (Luginbühl 1989); this new vision was introduced by the *non-peasant* strata, since farmers, the country children, are unable to step back and understand these changes (this is the reason why farmers were unable to aestheticize nature). Hence, city dwellers were the first to discover—here to be understood as "invent"—rural landscape by combining three kinds of factors: natural, technic, and symbolic. Gardens and parks become the natural backdrop, garden fences are to nature what frames are to paintings: the institutionalization of contemplation. Beauty is set aside, suspended; that is the one we were able to admire, within our gardeners' (women for the most part) intimate spaces. But let us not forget that, until the Revolution and probably still afterward, Russian society (except for an aristocratic elite that was closely linked to the Enlightenment) was a deeply rooted rural and farming society. For most people, this change in the aesthetic approach of nature emerged with a move toward industrialization in the twentieth century, in conjunction with the institution of collective gardens. This sanctification of nature is consubstantial with the end of family farming, but this will receive no further debate. The hurtling of Soviet modernity (Moore 1966) involved a three dimensional, identical, and standardized urban space, which resulted in the neutralization of real sites. A famous Soviet comedy sheds light on this reality through the story of a man driving back home,

Fig. 5.6 Beautiful nature inside the Datcha

who takes the wrong street in the wrong city and comes into the wrong apartment for it looks exactly the same as his. The image of the garden stands in opposition to this space on which no one can have a proper grip; it is a complex place that seems to link elements that had been set apart for modernity's stake: on the one hand, the local and global, the universal and particular (in the ecological paradigm); on the other hand, the physical and logical, the material and spiritual (in the phenomenological paradigm) (Fig. 5.6).

THE POST-SOVIET URBAN DATCHA
Guselle is 29 years old and works as a shopkeeper in Kazan; she took over a piece of land from his brother-in-law in 1998. It must be seen as an opportunity rather than as an active decision. This land was chosen for its location, near the city and on the banks of the Volga. It contains a datcha without a garden and thus without any vegetable crops and is surrounded by lawn arranged for children games. Her house, as well as that of her brother-in-law, has been built up on the site, following the European model: They have a prefabricated house; her husband assembled the panels and bounded it all with bricks; the second house has been built by professionals. However, her husband built the bagna, a traditional Russian "sauna." Here, the datcha is exclusively devoted to rest: "We don't think that we need a garden, we come here once a week to rest." Guselle explains this choice by telling us that a garden entails considerable expenses and that she and her husband would

rather spend that money on children's games and on all comfort and amenities for the datcha. Moreover, her occupation only leaves very little time for leisure activities. Guselle also admits her lack of interest in gardening; at the most, she is thinking of planting raspberries and blackcurrant berries for the children. The household does not need a garden to have best quality products since Guselle's mother owns a large plot (600 m^2) and provides her family with fruit and vegetable during the nice season and canned products for the winter season. Although she rules out working in the garden, Guselle enjoys fishing on the Volga with her husband; they own a small motorboat which they use for this purpose. Guselle and her husband keep up with the neighbors; her neighbor brings her fruit and vegetables whenever she has too much of it, even though they do not belong to the same social class. The discussions are friendly: meal sharing, mutual invitations to birthday parties, games (chess), etc.

5.6   Conclusion

The recent evolution of the datcha through an approach based more and more on aesthetics and less and less on production could be seen as the start of an attempt to move beyond modernity (which is here the genuine economic function of the collective garden). Of course, this is not a matter of reverting to the original empathy of the subject (the farmer) toward the object (nature) but of going beyond this distinction. Following the model western suburban gardens, each plot tends to become a kind of small eco-museum, an eco-emblematic temple of our time, a small nature monument that does not tell the "great victorious national Tales" anymore but rather small particular stories of universal value. Augustin Berque tells us that the post-modern paradox has enabled a re-sanctification of nature "in proportion to the profane knowledge brought by science." This dynamics can be understood from the metamorphosis and transmissions of the gardens generation after generation, and from the restoration that enables their survival, even if their function has changed. If reality seems to be complex, it is because all the above-mentioned dimensions can coexist within a single garden, just like the datchas are home to all generations.

The meaning of the garden thus finds itself at a crossroads between the wish of the elderly to perpetuate solidarity in the family, with the garden's production being strictly divided up between family members (particularly toward progeny) but also dispatched among neighbors and friends in order to structure a sociability network. However, the new aspiration of the post-Soviet generation that is now old enough to procreate introduces an intergenerational break (abandonment of the agricultural activity or even of the garden) which (dialectically) calls for greater family

structures. The transformation of the datchas finally appears to be a powerful anthropological factor that reveals the changes in Russian society (and, on a broader level, of post-Soviet societies like Ukraine and Belarus), caught between, on the one hand, the continuation of the modern industrial dream involving a tear-off from the land and, on the other hand, the dream of going back to nature, thus maintaining a solid bond with tradition, family, and the land. New forms of sociability and of land use might arise from the preservation of species, knowledge, know-how and memories that may all serve as a basis to shape transition societies.

References

Baudrillard J (1968) Le système des objets. Gallimard, Paris

Bitoun P, Dupont Y (2016) Le sacrifice des paysans, L'échappée (ed.)

Caillé A (1989) Critic of utilitarianism, La Découverte

De Crisnoy C (1978) Lénine face aux moujiks. Seuil, Paris

Gessat-Anstett E (2001) Du collectif au communautaire. À propos des réseaux familiaux dans la Russie post-soviétique. L'Homme 157:115–136

Hervouet R (2009) Datcha blues. Existences ordinaires et dictature en Biélorussie, Belin, Paris

Luginbühl Y (1989) Paysages, représentations des paysages du siècle de Lumières à nos jours. La Manufacture, Lyon

Mendras H (1967, reed) The end of the peasants, Actes Sud, coll. «Babel», Arles

Mendras H (1995, reed) Les sociétés paysannes, Armand Colin, coll. «U»; Paris

Moore B (1966) Social origins of dictatorship and democracy: lord and peasant in the making of the modern world. Beacon Press: Boston MA

Ortar N (2005) Les multiples usages de la datcha des jardins collectifs. Anthropologie et sociétés 29(2):169–185

Yates F (1975) The art of memory. Gallimard, Paris

Author Biography

Frédérick Lemarchand sociologist, is a Full Professor at the University of Caen. Director of the Risk Network deviant (University department for risk assessment sciences) (Institut for Humanities), he began his research on various environmental topics. In 1995, he started to analyze the social consequences of the Chernobyl disaster, for 10 years (and included the nuclear Fukushima disaster, in 2011). He pursues a personal reflection about transhumanism, relationships between humanity and techniques, environmental transitions, and democracy. He is a member of numerous scientific journals (as *Vertigo*, *CA*), director of many Ph.D. on this topics, and member of the scientific council of CRIIGEN (Committee for Independent Research and Information on Genetic Engineering).

Part II
Urban Gardens Under the Biodiversity Order

Chapter 6
An Agroecological Revolution at the *Potager du Roi* (Versailles)

Pauline Frileux

Abstract Le Potager du Roi is the work of the gardener and agronomist Jean-Baptiste de La Quintinie (1624–1688). For more than 300 years, this productive, innovative and aesthetic fruit and vegetable garden has never ceased to produce food. This article analyses changes in the relationship to nature and the contemporary emergence of an agroecological farming model. Cultivating the Potager du Roi according to ecological norms is not an end in itself but an attempt to find an answer to a crisis which is of an environmental, economic and social nature. Cultivating fruit and vegetables that are beautiful, tasty and good for people's health is a way of restoring meaning to the work of the gardeners. In a context which has become urban, their actions are governed by an agroecological paradigm: the objective is no longer to respond to an aesthetic notion of a tidy and controlled nature, but truly one of caring for the land to regenerate the soil.

Keywords Agroecology · Living-soil · Gardener · La Quintinie
Potager du Roi · École Nationale d'Horticulture

6.1 Introduction: A Place for Producing Food, Walking and Teaching

The Potager du Roi is situated a few dozen metres as the crow flies from the Château de Versailles. Listed as an historical monument since 1926, it was first opened to the public in 1991 and is visited by between 30,000 and 40,000 visitors every year. The garden covering an area of nine hectares is the work of Jean-Baptiste de La Quintinie, the director "of all the fruit and vegetable gardens of the king" under Louis XIV. For more than three centuries, gardeners have produced fruit and vegetables in the Potager du Roi. Elaborately designed it has changed little since it was created in 1683: a central basin, sixteen square vegetable plots or "carrés"

P. Frileux (✉)
Ecole Nationale Supérieure de Paysage (ENSP), Versailles, France
e-mail: p.frileux@ecole-paysage.fr

surrounded by raised terraces for walking, arched passages providing access for the gardeners and storage space for tools and equipment, and very high light-coloured walls bordering small fruit gardens sheltered from the wind. The rigour of the general design is reinforced by architectural rows of espaliered trees. This kitchen garden was originally designed for members of the court of Versailles to stroll in. Two centuries later, its terraces were still the pride of the Ecole Nationale d'Horticulture (ENH) which was founded in 1874 on the site of the Potager du Roi[1]: "These magnificent terraces have a total length of 800 m; they form a beautiful promenade which delights visitors" (Nanot and Deloncle 1898, p. 127).

At that time, the students of the ENH did most of the work: "The school does not have any other labour than the students; therefore the nine hectares of the Potager are entirely cultivated by the students, the head gardeners being none other than the instructors in charge of the teaching these young people how to do the work" (op. cit., p. 228). A documentary film produced in 1929 by the Ministry of Agriculture extols the merits of this practical training applied to the full range of gardening tasks: tilling of the soil, irrigation, phytosanitary treatments, the cultivation of fruit trees, the cultivation of flowers in the open and in greenhouses, and general repairs (Benoît-Lévy 1929). Horticultural training has gradually turned away from gardening. The former apprentice gardeners are now simply observers. After the Ecole d'Horticulture moved to Angers in 1994, the management of the Potager du Roi was handed over to the École Nationale Supérieure du Paysage.[2] Gardening lessons were reintroduced in 1986: the students cultivate a plot during the three years they study at the school. There is also a vocational training course that has been on offer on the site of the Potager since 1989. However, the garden is tended daily by the nine permanent gardeners.[3] Seasonal workers are hired during the summer to pick the fruit and do the summer pruning. In the winter, the task of regularly pruning the trees is given to interns. Volunteers help with the fruit picking, the tending of the borders and the maintenance of the ornamental gardens (the rockery and the rose tree alley).

Three new sets of regulations have forced the gardeners to call their practices into question. The law of 12 September 2006 which sets "time limits for re-admission" of the public to a treated plot. When treating against scab, for example, the garden must be closed to the public for between 24 and 48 h after the treatment. Ten sprayings per year were still applied to fruit trees in 2008 to limit this fungal disease.[4] The law of 17 August 2015 on Energy Transition for Green Growth provides for the banning of synthetic phytosanitary products in gardens open to the

---

[1]The management of this site was entrusted to the ENH in 1873. The garden was therefore no longer under the management of the Administration du domaine du Château.

[2]Founded in 1976, the ENSP succeeded from the department of landscape design and garden arts of the ENH which was opened in 1945.

[3]Antoine Jacobsohn has managed the team at the Potager since 2007. There are nine gardeners and four people in charge of the public (shop and visitors' service).

[4]*Nashi* n° 24, May 2009. Scab is a disease caused by the *Ascomycetes* fungi (*Venturia inaequalis* in apple trees and *V. Pirina* in pear trees). It comes under the form of brown stains on the leaves and fruit and a significant drop in fruit production.

public. As employees of the Ministry of Agriculture, the gardeners are also directly concerned by the law on the Future of Agriculture, Food and Forests of 13 October 2014 which is intended to promote agroecology in France. In its conclusions on the *Agroecological Transition,* the Economic, Social and Environmental Council (in French, Conseil Economique, Social et Environnemental—CESE) defines agroecology as "a set of production methods based as much as possible on natural regulating methods so as to combine food production and the reproduction of the resources employed" (Claveirole 2016, p. 24). The notion was included in 2014 in the Rural Code.

We conducted a study at the Potager du Roi to understand the changes in cultivation practices and analyse the factors leading to the emergence of an agroecological awareness in this historical garden which is a farm, an urban park and a school vegetable garden all at the same time. To understand recent changes required examining the gardening values inherited from the long history of this garden. Among the old sources, we must quote the treatise entitled *Instruction pour les Jardins fruitiers et potagers.* This treatise on gardening posthumously published in 1690[5] is based principally on the experience La Quintinie acquired with the creation of the Potager du Roi. We have used as a reference the *Guide à l'usage des candidats* (Nanot and Deloncle 1898) one of the authors of which, Jules Nanot, was the director of the ENH from 1892 to 1923. For the contemporary study, we have used a series of interviews conducted between February and October 2016 with the nine gardeners then working at the Potager du Roi.[6] We also consulted the *Petite flore du Potager*[7] and the *Nashi* (2004–2016), a newsletter on the Potager published by the Conseil du Potager.[8]

6.2   The Heritage: Countering and Surpassing Nature

The early history of the Potager du Roi is greatly marked by man's control over nature. The head gardeners who succeeded one another constantly strived towards perfection in all of the following domains: the architectural layout of the landscape, hydraulic engineering, soil science, fruit tree cultivation, plant acclimatisation, and horticultural intensification.

---

[5]2016 for the current edition. From here on, we will refer to this book as LQ.

[6]See in the annex, the table of sociological profiles.

[7]The project initially inspired by Martine Méritan and Antoine Jacobsohn was carried out by Liliana Motta in 2014. The idea was to compile within a single document everything that had been written on the plants cultivated in the Potager. Plans present where the perennial plants are situated and when they were planted.

[8]This council setup in the end of the 1990s and comprising representatives from the Potager and the faculty convened every month. The first issues of *Nashi* published excerpts from the minutes of the council meetings. Stéphanie de Courtois, Marc Rumelhart and Manuel Pluvinage, joined soon after by Antoine Jacobsohn, were its founders.

6.2.1   A Soil Created from Scratch

The Potager du Roi was established on marshland in the location called "L'étang puant", land "of the type one would not wish to find anywhere" (LQ, p. 167). It took five years and all the inventiveness of the gardener-agronomist Jean-Baptiste de La Quintinie to drain the land. The marsh was filled up with silt taken from a neighbouring lake and sand from Fontainebleau brought from the summit of the Butte de Satory. The endeavour was on a scale commensurate with the royal finances. Due to the persistent water-logging of the site, the soil had to be drained by means of an ingenious network of drystone-drains and subterranean pipes. With the massive input of manure, La Quintinie increased the height of all the raised planted patches to help drain the water (LQ, p. 169). Although the Potager du Roi was hollowed out of the ground, it was cultivated in an anthrosol raised by at least 1.80 m above the natural level (Nanot and Deloncle 1898, p. 149). It is now fertile land, enriched by two centuries and a half of natural fertilisers. However, from the 1960s, with the intensification of agriculture, chemical fertilisers were used.

6.2.2   A Model of Organisation and Beauty

The Potager du Roi was La Quintinie's magnum opus. The garden had to answer the king's ambitions. It is a kitchen garden, but it is also a garden intended for walking in and for enjoying the spectacle of nature created by the hand of the gardener. The correct layout of the garden resides in its proportions—in length a raised patch "must not exceed more than one and a half times its width", to present a "pleasing aspect" (p. 195) the beds are strictly aligned. In his lexicon of "gardening terms" (pp. 85–151), La Quintinie lists a profusion of words relating to the alleys: "a straight alley", "beaten alley", "trimming", "levelling" and "raking or levelling an alley". The immaculate tending of the alleys and the freshly tilled soil reflect an aestheticism of order and tidiness:

> Neatness must shine in every place and serve as a lustre in the alleys as well as the tilled soil […]. This neatness contributes to a universally perfect décor and invites the *curious* for a pleasant stroll. (p. 912)

Two centuries later, the aesthetic criteria have not changed. If one is to believe the director of the period, the "fine layout" has not wavered and continues to be the pride of the Ecole Nationale d'Horticulture:

> A splendid, verdant and floral setting with nine hectares of horticultural plantations and gardens organised according to a perfectly methodical and elegant layout the symmetry and regularity of which is heightened by the alleys and walls. It would be impossible to find anywhere else such a perfect model of a fruit and vegetable garden. (Nanot and Deloncle 1898, p. 117)

6.2.3   Eliminating Canker and Weeds

"Eliminating weeds" are recurring words in La Quintinie's treatise. This bears witness to the tenacity of the weeds and the work they give to the gardeners. La Quintinie constantly warns against this scourge. The gardener must be particularly vigilant in the month of May:

> This is when the gardeners need to pay special attention to avoid the garden from being overrun [...]. The weeds (*méchantes herbes*) will quickly smother all the good seedlings, the garden alleys will become wild and the trees will be overrun. (LQ, p. 873)

The work on the surface of the soil reconciles agronomic and aesthetic objectives: "I constantly recommend tilling, for the good of the soil and the plants as well as for the view" (LQ, p. 235). "The more frequently the better", he adds in his short guide of gardening maxims (p. 59). He recommends that at the foot of each tree, the soil should be tilled four times a year: in spring, at the summer solstice, at the end of August and just before winter sets in.

The weeding hoe is the implement for light tilling, harrowing or hoeing. It was the main weeding implement used until the 1960s, and then herbicides were used for a period which lasted forty years. The former head gardener, who arrived in 1969, immediately after graduating as an arborist witnessed this revolution: "After two years of doing nothing else but hoeing, I introduced the use of herbicides. It was one of the techniques that made it possible to cope with the constant reduction in staff at the Potager du Roi".[9] The testimonials of the gardeners concur regarding the general use of herbicides:

> Herbicides were sprayed in March–April everywhere in the orchard: at the foot of the trees, between the rows, in the tilled soil, everything was sprayed, the alleys too. We would allow time for the products to take effect. There was a systemic herbicide, a total defoliant and an anti-germinator. That took care of the problem for the whole year. (Laurent)

The Ecole d'Horticulture was famous for studying weeds and even had a chair dedicated to weeds which was successively held by Jacques Montégut[10] and Philippe Jauzein. Within the framework of research on the "protection of plants"; the Potager du Roi became the home of a "unique collection in France of annual and perennial weeds for teaching and research purposes".[11]

To care for the trees, La Quintinie recommends principally manual interventions: "cut off with a knife" the canker and cover the branch with cow dung, "clean the tree" of its caterpillars, catch the rats with traps. But when the problem is too severe,

---

[9]*Nashi* n° 13, November 2006.

[10]He wrote *Pérennes et vivaces. Nuisibles en agriculture,* 1983, published by the Jean Manuel Department at the SECN.

[11]Philippe Jauzein, interviewed by Stéphanie de Margerie in 1995 within the context of the "Potager 2000" project. Fourteen people were interviewed about how they perceived the Potager du Roi following the departure of the ENH: the head gardener, teacher-researchers, a lecturer in landscape architecture and several people from administration.

he does not hesitate to eliminate the plant itself. As in the case of "cankerous trees" and of stunted trees with "shrivelled leaves, often full of greenfly and ants; we then refer to the tree as worthless, it baulks, it is scraggly, it must be uprooted" (p. 136).

> Among the incurable diseases affecting our trees, I count the first to be old age, for example, when a pear tree or plumb tree has served thirty, forty or fifty years, one must consider it to have reached old age and decrepitude. Having thus lived its life and ended its career, there is no hope of a return to health, it must be uprooted, new soil must be brought in and new trees planted. (LQ, p. 791)

Fruit trees today are preserved until a much more advanced age. The oldest trees were planted in 1880.[12] This is one of the main differences with the seventeenth century.

Gummosis is the second incurable disease against which La Quintinie recommends "cutting the diseased branch two or three inches above the afflicted part" (p. 118). Against "tingidae" (*Stephanitis pyri*) which attacks the leaves of pear trees, La Quintinie tried all sorts of remedies without success:

> I have used all sorts of concoctions with strong, acrid, corrosive and strong-smelling ingredients, such as rue, tobacco, salt, and vinegar to cleanse the leaves and branches. I have used oil as advised by some *curious* and sulphurous smoke as advised by others […] (LQ, p. 791–792)

The research laboratory created in 1893 at the budding school of horticulture contributed to the emergence of new knowledge in the domain of phytosanitary treatments. Jules Nanot refers to studies "on the spraying of copper sulphate over the forcing frames to eliminate woolly aphids, etc." (Nanot and Deloncle 1898, p. 118). As everywhere else in France, these treatments saw their heyday in the 1960s and 1970s. In the beginning of the 2000s, so-called reasoned cultivation emerged, with a more targeted approach to treatment and less frequent spraying. The Potager then went from twenty-two to eleven sprayings of the fruit trees per year,[13] but this still remained far from the practice of agroecology:

> The first year [2005] I was concerned about the treatments. We did two sprayings just for greenfly, one spraying for jumping plant louse before the month of June, and sprayed a mite killer and three larvicides against codling moth. (Laurent)

The head gardener justified these actions in the name of protecting the fruit tree heritage: "We do not intend to convert to organic cultivation in the near future for reasons relating to the conservation of historical shapes of fruit trees".[14] The architecture of the trees contributes to the remarkable character of this garden.

---

[12]They are two rows of 20 Verrier palmettes with five and six branches which can still be seen in the Cinquième des Onze. According to the *Petite flore du Potager*, op. cit.

[13]Jacques Beccaletto, 2006. "Où nous en sommes dans la gestion phytosanitaire du Potager du Roi", *Nashi*, n° 13.

[14]op. cit., 2006.

6.2.4   Fruit Tree Aesthetics

La Quintinie attaches a great deal of importance to the pruning of fruit trees: "The *curious* of fruit trees have always considered pruning as a crowning achievement in gardening. […] Everyone cuts but few prune" (LQ, pp. 539, 541). The cultivation of fruit trees is a major theme in his treatise. There are recommendations on how to place trees and prune them, concerning the fruit, grafting and the management of fruit tree nurseries.

   The objective in fruit tree pruning has to do with production (yield, early growth and quality of taste) and aesthetics: "to help the trees yield the best fruit; and […] make them more attractive in appearance than if they would be if they had not been pruned" (LQ, p. 66). The care given to trees contributes to the layout of the garden: "The beauty of training trees consists of ordering to the right and to the left the branches which can sprout on any side and to avoid confusion, empty spaces or intersecting branches (p. 71). What La Quintinie also refers to as "brightening up a tree" (p. 94).

   The diversity of forms increased over the centuries and was the pride of the Ecole d'Horticulture at the end of the nineteenth century: it "is maybe the most beautiful collection of fruit trees in France if one considers the number of species and varieties, the vigour of the trees and the variety of their forms" (Nanot and Deloncle 1898, p. 160). The collection of the Potager currently comprises 68 shapes of fruit trees representing the evolution of this art since the seventeenth century. They are listed in the *Encyclopédie des formes fruitières* (Encyclopaedia of Fruit Tree Forms) published in 2001 by Jacques Beccaletto who was the head gardener of the Potager du Roi at the time. He describes most of the known forms in France: their origin, their architecture, their training. Many of them did not exist in La Quintinie's time and were invented in the nineteenth century: the unilateral horizontal cordon (circa 1840), the Verrier espalier with four, five or six branches (circa 1850), the lozenge created at the ENH circa 1880, etc. The training times can be very long: "I had to wait twenty-five years to completely finish Legendre espaliers planted in 1969" (Beccaletto 2001, p. 143). This ancient form described in 1684 by the parish priest of Hénouville[15] replaced, between the end of the 18th and middle of the nineteenth century, the bush pear trees installed by La Quintinie in the Grand Carré. These espaliered trees surround each vegetable patch and amplify the architectural dimension of the garden. At the time, La Quintinie was against this form of fruit tree that presented too many constraints: "In the past we used to make espaliered trees, but this practice has almost disappeared, they were hard to maintain and provided a very mediocre yield […] It is more profitable to grow bush trees" (LQ, p. 218 et 99). The espaliers of the Grand Carré are a reference today for

---

[15]The form described back then comprised seven or eight main branches. The one described by Jacques Beccaletto in the Potager du Roi has five.

the agronomist and historian in charge of the conservation of this heritage.[16] Changes remain possible nevertheless: the head gardener proposed in 2000 "the Beccaletto modified V palmette", an adaptation of the so-called D. Bouscasse fan-shaped palmette (Beccalettto 2001, p. 104). Aesthetics are once again referred to in justifying this choice: "the opening of the angle is increased to seventy degrees, and the horizontal branches are reduced to the number of five, to maintain the visual effect produced with the forms in the vicinity of the Grand Carré".

6.2.5 Producing Out of Season

The art of "hotbeds" enables the inventive gardener to have a productive garden in all seasons: "The endeavour requires great effort and expense but the pleasure of seeing in the midst of snow and in cold winter weather an abundant supply of excellent large green asparagus shoots more than makes up for this" (LQ, p. 917). With the royal stables nearby, the horse manure was abundantly used to fertilise the soil and accelerate production. La Quintinie dedicates an entire chapter to this topic since this input is one of the mainstays of his system: "In truth, these types of manure are wonderful to use in our gardens, especially in winter; one might say they replace the great star which breathes life into all things" (LQ, p. 244). They were still greatly used in the nineteenth century: "Annually, to constitute the layers on which we cultivate the early fruit and vegetables, flowers and ornamental plants, we used the manure of 50 horses" (Nanot and Deloncle 1898, p. 152).

A first hothouse was built in 1730 under the direction of Louis Le Normand for the cultivation of pineapples then recently introduced in France. "To heat the hothouses required between 700 and 1000 francs' worth of wood each year; other hothouses were built in 1752" (op. cit., p. 33). More hothouses were built in the eighteenth and nineteenth centuries for the forcing of fruit and vegetables: there were nine at the end of the nineteenth century, including one for the cultivation of pineapples, the others being "dedicated to the forcing of strawberries, green beans, or the wintering of ornamental plants" (p. 129). The hothouses were dismantled in 1994 when the ENH moved to Angers, marking the end of cultivation in pots.[17]

---

[16]Comment by Antoine Jacobsohn. The head architect of historical monuments defers to the head gardener of the Potager du Roi on matters concerning live plants. We are not aware of the existence, for this garden, of any written documents describing the nature of the living heritage preserved as a historical monument.

[17]There remain approximately 800 m^2 of cultivations sheltered in old horticultural hothouses reconverted for vegetables. There is an area for seedlings (40 m^2), a few plantations in open ground (solanaceous plants), a small hothouse planted on the initiative of a gardener who is an enthusiast of tropical plants and a space reserved for the plantations of students.

6.2.6 Intensive Monoculture

The "Figuerie" was created by La Quintinie and was an object of his pride: a garden dedicated to figs, designed on the model of the Orangery, with 700 potted fig trees sheltered each winter. The original plan of the Potager also features a melon patch (Melonnière) and a plum orchard (Prunelaye). La Quintinie avoids "mixing species":

> I find it preferable because it is easier for picking and avoiding the loss of fruit. […] I do not mix species. […] only apricot trees with peach trees, and I do the same with plum trees which I also mix with peach trees. (LQ, p. 487)

This model of monospecific gardens became widespread in the nineteenth century with the cultivation of pineapples: "We produced 800 pineapples per year at the Potager" (Nanot and Deloncle 1898, p. 59). This monoculture was accompanied, however, by a great diversity of fruit species and varieties. There were 14,515 trees and 1177 fruit varieties comprising 565 varieties of pears and 309 varieties of apple trees cultivated in 1898 (op. cit., p. 160). However, the modernisation of agriculture after the Second World War which introduced standardisation and a reduction in the number of species and varieties cultivated also affected the Potager du Roi. The varieties most sought after on the market were privileged for teaching purposes. In the case of pears, for example, the 'Doyenné du Comice' was massively planted in the 1960s and 1970s. Today this variety is found everywhere in the garden.

The former Potager du Roi remained the perfect example of an ordering of nature: the soil, inadequate for cultivation, cold and waterlogged, had become a fertile and well-drained piece of land, its trees were trained following strict architectural shapes, and the alleys were traced out to facilitate strolling. This type of layout designed by La Quintinie was perpetuated for 300 years, but the Potager du Roi as it was then is now out of step with emerging agroecological issues. This is what Antoine Jacobsohn, in his position as head gardener, expresses in his *Dialogues avec La Quintinie* when he writes: "It is this intention to control nature, which was one of your projects, and which has become the source of one of our current difficulties" (Jacobsohn and Petzold 2017, p. 66). For the last ten years, the Potager du Roi has indeed become more "green": some alleys have been planted with grass, and the bare earth is disappearing under flowers.

6.3 Imitating Nature: Three Major Upheavals

From the end of the 1990s, the gardener in charge of fruit production tested environmentally friendly methods to reduce the number of phytosanitary treatments of the trees: the breeding and dispersion of psyllids to favour auxiliary insects, pheromone traps, saccharose sprayings (INRA protocol), etc. But soil management

remained a problem because of aesthetic issues: "We are testing all the cultural and technical possibilities to radically reduce the quantity of herbicides used in the Potager du Roi. […] This necessary change in practices is accompanied by a general change in the appearance of the garden. We are shifting from a neat garden to one which is less neat and more natural".[18] Changes in cultivation methods followed three major trends which we shall successively analyse: the reinforcement of diversity, the reintroduction of animals and the regeneration of the soil.

6.3.1 "Breaking Monoculture"

We now know the link between the diversity of an agroecosystem and its resilience against pathogens. At the Potager du Roi, the monoculture of apples and pears inherited from the Ecole d'Horticulture encouraged certain diseases such as scab, which is particularly troublesome in fruit tree cultivation. Diversification in fruit cultivation since the 2000s is aimed at developing collections—diversifying the number of species of modern and historical varieties—and at achieving environmental objectives such as privileging resistant varieties and mixed planting.

The collection of fruit varieties was supplemented in 2000–2001 with the planting of 412 different varieties: 211 apple trees and 201 pear trees.[19] The dream of Manuel Pluvinage, who was then the head gardener of the Potager du Roi[20] was to "present a living catalogue of the different fruit and vegetables in existence from the time of Louis XIV to our days".[21] The plum tree was reintroduced in 2006. The same year, Antoine Jacobsohn brought about the "massive return of peaches" with the planting of forty varieties.[22] New vegetables were cultivated and tested in thematic exhibitions on the diversity of egg plants, gourds and peas,[23] etc. The best tasting and looking varieties were kept.

The choice of fruit cultivars planted for production took into account resistance to cryptogamic diseases: "*We have practically no more 'Golden Delicious', we are gradually uprooting the trees. It is one of the apples which is most sensitive to scab*" (Laurent). The 'Doyenné du Comice' pear, also very sensitive to scab, was replaced by the 'Beurré Diel', the 'Beurré Superfin' or the 'Duchesse d'Angloulême', which are seldom contaminated by this mushroom.

---

[18]Jacques Beccaletto, *Nashi* n° 13, November 2006.

[19]According to the "Petite Flore du Potager du roi", op. cit.

[20]Manuel Pluvinage is an historian by training. He was in charge of the Potager du Roi from 1999 to 2007.

[21]"Le Potager du Roi fait peau neuve", *Le Parisien*, 21 March 2002.

[22]*Nashi* n°13, November 2006.

[23]See: "Légumes de génie" (2002), "L'épopée des courges" (2005), "Du fayot au mangetout" (2010).

More recently, more diversification was experimented within the most prestigious part of the garden: espaliered peach trees were introduced in the Grand Carré to replace old pear trees: "*I would like to grow peach trees, apricot trees, almond trees and cherry trees. To work with fruit which we know can be viably cultivated organically*" (Laurent). Peach trees therefore introduced a break with monoculture but which maintain through their shape (an adapted horizontal palmette) the pleasing layout of the espaliered trees.

The gardeners also tested plantations of small fruit in rows, at the foot of the fruit trees: "*We are replanting blackcurrant and gooseberries, we're trying to introduce new fruit*" (Laurent). Bushy shrubs, like the goji (*Lycium barbarum*) were introduced. Among the new varieties selected, the gardeners identified plants that naturally fertilise the soil, such as sea buckthorn (*Hippophae rhamnoïdes*) and cherry elaeagnus (*Elaeagnus multiflora*), two species which fix nitrogen from the air (Jacobsohn and Meynard 2015, p. 15).

Lastly, vegetables were planted as alley crops among the fruit trees, thus contravening the precepts of the Ecole d'Horticulture according to which "on the same piece of land one does not mix trees and vegetables harmful to one another" (Nanot and Deloncle 1898, p. 161).

6.3.2 Welcoming Animals

Domestic fowl were recently introduced[24] on the initiative of the students of the school of landscape architecture. It took several years for the idea to be accepted: "The students are requested to take away the chicken coop and its occupants", can be read in a *Nashi* newsletter of 2004. The Council of the Potager du Roi ruled "against installing domestic, or any other animals within the confines of the school or the Potager. […] to ensure the safety of the public and the health of the animals".[25] Several months later, however, the department of ecology of the ENSP introduced geese in one of the more remote parts of the garden to implement its gardening project: "the goslings should help us manage the grass in the Duhamel meadow-orchard until the beginning of the summer. If the experiment is a success, we are thinking of doing the same in the Fruticetum, which is difficult to gain access to because of the dense grass. We could set up a collection of ingenious stiles".[26] In 2012, the head gardener of the Potager published in the same newsletter an excerpt from the *Spectacle de la nature* by l'Abbé Pluche (1739) referring to remedies against "caterpillars, worms, snails and all other insect pests": "You should release

---

[24]It should be mentioned that a farmyard with fowl was included in the plan of the gardens in 1690.

[25]*Nashi* n° 7, September 2005.

[26]Comment by Marc Rumelhart, then head of the Ecology Department, reported in an article on "Student Gardening", *Nashi*, n° 6, June 2005.

lapwings or plovers after having clipped their largest feathers. They will work from dawn to dusk cleaning everything up".[27] Abbot Pluche gained his knowledge of gardening from Louis Le Normand, who was the head gardener of the Potager du Roi at the time. Antoine Jacobsohn does not exclude the possibility that poultry may have been used in the Potager du Roi from the 1730s.

The illegal poultry regained its status as a garden animal after the launching of an interschool competition for garden animals in the Potager du Roi in 2012.[28] The challenge was, "How to welcome animals in the garden". A comfortable chicken coop now houses ten hens cared for by the students. Their contribution, however, is limited to tending a small enclosure of 2000 m^2. But they are inspiring new projects in the minds of the gardeners:

> For us, the hens could be precious allies against the Asian hornet. We could consider putting at least a part of the apiary with the hens. (Bertrand)

> For me, the garden is great but it lacks life. I would like to have chickens to scratch the grass, to eat the worms fallen from the trees, to weed certain patches and to cut the grass. (Laurent)

Sparrows play a similar role as the farmyard poultry, but their presence in the Potager is less controversial. Although they peck at ripe fruit, they are also extremely efficient at "cleaning" trees of their insects when they feed their young in the spring. The *Nashi* lauds the titmouse in its new section on animals[29]: they are "very important helpers for gardeners. They swallow several kilograms of insects during the breeding season and can help avoid the use of pesticides".[30] With the collusion of a local nature association (Association des Naturalistes des Yvelines), the gardeners have installed nesting boxes for birds like the titmouse in the garden, and birds are regularly seen nesting in the garden. Welcoming the presence of birds is part of the more integrative vision of the agroecosystem.

Bees also benefit from this vision of a generous nature. Their presence ensures the quality of the fruit production. Conscious of this complementarity, the young gardeners have trained in beekeeping.

> Many things can be done with bee-hives. It is a part of the job of a vegetable gardener and tree-grower to keep bees. And when you go to see the bees, you have to be calm. (Bertrand)

The beehives which used to be kept behind a wall by a beekeeping association are now in "transhumance". The gardeners move the hives to optimise pollination of the fruit trees and to promote the natural image this conveys to the public:

---

[27]Abbé Pluche, p. 157, quoted by Antoine Jacobsohn in "De l'utilité de la volaille domestique au Potager, en 1732 et aujourd'hui?", *Nashi* n° 30 (January 2012).

[28]An initiative of the Picorama student association which was supported by the Department of Ecology of the ENSP.

[29]Antoine Jacobsohn introduced the section "Notre faune" (Our Fauna) in the new layout of the *Nashi* inaugurated in 2010.

[30]Jean-Pierre Thauvin, *Nashi* n° 30, January 2012.

> The transhumance of the hives reassures us. It also shows people that there is life in the
> garden with bee hives moving around it, and that if we move the hives we are careful about
> spraying because we don't want to kill them. I think the presence of hives in the garden
> reassures people. (Laurent)

For the introduction of the "insect helpers", a "composite hedge" sixty metres long was planted in 2000 following a training course organised by the Technical Joint Trade Centre for Fruit and Vegetables (in French, Centre Technique Interprofessionnel des Fruits et Légumes—CTIFL).[31] It shelters a mixture of indigenous and ornamental species, according to the model recommended by CTIFL (Centre technique interprofessionnel des fruits et légumes 2000). The hedge is intended to "attract the insects and fauna near the fruit trees" to "fight against pests" explains a sign. Fifteen years later, the gardeners are thinking of doing the same thing in other parts of the garden, based on a model inspired by the "high-biodiversity fruit hedge" (Leterme 2014, p. 134). These multilayer hedgerows restore a degree of complexity to the air (helper insects) and to the soil thanks to root secretions which stimulate micro-organisms.

The development of plant cover and the reduction in tilling has made a new actor indispensable: the cat which preys on field mice and voles.

> Cats are the only solution. A few good hunters generally ensure a balance. We need to ask
> to be allowed to introduce cats, its a global approach. If we introduce permanent plant cover
> without cats, it may fail because there are too many rodents. [...] Last year, I had a skirret
> patch, everything was eaten. (Simon)

Animals in the garden can also provide traction. Some thought was given to this notion in 2007, following discussions with wine growers working with animal traction.[32] Demonstrations of the use of donkeys were programmed in 2012 for the Saveurs du Potager event organised with the Anerie Bacotte (donkey farm).[33] Animals can advantageously replace machines because manoeuvring on small plots is hard on the machines and damages the trees. To be dependant on motorised equipment also generates an economic and environmental cost. In January 2016, the team at the Potager du Roi took in two female donkeys for traction work. They proved to be efficient in earthing up asparagus, but the experiment ended before it was possible to explore other ways of using donkeys: "*The idea was to reduce the number of machines and the use of fuel, and to switch to animals. The aim was to seek autonomy. But we realised that with an animal, you don't just turn the ignition key*" (Annie). Animals also ended up being less useful since the intention was to reduce tilling.

---

[31]During this training session, the person in charge of fruit growing, helped by a gardener, caught and listed the insects living in the "composite hedges" (comment by Olivier Gonin, former gardener at the Potager du Roi).

[32]*Nashi* n° 15, May 2007.

[33]The Anerie Bacotte has developed a "natural garden" in Bois-le-Roi which is cultivated using animal traction.

6.3.3 Protecting and Nourishing the Soil

The soil bears the marks of changes in cultivation practises and of the relationship of gardeners to the living world. The repeat photographs opposite (Photos 6.1 and 6.2) give a clear idea of the extent of the changes. The Grand Carré, photographed in February 1991, presents bare earth treated with herbicides. A repeat photograph taken in March 2016 shows that the grass has taken over the alleys and the spaces at the foot of the palmettes. In the Legendre Garden (Photo 6.3), cardboard covered by wood chips follows the rows of pear trees. Between the rows, green fertilisers alternate with vegetable beds with generous quantities of mulch.

The protection of the soil of the Potager du Roi started with the grassing down in 2005. The aim was to reduce the consumption of herbicides and to improve the quality of the environment for the public. Interest in the benefits for the soil itself came later. Grass was planted in the most attractive cultivated plots for the benefit of the visitors, making them more accessible via mowed walkways. The grassing down reconciled environmental as well as public access objectives. This was gradually implemented on all of the sixteen plots. The phytosanitary treatments were thus moved away from the vegetable plots of the Grand Carré. The alleys themselves were grassed down, except for the "croix centrale" (central cross), to retain the imprint of the original layout.

Once again, in order to reduce the spraying of herbicides, different plant covers were tested along the rows of fruit trees: grass cropped with a cutter, green manure crops (*Trifolium suaveolens, Trifolium incarnatum*) or perennials (*Medicago sativa, Hieracium pilosella*). In 2013, the so-called sandwich method[34] was tested on extended fruit tree forms which could not be easily accessed for mechanised maintenance: a green fertiliser was planted along the rows of trees which were separated by grass. Between the two, a twenty-centimetre-wide strip was tilled to break up rodent galleries and limit competition from the grass. Organic mulching based on jute and wood was experimented with in 2006 at the foot of the fruit trees, but this soon proved to be too expensive: "For the Lelieur Garden alone, 600 m of mulching was laid down at a cost of approximately 2000 euros requiring 200 h of labour".[35] The ENH laboratory, in addition to conducting the phytopharmaceutical studies mentioned earlier, was already researching on "the use of mulches in horticulture" (Nanot and Deloncle 1898, p. 118). La Quintinie himself was not hostile to using mulch:

> People who live near forests gather leaves, not only to use them as cover, as I explained, but also to let them rot in a hole, the manure thus obtained is very good and can be used as compost. (LQ, p. 892)

---

[34]Tschabold Jean-Luc, "Le système sandwich", *AlterAgri* n° 67, September–October 2004.

[35]François Moulin, former head gardener in charge of fruit cultivation. *Nashi* n° 12, September 2006.

Photos 6.1 and 6.2 Repeat photographs of the northern terrace of the Grand Carré (Potager du Roi). February 1991 above (© Marc Rumelhart), March 2016 below (© Pauline Frileux). Observe the bare earth, treated with herbicides, then the grassed down alleys and rows of espaliered trees framing each plot

A change began in 2013: the mulching and plant cover were no longer just a way of managing weeds; they became a key elements in the new cultivation practices. The first attempts at cultivating under plant cover were made by gardeners from the "ornamental" section, inspired by a workshop on the Figuerie garden.[36] They tried to convert the former "green carpet" which had been cultivated for several years into a flower meadow. Beds of permaculture inspiration were planted in front of the buildings of the Ecole du Paysage with vegetables and edible flowers. The soil was no longer tilled, but simply scratched on the surface. It was protected by a thick layer of straw mulch to nourish a rich vegetation (Photos 6.4 and 6.5). This model was replicated in different ways in the other gardens of the Potager: crushed

---

[36]An international workshop session conducted by Karin Helms and Stefan Tischer, landscape architects.

Photo 6.3 To regenerate the soil, cardboard covered in wood chips is placed under the Verrier palmettes. The spaces between the rows are mulched and planted with vegetables to diversify production (© Pauline Frileux, Jardin Legendre, March 2016 on the left, December 2016 on the right)

Photo 6.4 "Ornamental and vegetable" beds of permaculture inspiration are cultivated on the former green carpet of the Figuerie, in the Potager du Roi (© Pauline Frileux, March 2017)

mulch[37] or straw mulch at the foot of the fruit trees, green fertilisers, no tilling and direct seeding.

Recent changes in cultivation practices are signs of a real paradigm shift: the objective is no longer to manage weeds to ensure the garden "looks neat", but to care for the soil in order to regenerate it. Current gardening practices are now part of a more integrated vision of the agroecosystem which encompasses wild and cultivated flora and fauna. The agroecological transition in the Potager du Roi has been facilitated by a certain discouragement in the war against weeds, whether by

---

[37]A crusher was purchased in 2008 to recycle waste from the pruning of the fruit trees that used to be burnt. A complement of crushed mulch is provided by the Urban Community of Versailles Grand Parc for the price of its transport.

Photo 6.5 "Ornamental and vegetable" beds, details (© Pauline Frileux, September 2017)

chemical or mechanical means. Another factor has been that three head gardeners went into retirement within a period of three years: the head gardener in charge of fruit trees in 2009, the one in charge of ornamental plants in 2010 and the one in charge of cultivations in 2011, after 42 years working in the Potager du Roi. The departure of these three head gardeners totally changed the established order in a short time resulting in freedom of action for the new generation of gardeners.

6.4   The Conditions for the Emergence of an Agroecological Paradigm

The emergence of agroecology in the Potager du Roi finds its origins in the personal motivations of each gardener, as we shall see later: agricultural production (increasing yields), economy of means (reducing the number of arduous tasks), the environment (limiting energy consumption), biodiversity (favouring soil fauna), but also for reasons of health and the improved flavour of the fruit and vegetables.

6.4.1   A Crisis Situation: An "Indescribable Jungle"

The calling into question of existing practices is often accelerated in times of crisis. The invasion of wild vegetation following the end in the use of herbicides in 2006 overwhelmed the Potager du Roi:

> We soon found ourselves overrun by an indescribable jungle. We had to adapt, to find the machines to clean it up. So we made major purchases of brush cutters and mowing machines to try to catch up. (Laurent)

The end of the use of herbicides came in the wake of the ENSP project which raised the question of "changes in cultivation practices, namely in the phytosanitary domain which required reconciling efficiency with the admission of the public".[38] But the decision taken by ENSP, itself under the obligation to comply with the injunctions of its supervising ministry, ended in failure. Phytosanitary treatments were resumed in 2007 upon the request of the head gardeners:

> To switch from professional weeding techniques as practised in horticultural farms to using no herbicides at all is inconceivable. That is why in the orchards there will be localised treatments against resistant weeds such as couch grass, bindweed, knotweed and wormwood… when their presence becomes overwhelming. Basically, what remains to be defined is the general aspect of the garden and especially the orchard we want for the future. (François Moulin, 2006[39])

The end of the use of herbicides followed the departure of the head gardener in charge of cultivations, in 2011. It is still perceived by some gardeners as a loss of control over nature and a calling into question of their know-how. The Potager no longer corresponds to the aesthetic standards they had been taught:

> When growing vegetables you still have to hoe. Irrigation and weeding ensures success. If you leave the weeds, they take the water and the nutrients, they compete, and you get stunted vegetables, small yields, and the garden isn't attractive to visitors, everything is spoiled. (Annie)

The same applies to the life expectancy of the trees and the quality of the harvest. The end of the treatment against scab favoured the spread of the fungus. Over and beyond a certain concentration, a cancerous derivative renders the diseased fruit unfit for consumption, even for the production of fruit juice. The gardeners were therefore forced to throw away tons of contaminated pears and apples. Apart from the financial cost, one can understand their disappointment at losing their harvests. But since the law of 12 September 2006,[40] phytosanitary treatments have become incompatible with admitting the public to the garden.

Lastly, the law on the future of agriculture makes agroecology a "national priority" which the gardeners of the Potager, employees of the Ministry of Agriculture, must address in spite of not having received the relevant training:

> Who has been trained in agroecology? I have a BTA[41] in crop protection, in other words, the intensive treatment of crops. I have a "phytosanitary" certificate, that's what I know. But none of us is able to guide people in this new approach. (Annie)[42]

---

[38]Projet d'établissement de l'ENSP Versailles, 2005–2015.

[39]*Nashi* n° 12, September 2006.

[40]The law concerning the "time limit for re-admission" (see introduction, page 3).

[41]Agricultural technician's certificate (in French, Brevet de technicien agricole).

[42]ENSP meeting, January 2017.

6.4.2 An Economic Driver: Reducing Costs and Increasing Production

The profitability of the Potager du Roi has been a recurring issue since its budget has been shared with the Ecole d'Horticulture. In 1875, "The rapporteur of the budget parliamentary commission requested that the cultivation of collections and experiments should be replaced for the most part by cash crops" so as to ensure the income of the Potager du Roi compensates for the school's expenses (Nanot and Deloncle 1898, p. 186). The authors added: "Clearly, this request has not been fully complied with; however, it is obvious that this could not have been the case since it would have been to the detriment of the teaching, the future of the establishment and its reputation". A century later, the administration expressed the same wish: "For the ENSP, the Potager is a heavy burden, production must be increased".[43]

Whereas the gardeners were instructed to produce more, the reduction in treatments resulted in a sharp decline in fruit production: 47 tons in 2002, 12 tons in 2014 and only 5.5 tons of fruit harvested in 2016. Higher profits obtained by selling processed products (jams and fruit juices) made it possible to compensate for the drop in production. The gardeners also sought to save on labour not directly profitable, such as weeding. This resulted in continued grassing down as well as mulching, "*which will enable us to save time, in the long term we intend to compost everything on site*" (Mathieu). A second response was to introduce more profitable vegetables and herbs in the fruit gardens which also introduces a diversification of the agroecosystem (Photo 6.6).

> We have to slightly re-adapt all of the agroforestry principles here. The basic principle is to cultivate between the rows. [...] the principle is to increase the profitability of a plot. [...] So we said to ourselves, let's try to grow vegetables between the trees. (Bertrand)
>
> There is a lot of space at the foot of a fruit tree which can be used and must be made profitable, and that is why we now plant blackcurrants and gooseberries at the foot of the fruit trees. We are going to plant mixes of herbs to occupy the soil, to have a permanent cover which also ensures a certain profitability while making the site more attractive. (Laurent)

A third approach involves leaving the soil untilled, which helps reduce costs by reducing fuel consumption. Experimenting with sowing under plant cover is a way of "*reducing labour through adjusted and more agronomically rational farming techniques*" (Bertrand).

---

[43]Excerpt from an interview of the General Secretary (Stéphane de Margerie, 1995).

Photo 6.6 Mulching and planting of perennials in the row of spindlebush pear trees. Collection of apples and pears in the Quatrième des Onze, in the Potager du Roi (© Pauline Frileux, May 2016)

6.4.3   An Ecological Driver: Natural Cultivation

Green manure crops are sown to regenerate the soil, and the gardeners are seeking to adapt their machines for sowing under plant cover without tilling. "*There is something to be said for plant cover, for maintaining the mycorrhiza. You can only achieve this with plant cover* (Bertrand). The notion of living-soil has gradually taken among the gardeners and changed the way they relate to machines.

> Permaculture is not tilling the soil. Above all, I see it as preserving the soil. Most of the places have been tilled… I have even tilled some plots three times a year, which is already two times too much! (Pierre)

The environmental policy of reducing inputs, as we have seen, was not accompanied by a change in the way spontaneous species were perceived. The gardeners no longer used chemicals, but they still had to deal with the weeds. Partial grassing down and tillage remained part of the idea of making the garden "look neat".

> We switched to mechanical weeding at the foot of the trees [in 2012]. That solved the problem for about 80% of the orchard, except for the voluminous forms, for example where we adopted the "sandwich method". It was in response to the fact that we couldn't weed […] The first years we would mow once a month and last year we mowed only four times, which kept everything clean. (Laurent)

In 2005, in a letter addressed to the ENSP, two experimental gardeners in residence at the Potager du Roi, Liliana Motta and Sébastien Argant rebelled against the sterile aspect of the Potager: "On our path", they explain, "are deserted plots of bare earth and amputated trees. […] We have the impression we are tending a cemetery". Their gardening approach involves all kinds of living elements: Liliana Motta collects "plant pests" (Motta 2014) and Sébastien Argant loves well nourished soils in which "worms work instead of the gardener" (Argant 2003, p. 363). Within the scope of the student gardening activities, the two experimental gardeners initiated observation work of spontaneous vegetation on plots with or without tillage.[44] The innovative nature of their approach, especially regarding soil management methods, drew the attention of the head gardener at the time who wrote the following about student gardening: "It is clear that the logic of clean gardening combining morality and the total absence of weeds is no longer in practice here. […] the criteria is no longer the importance of production nor the visibility of the work but the environmental quality of the practices" (Pluvinage 2003, p. 148).

Other experimental gardeners have campaigned for a "natural vegetable garden", especially Yves Gillen, referred to as a cutter of reeds and "liberated gardener" (in French, "Jardinier affranchi") (Bertrand-Gillen 2009). He has taught future landscape architects the art of making good compost, how to use the grelinette garden fork and the straw cutter to cover the soil, as well as how to trim borders and tend alleys. Other events contributed to instilling alternative practices: the installation of Yvonne's "lasagne" in a corner of the Grand Carré with all the garden waste—"*a big lasagne with extraordinary biodiversity*" (Yvonne)—or the Orties' Folies gardening festival held in 2010 with conferences by Gilles Clément, Jean-Paul Collaert and Bernard Bertrand on "the benefits of the nettle and wild plants" and the different uses of nettles in agriculture.[45]

> In the beginning, I kept saying, "We must go organic". It was complicated […]. I said "organic", because it was a way of working without treating, but in fact it wasn't the organic aspect I was interested in, because when you cultivate organically you treat. […] We aren't cultivating organically but "naturally". That's what's interesting, working naturally, we don't need to treat. (Yvonne)

These pioneers paved the way for agroecology in the Potager du Roi. Two recent events finally tipped the balance in the transformation of the team's perception of the living environment: the accidental encounter with the professional association of living-soil market gardeners[46] (in French, Maraîchage sur Sol Vivant or MSV) and exchanges with the French Canadian Stefan Sobkowiak, promoter of the "permacultural orchard". The MSV network was created in 2012 upon the initiative

---

[44]*Nashi* n°10, June 2006.

[45]*Nashi* n° 26, January 2010.

[46]In June 2015, one of the founders of the association Maraîchage sur sol vivant came to the Potager du Roi for a meeting organised on site with the association Atelier Paysan. Surprised to see vegetable patches in the Figuerie, he invited the gardeners to talk more about its cultivation.

of farmers who wanted to regenerate their soils. It works on the principle of a sharing of experimental practices to test agronomic theory in the field. The vegetables are cultivated without tillage, under thick cover of non-decomposed organic matter. In December 2015, the gardeners of the Potager attended the MSV annual conference.[47] They met Marcel Bouché, one of the few earthworm specialists in the world (Bouché and Lavelle 2014), as well as the agronomist and market gardener Konrad Shreiber who claims that "composting is polluting".[48] Under this provocative slogan, he recommends the use of fresh organic matter to activate fungi in the soil that produce glomalin, a molecule essential to the composition and maintenance of soils. In the spring of 2016, the entire team visited the vegetable farm of François Mulet, one of the founders of the network. For him, "*the reference is the earthworm, if it is present, all the rest is there*". This excursion organised by the gardeners themselves bears witness to a dual decentring: renewed interest in vegetable production in itself and the desire to test the cultivation techniques inherent to the field of permaculture.

At the same time, the gardeners in the fruit section met Stefan Sobkowiak.[49] His ethic: "share the surplus with people and nature", a surplus which he estimates at between 5 and 10% of the yield. Birds are "allies" he attracts with sunflower seeds and more than 150 nesting boxes installed in his orchard. This French Canadian's approach consists of "maximising biodiversity" while increasing production and reducing labour and inputs. His orchard is therefore designed around trios associating a tree which fixes nitrate in the air (a leguminous tree), an apple tree and a pear or plum tree. The absence of any contact between two identical varieties limits the propagation of pests, and the leguminous tree naturally fertilises the soil. Against scab he sprays whey, a by-product of cheese. "We aren't seeking perfection, just a balance". The grassed surfaces are seen as a "resource deserving proper management for insect helpers". Small fruit and vegetables are included in the rows and compose "grocery alleys" which provision the members of the orchard association. These two permaculture approaches adopted by professionals have in common the fact that they experiment with ecological, productive and efficient techniques. The combination of these three aspects finally convinced the team of the Potager du Roi.

---

[47]Emmanuel Blot and François-Xavier Delbouis, "Continuer d'avancer avec le réseau Maraîchage sur sol vivant", *Nashi* n° 41, March 2016.

[48]Conference of 30 July 2015 during the "Paysages in Marciac" festival organised by the association Arbres et paysage 32. See excerpt on YouTube.

[49]See the documentary directed by Olivier Asselin, *Le verger permacuturel. Au-delà du bio, 2014.*

6.4.4   A Social Driver: Promoting the Profession of Market Gardener

Agroecology entered the Potager du Roi through vegetables in the "ornamental and kitchen garden" borders of the Figuerie (cf. S*upra*, Sect. 6.3.3), totally changing the distinctions made between the cultivation of fruit and vegetables and between tree and vegetable growing. The growing of fruit trees has always benefited from a prestigious image at the Potager du Roi. For La Quintinie, it was among the "masterpieces of gardening": "the training of all sorts of trees, the beauty and singular benefits of each fruit, the correct ripeness" (LQ, p. 78). His successors were great tree specialists: "the Le Normands[50] were talented arborists" (Nanot and Deloncle 1898, p. 33), le Comte Lelieur[51] an "expert arborist" (op. cit., p. 46) author of a treatise on fruit trees (*La Pomone française*, 1815). Auguste Hardy,[52] the first director of the Ecole Nationale d'Horticulture, was also an "eminent arborist" (op. cit., p. 88) author of a treatise and founder of the "école de poiriers" at the Potager du Roi. Lastly, Jules Nanot, the second director of ENH, was in charge of the teaching fruit tree arboriculture. These directors who succeeded one another up until the beginning of the twentieth century contributed to the reputation of the Potager du Roi as a fruit garden. The trained trees contribute to the garden's architectural layout and confer an historical dimension through the collection of fruit tree forms, contrary to the vegetable production which for the most part is simply cultivated according to an annual cycle.

The excellence of the vegetable and fruit production used to depend on the acclimatisation of new vegetables and early fruit and vegetables, which are no longer objectives in this age of sustainable development. Halfway between practising horticulture and agriculture, the gardeners of the "vegetable" sector are finding it difficult to define themselves professionally: "*We are not classic market gardeners, we are in a market garden*[53]" (Simon). The Potager stopped being a member of the association of market gardeners at the Chamber of Agriculture: the subscription fee was too high (10% of the vegetable budget), but above all, the visits of the association's agricultural consultant revealed the extent of the differences between the Potager and the market garden profession:

> We do not resemble a market garden at all. He laughs when he visits us: we don't have any high-yield vegetables, we have trees which are planted every 20 metres which prevent us from using a tractor, we have varieties he's never seen… we aren't market gardeners. Market gardeners today produce no more than five different vegetables. We have 460 different varieties and a hundred species. (Annie)

---

[50]François Le Normand and his two sons François and Louis, followed by his grandson Jacques-Louis all managed the Potager du Roi from 1691 to 1782.

[51]Le Comte Lelieur managed the Potager du Roi from 1804 to 1819.

[52]Auguste Hardy was the director of the Potager du Roi from 1849 to 1891.

[53]In reference to the book by Jean-Martin Fortier, 2015, *Le jardinier-maraîcher. Manuel d'agriculture biologique sur petite surface*, Écosociété.

This diversity of varieties, which is difficult to justify strictly in terms of production, has become an asset in terms of biodiversity. The vegetables have proved to be more rewarding than the trees when it was necessary to invent techniques which do not involve the use of pesticides or tilling, as in the case of the Figuerie. Excellence in market gardening is gauged today by the gustative quality of the produce. Cultivating without pesticides is also about producing beautiful, tasty vegetables, and it is about pride in the "market gardening" profession.

6.4.5 The Driver of Food Production: Beautiful Tasty Fruit and Vegetables

"Obtaining a crop" is one of the founding principles of the permacultural project. "The ultimate reward is to be able to consume what we grow" writes one of the founders of the movement, David Holmgren (Holmgren and Cochet 2014, p. 172). Food production creates a positive retroaction which stimulates the gardener. At the Potager du Roi, it forges the identity of the team, irrespective of the garden sections. The war waged by the gardeners against weeds has therefore contributed, in spite of themselves, to diverting them away from their core activity:

> It's wearing for the staff, especially the arborists. Because on the Grand Carré we spend 90 h a year just clearing underbrush. On the other plots it's even more, we spend 350 h clearing per year. So practically a quarter of the year is spent clearing underbrush. And that is physically tiring. It wears out the staff and the equipment. (Laurent)

The gardeners in charge of the ornamental section do not like maintenance work either:

> When I arrived, I spent my time watering, hoeing and cutting. […] Weeding the gravel paths all day, I did that for years, I now realise it's pointless. Maintaining gravel paths and trimming boxwood isn't inspiring. (Arnaud)

Tending the alleys was still an occupation widely shared in the 1970s, according to Jacques Beccaletto[54]:

> At the Potager du Roi, in the past, the gardeners would spend the last hours of the week cleaning up the garden […]. All the staff, those in charge of the vegetable patches, the green spaces, and the fruit, would spend the last hours of the working week doing the same thing, raking the gravel of all the terraces and alleys.

But this is no longer the case: the gardeners in the ornamental section claimed the right to grow vegetables after the head gardener went into retirement. This enjoyment at producing food contributed to renewed cultivation practices: "*It's more pleasant to start the day by picking courgettes rather than spending all*

---

[54]Jacques Beccaletto, "Une histoire de graviers", *Nashi* n° 31, May 2012.

morning clearing the undergrowth at the foot of the trees" (Bertrand). As we have seen, vegetables now grow between the rows of fruit trees and in the flowerbeds.

The interest in consuming vegetables led to ending the use of herbicides to clear the alleys sooner. The subject of food is ever present when talking with the gardeners who constantly evoke the tastiness of their produce.

> Our carrots aren't the same as those you buy in the shops, not at all the same. When I pick a carrot, it smells of carrots, you taste it and it really tastes of carrot. When you buy a carrot in a shop, it's hard, it's orange and that's all it is. (Annie)

> The 'Noire de Crimée' is a very fragile plant [a tomatoe] which attracts mildew, but we keep it because it's an exceptional variety, we can't do without it. (Pierre)

In this regard, the gardeners of the Potager are the rightful heirs of La Quintinie, who paid a great deal of attention to the selection of delicious varieties so as to "give people pleasure, but most of all to contribute to their good health" (LQ, p. 344). "Exceptional flavour" is also the objective sought by Stefan Sobkowiak with his "permacultural orchard" (Asselin 2014). The gustatory quality of the vegetables produced by the Mulet brothers was a key factor in the adoption of living-soil gardening principles by the gardeners of the Potager du Roi:

> They have cauliflowers that are more than 30 cm in diameter. […] They are very dense, beautiful cauliflowers. The radishes are so big, you think they must be hollow. Not at all, they're delicious, very sweet. (Bertrand)

The level of excellence attained by these gardeners, in terms of the "neatness" of the cultivated beds and the flavour of the vegetables, two essential criteria at the Potager du Roi, has made no-till cultivation credible.

Permaculture is also "a positive approach to weeds" (Holmgren and Cochet 2014, p. 94). According to this principle, gardeners experiment cultivating in combination with spontaneous plants which are no longer in competition, but which provide protection.

> In the bed along the wall, there is some borage that has reseeded, and I had planted lettuces between the fledgling borage plants in the beginning of spring. That was interesting […]. I picked the borage, the first leaves were delicious, you cook them like spinach […] So I picked everything, the wild borage and the planted lettuce. (Simon)

The Potager now sells wild plants along with carrots and leaks:

> In the spring when we didn't have much to sell, we were glad to find the wild plants. The sorrel, borage, goosefoot and orache, anything wild we could make bouquets with. (Yvonne).

> What I find most interesting are the wild plants, without necessarily cultivating them […] In the beginning of spring, I love to walk among the rows and pick any wild plants that can be harvested for sale. Patience dock, bittercress… We should maybe think of ways of producing these plants. (Simon)

Permaculture also involves a different approach to dealing with green waste. In the past, waste was either burnt or disposed of, more recently it was composted,

now it is recycled as food: "*We re-use the leaves, we make cakes with turnip, radish and carrot tops. To think that you can consume practically everything is really something else*" (Yvonne).

Agroecology has therefore gradually entered the Potager du Roi. The gardeners who were reluctant about organic cultivation finally spearheaded an integrated vision of the agroecosystem. Conversions among the gardeners varied in time and according to different motivations such as not having to use pesticides, optimising crops and recycling living matter. All the same, this agroecological conversion did give rise to disagreements among the gardeners. Two gardeners, for example, refused to attend a training course on phytosanitary treatments. Conversely, from 2007, the director of the Potager du Roi decided to experiment with the spraying of phytostimulants to compensate for the end of treatments on a test plot. At the time, he was unable to convince his team. It took ten years to carry out this agroecological transition. Online resources, especially filmed conferences, contributed to disseminating knowledge about permaculture and agroecology. The expectations of the students and visitors regarding ecological and innovative cultivation practices have also played a part which remains to be evaluated. However, the gardeners who have the most developed this approach deplore certain deficiencies in terms of water consumption, the use of treated seeds or the purchasing of straw. Changes are slow in coming and at the same time they are occurring very quickly given the scale of this radical change: "*We don't have any solutions… in the long term for the voles, for the perennial weeds, or for diseases such as canker and mildew. We are somewhat at a loss*" (Annie). The trees have been directly affected by the discontinued use of fungicides which has made the ecological transition even more difficult. But then, the ageing fruit trees need to be replaced anyway. As we have seen, in recent plantations disease-resistant varieties and a mixture of different species have been privileged, which bodes well for future yields.

6.5   Conclusion

Agroecology at the Potager du Roi has been engendered by an economic crisis (reduced budgets), a social crisis (lowering of the status of the gardening profession) and an ecological crisis (biological unbalances, loss of biodiversity). In spite of the garden's singular nature as a farm, a conservatory of trained fruit trees, an historical garden and a school garden, the development of agroecology in the Potager du Roi follows the same reasoning which is emerging in the rest of the country due to "the imperative need to reduce production costs", the desire to promote the farming profession, and the need "to improve the fertility of the soils" (Claveirole 2016, pp. 30–34).

The agroecological transition takes inspiration from agroforestry, permaculture and living-soil market gardening. The new farming techniques are questioned in terms of their agronomic relevance and their aesthetic impact, which is important given the historic nature of the site and the fact that it is open to the public. Plant

cover provides flowery borders, and the layout of the grassed down alleys high-lights the architecture of the garden. Ecology is establishing a new aesthetic dimension the balance of which depends on attention to thresholds and transitions.

Whereas the prohibited use of herbicides imposed on the gardeners in 2006 ended in failure, individual experiments inspired by permaculture have finally been adopted all over the garden and have succeeded in gradually converting the entire team. The "green carpet" metamorphosis of the Figuerie demonstrates the relevance of conducting a life-size trial in a prestigious site. The gardeners from the orna-mental section which has suffered neglect since the departure of the Ecole d'Horticulture have so far played an essential "pioneering role" in the launching of these movements (op. cit, p. 26).

The agroecological revolution of the Potager du Roi is apparent in the renewed attention to the soil which bears witness to a change in the way of perceiving nature. It closely relates to a new social balance within the team of gardeners: a vertical organisation with a strong hierarchy (head gardeners) is gradually giving way to a horizontal organisation in which all the gardeners are at the heart of a self-governing process.

Profile of the Gardeners Interviewed in 2016

First name[a]	Arrival at the Potager du Roi	Section	Age group	Training, career path	Main subjects of interest in the garden
Annie	1994 (seasonal employment since 1991)	Vegetables. Head gardener since 2011	[45–55]	Certificate in crop protection and floriculture. Teacher in a secondary horticultural school	Showing the diversity of vegetables. Teaching the general public
Pierre	1998	Vegetables	[35–45]	Certificate in garden and green space management	The hothouse, Japanese vegetables, historical varieties, guided tours
Mathieu	1998	Vegetables	[35–45]	Certificate in science and laboratory techniques	Simplification of farming techniques to save time, driving farm vehicles
Yvonne	2006 (intern in 2005)	Vegetables	[55–65]	Art and fashion design. Farming	Cultivating with natural methods,

(continued)

First name[a]	Arrival at the Potager du Roi	Section	Age group	Training, career path	Main subjects of interest in the garden
				certificate (reconversion). Chairwoman of family garden association	lasagne gardening, recycling, sale of produce in the Potager du Roi shop
Laurent	2006 (seasonal worker since 2005)	Arboriculture	[25–35]	Certificate in landscape planning	Optimising production, the permacultural orchard, gardening with chickens
Simon	2006	Vegetables	[25–35]	School of architecture, courses in botany	Wild plants, mixed lettuce, no-till cultivation, plant cover
Arnaud	2010 (intern in 2003 then seasonal worker since 2007)	Ornamental	[25–35]	Certificate in vegetable and flower growing in hothouses	Permaculture, electroculture, edible flowers, combined cultivation of flowers and vegetables, gardening with students
Bertrand	2010 (seasonal worker since 2007)	Ornamental garden and mechanical workshop. Arborist since the end of 2015	[25–35]	Certificate in farming mechanics	Adapting farming tools and machines, living-soil market gardening, sowing under plant cover, apiculture
Justine	2009	Arboriculture	[25–35]	Certificate in flower and vegetable production, certificate in landscape planning	The relationship to animals

[a]The first names have been changed to preserve anonymity

References

Argant S (2003) L'économe. Pourquoi s'extasier devant un économe là où il est question de Jardinage ? Les Carnets du Paysage n° 9–10 362–363

Asselin O (2014) Le verger permaculturel. Au-delà du bio. Documentary film, 110'

Beccaletto J (2001) Encyclopédie des formes fruitières. Actes Sud, Arles

Benoît-Lévy J (1929) L'Ecole nationale d'Horticulture de Versailles. Documentary film, 24'05, Moury

Bertrand-Gillen A (2009) Les affranchis Jardiniers: un rêve d'autarcie. Ulmer, Paris, France

Bouché M, Lavelle P (2014) Des vers de terre et des hommes: découvrir nos écosystèmes fonctionnant à l'énergie solaire. Actes Sud, Arles, France

Centre technique interprofessionnel des fruits et légumes (2000) Les haies composites réservoirs d'auxiliaires. Éditions Centre technique interprofessionnel des fruits et légumes, Paris

Claveirole C (2016) La transition agroécologique: défis et enjeux : avis du conseil économique, social et environnemental. Conseil économique, social et environnemental, Paris, France

Holmgren D, Cochet Y (2014) Permaculture: principes et pistes d'action pour un mode de vie soutenable. Rue de l'échiquier, Paris, France

Jacobsohn A, Meynard J (2015) Le Potager du roi est aussi un Jardin fruitier. Les Croqueurs de Pommes n° 150, 13–15

Jacobsohn A, Petzold A (2017) Le potager du Roi: dialogues avec La Quintinie. Artlis, Paris, France

Leterme É (2014) La biodiversité amie du verger: le meilleur des vergers d'hier et de l'arboriculture d'aujourd'hui pour bâtir les vergers de demain. Rouergue, Arles, France

Motta L (2014) Eloge du dehors. Les Carnets du Paysage n° 26, 176–189

Nanot J, Deloncle C (1898) L'Ancien potager du roi. Histoire et description de l'École nationale d'horticulture de Versailles. Guide à l'usage des candidats, Librairie de la France agricole

Pluvinage M (2003) Pour une histoire sociale du jardinage. Les Carnets du Paysage n° 9–10, 139–149

Author Biography

Pauline Frileux is an ethnologist, an associate professor in Natural Sciences, a university lecturer at the Laboratoire de Recherches en Projet de Paysage (LAREP) and teaches at the École Nationale Supérieure de Paysage de Versailles. Her research deals with the relationship to the living element and ways of cohabiting with nature in the city and its suburbs.

Chapter 7
Community Gardens and Their Potential for Urban Biodiversity

Francesca Di Pietro, Lotfi Mehdi, Marion Brun and Céline Tanguay

Abstract The aim of this research was to explore the potentialities of community gardens—a specific type of urban garden—in terms of urban biodiversity and ecological continuity in the city. We considered the three main scales of organisation of urban ecosystems: local individual habitat, intermediate urban landscape and the larger scale encompassing the entire urban area. The study site within the urban agglomeration of Tours currently contains 29 clusters of community gardens, mainly situated in three central municipalities of the urban area; 12% of the community gardens have disappeared over the last ten years due to residential and industrial urban development. Analysis of land tenure and morphological characteristics of the gardens highlighted that alongside a gradient of very varied gardens, two groups of community gardens can be identified, one more precarious situated on building land, the other established on non-building land in floodable areas, and on road and railway easements. Indeed, at the agglomeration scale half of the community gardens are located in high flood hazard areas and about a third are situated less than 100 m from a railway line or main road network. A measure of the potential ecological continuity of the urban green corridor provided by community gardens compared to urban green spaces shows that the loss of ecological continuity in the event of urbanisation of community gardens would be considerable. Relegated by urban pressure to areas of non-building land, some community gardens could play the role of a discontinuous ecological corridor due to their location along linear axes within the city: water courses, main roads and railway lines. However, the gardening techniques practised there can limit their capacity to contribute to plant diversity in the city.

Keywords Community gardens · Urban wasteland · Urban biodiversity
Ecological continuity · Urban green infrastructure

F. Di Pietro (✉) · L. Mehdi · M. Brun · C. Tanguay
CITERES UMR 7324, University F. Rabelais, Tours, France
e-mail: dipietro@univ-tours.fr

L. Mehdi
UMR Live, Strasbourg, France

7.1 The Place of Community Gardens in Research on Nature in the City

Over recent years, the theme of nature in the city has aroused growing interest in the scientific community. This can be explained by two processes. On the one hand, urban nature as an affirmed subject of study is linked to the emergence of urban ecology. Arising from social sciences, particularly geography and urban planning, urban ecology emerged as a branch of ecology in the seventies, initiated by the work of Herbert Sukopp in Germany. As the paradigm "balance of nature" was declining, ecologists recognised that anthropogenic habitats were legitimate subjects of ecological study. Analysis of urban ecosystems thus flourished. The UNESCO development programme *Man and the Biosphere* (MAB) in 1974, and later the creation of two urban *Long-Term Ecological Research* (LTER) programmes by the *US National Science Foundation,* contributed to encouraging research on the ecological and social components of urban ecosystems throughout the world (McDonnell 2011).

On the other hand, the scale of urbanisation both in its spatial dimension—manifested by the increasing spread of urbanised areas—and its demographic dimension—demonstrated by the increasing proportion of the population living in cities—has contributed to focusing attention on urban ecosystems. In 2012 in France, urban areas covered 21.8% of the national territory, having increased by around 20% over 10 years (Laugier 2012). The spatial dimension of urbanisation has resulted in a barrier effect formed by expanding urban areas which thus restrict the movement of species at a regional level: with growing urbanisation, the important role of cities in conserving biodiversity has been recognised (Kowarik 2011). Moreover, over half the world's population, which has increased by 30% over the last 50 years, lives in cities, representing 80% of the population of most European countries and the USA, and 77.5% of the French population (Antrop 2004; Pickett et al. 2011). The demographic dimension of urbanisation results in natural spaces in the city being subjected to growing social pressures and expectations, which can be contradictory. The urban population density means that these spaces support multiple ecosystem services (Weber and Mehdi 2012), including recreational and environmental education roles, which constitute challenges in terms of environmental justice (Cohen et al. 2012).

Natural spaces in the city thus support a commonplace biodiversity whose ecological and social value is recognised in particular for recreational and educational functions. Today, these spaces are considered as a whole, and their mutual spatial relationships as an ecological network, the urban green infrastructure, with multiple functions (Mehdi et al. 2012).

Among the natural spaces in the city, private gardens concern a large part of the French population: according to a survey on the gardening industry, in 2011 almost 90% of the population had a garden space linked to their first home including a patio, balcony or window-sill and 70% gardened (Promojardin 2012). Overall, the

space take up by private gardens is significant (Smith et al. 2005; Loram et al. 2007, 2008); 15 years ago in France, of the 1.6 million hectares occupied by individual housing 30% was covered by lawns, 14% by vegetable gardens and 12% by ornamental gardens (Girardin 2002). However, private gardens are also characterised by a strong spatial fragmentation (Gaston et al. 2005; Mathieu et al. 2007). Moreover, several studies developed particularly in Great Britain have shown the value of private gardens in urban biodiversity (Thompson et al. 2003; Gaston et al. 2007; Davies et al. 2009) and this despite the presence of invasive species of horticultural interest (Smith et al. 2006; Goddard et al. 2009). Coordinated management at a larger scale than that of the individual garden is thus necessary to orient management practices and internal organisation of these private areas towards protection of biodiversity (Nassauer et al. 2009; Goddard et al. 2010).

Within this context, community gardens represent more extensive areas which can constitute real ecological units in an urban environment, and they can also be organised in collective structures more sensitive to public action. Originally linked to industrial paternalism and culturalist urban planning, and thus representing a buffer for conflicts of the industrial city (Werquin and Demangeon 1997), community gardens have successively varied since the beginning of the twentieth century and in recent years have experienced a revival in several countries. Their existence is related to popular gardening practices which have developed since the beginning of the nineteenth century, linked to sociological changes in gardeners (Frauenfelder et al. 2014) and urban mutations (Tozzi and D'Andrea 2014). These developments are visible in the form and designation of these gardens in French: *jardin ouvrier* to *jardin familial* and then to *jardin collectif* (also called *jardin associatif* or *communautaire*) or *jardin partagé* (Dubost 2007). This change in language has also been observed in English, in which the term *community garden* (*public access community garden* or *gated community garden*) has succeeded *allotment garden* (Bendt et al. 2013).

In 2003, in a bill of the French Senate, *jardins familiaux* were defined as "land divided into plots, which are allotted to individuals for gardening purposes for their own needs and those of their family, with the exception of any commercial use" (bill passed by the Senate in 2007). In the present paper, we will use the general designation "community garden".

As indicated by a literature review of community gardens (Guitart et al. 2012), these spaces are the focus of research rooted in social sciences. Many studies have analysed the interactions between the different categories of gardeners (Bouvier-Daclon and Sénécal 2001; Guyon 2008; Agustina and Beilin 2012; Ghose and Pettygrove 2014; Chan et al. 2015; Passidomo 2016). Other work has studied the relationships between the gardeners and local authorities (Baudry 2011; Baudry et al. 2014; D'Andrea and Tozzi 2014; Tozzi and D'Andrea 2014) and have investigated competition between community gardens and other uses of urban space (Foo et al. 2014; Frauenfelder et al. 2014). From a public health perspective, several studies have measured the effect of community gardens on diet (Alaimo et al. 2008; Corrigan 2011; Lardon and Loudiyi 2013; Wang et al. 2014), household economics

(Algert et al. 2014) and gardeners' physical and psychological health (Armstrong 2000; Okvat and Zautra 2011). The ecological and landscape features of community gardens remain relatively unknown (Consalès 2003), although work has recently grown on the role of community gardens in urban biodiversity (Joimel et al. 2013; Paris et al. 2013; Consalès et al. 2016).

The present study aimed to investigate the potentialities of community gardens in urban biodiversity and ecological continuity in cities: to what extent do community gardens represent elements of an urban ecological network? We addressed this question from the three main perspectives of urban ecosystem organisation (Clergeau et al. 2006): the local scale of individual habitat (here a cluster of community gardens), the intermediate scale, characterised by a different structure of land cover between the centre and the outskirts of the urban area, and the larger scale encompassing the entire urban area (morphological agglomeration). Firstly, we investigated the diversity of urban gardens at these different scales, and then we measured their potential role in the ecological continuity of the city.

7.2 Methodology

7.2.1 The Study Site: The Agglomeration of Tours

In contrast to the majority of research on urban nature, focused on large agglomerations and sites with high population density, the work presented here focuses on an urban area of medium size and population density but characterized by strong urban expansion: it is in fact in medium-sized cities that urban sprawl, understood as the conjunction of demographic growth and urban spread, is the most marked (Santamaria 2000; Brun 2015). The agglomeration of Tours (until 2010 consisting of 14 municipalities) is situated in the middle valley of the Loire, south of the Parisian Basin in the Centre-Val-de-Loire region, and it is characterized by the presence of two river corridors, the Loire and the Cher.

7.2.2 An Operational Definition of a Community Garden

From field experience, we clarified the definition of a community garden mentioned above. We have defined community gardens as areas divided into plots allotted to individuals to practise gardening for non-commercial use and organised collectively in a management or landowner structure. This completes the definition in the French Rural Code and is necessary to rule out some groups of private gardens spatially combined and morphologically similar to community gardens, but which are not organised collectively and can thus be assimilated to any other private garden. Despite their interest, this led us to rule out informal community gardens set

up on land belonging to private individuals or public authorities, located within dyke-protected areas in otherwise floodable zones close to the Loire (Beucher and Rode 2009).

We regularly observed that several management structures of community gardens were located in the same place and the spatial boundaries of each structure were vague or unknown, which prevented each community garden being precisely located; for this reason we worked at the scale of *clusters of community gardens*, each cluster consisting of adjoining plots managed within the framework of one or several collective structures. These clusters are nevertheless called community gardens in the rest of the present work.

An exhaustive inventory of community gardens in the municipalities of the agglomeration of Tours was conducted in the summer of 2005, based on information from municipalities and analysis of aerial photographs, followed by verification in the field (Deperrois et al. 2005). This inventory and the precise localisation of the community gardens were updated in 2015 using cartographic data and verifications from the field.

7.2.3 Diversity Criteria for the Gardens Studied

The community gardens studied were described at local (the community garden itself), landscape and agglomeration scales (Table 7.1); these data were combined in a geographic information system (GIS; using ArcGis software).

Table 7.1 Data collected on the community gardens

Scale	Variable		
Agglomeration	Number of community gardens situated in flood hazard areas (five hazard levels)		
	Number of community gardens situated close to main road and rail networks (in the buffer zones within three radii: 100, 200 and 500 m)		
Landscape	Percentage of area in each of the six classes of land cover (in the buffer zones within three radii: 100, 200 and 500 m)		
	Distance from the centre of the agglomeration (m)		
Garden (local features)	Land tenure characteristics	Regulatory	Zone of municipal urban planning scheme (three zones)
			Flood hazard area (five classes)
		Legal	Landowner (four types)
			Management structure (two types)
		Physical	Surface area (m^2) (two classes)
			Number of plots (three classes)
	Morphological features		Fences (three classes)
			Upkeep (four classes)

At the scale of the community garden, we measured the diversity of the gardens in terms of land tenure and morphological features identified through analysing urban planning documents, a survey of community garden managers and field observations.

The *land tenure* characteristics collected involved three aspects: regulatory, legal and material physical. Regarding regulatory matters, we considered the future use of the garden within the framework of two planning documents (the most recent versions available): municipal planning documents (*Plan d'Occupation des Sols, POS, ou Plans Locaux d'Urbanisme, PLU*), which indicate the medium term purpose of the community gardens (urbanised, to be urbanised, non-building land) and the inter-municipal flood risk prevention plan (PPRI) which classes the area into five flood risk levels (from 0: no hazard to 4: very high hazard). Regarding legal characteristics, the type of landowner (classed into four categories: local authority, association, private individual or mixed) and the type of management (divided into two categories: local authority or association) were taken into account. Regarding physical characteristics, we considered the surface area of the garden (in terms of two classes) and the number of plots (three classes).

The morphological features observed were in terms of the internal spatial organisation of the gardens; two parameters were recorded: the presence and type of fencing between plots (no fence, variable or wire fencing) and the degree of upkeep estimated visually and qualitatively on a scale of 2–5 (from 2: poor upkeep to 5: intense upkeep) (Fig. 7.1).

Fig. 7.1 A well-kept wire-fenced community garden

At the urban landscape scale, considered here as the space surrounding the community garden, we used one of the main descriptors of landscape, i.e. land cover. Six types of land cover were considered based on a land-cover map from several public sources and available in France: urbanised space (built, road and rail networks), semi-natural space (particularly wooded), hydrography (source: *Institut Géographique National*: BD Topo, BD Ortho), agricultural space (source: *Référentiel Parcellaire Graphique,* 2012), green public space (source: *Agence d'Urbanisme de l'Agglomération* of Tours, based on spatial data of green spaces in the centre of the agglomeration, updated in 2013) and interstitial space (wasteland and private gardens not included in the other types of land cover).

The land cover of the area surrounding each community garden was characterised by considering buffer zones of three radii from the centre of the garden generally used to estimate the diversity of urban land cover: 100, 200 and 500 m (Kong et al. 2005; Kong and Nakagoshi 2006; Muratet et al. 2008; Vallet 2009; Brun 2015). The percentage of each type of land cover in the three neighbouring buffer zones was calculated for each community garden (composition of adjacent land cover; Fig. 7.2).

In order to estimate the position of the garden in the urban gradient, we also measured its distance from the geographical centre of the agglomeration (Place Jean Jaurès, Tours; Lussault 1993); this distance varied between 1400 and 6700 m (median of 3013 m).
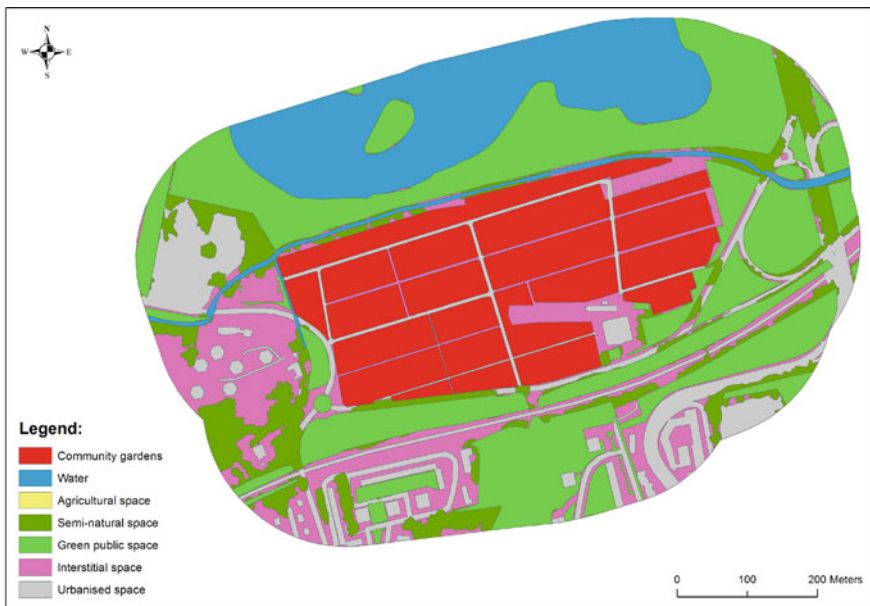

Fig. 7.2 Example of how the composition of land cover adjacent to a community garden was calculated

At the agglomeration scale, it involved estimating the type of space occupied by community gardens in terms of the constraints the space imposes on urbanisation. Two types of constraints were considered here: flood risk and the proximity of major linear transport infrastructures, such as a main road network (motorways and expressways) and railway lines. We thus calculated how many community gardens were located in the different floodable zones and how many were situated close to linear transport infrastructures (at a distance of 100, 200 or 500 m from a main road network or railway line).

With a view to investigating the local diversity of gardens and its relationship with the urban landscape, these variables underwent three multivariate statistical analyses: multiple correspondence analysis (MCA) of local data, classification of gardens through k-means clustering on their F1-F2 coordinates (MCA) and canonical correspondence analysis enabling the contribution of landscape variables to local diversity of gardens to be measured. As most variables did not follow a normal distribution, correlation between two quantitative variables or links between two qualitative variables were checked using nonparametric tests (Spearman correlation and Fisher's exact test).

7.2.4   Modelling Ecological Continuity

The potential contribution of community gardens to ecological continuity in the city was estimated in an exploratory way using the landscape graph method (Foltête and Giraudoux 2012). This method enables an eco-landscape distance to be calculated between landscape elements defined as habitat. This distance is called the *lowest cost distance* because it is estimated from the constraint that different types of land cover impose on the dispersal of a hypothetical species range; this constraint, called the *cost of dispersal,* is attributed to each land-cover class. In the light of the methods used in planning urban green structures, we considered the substructure of forest habitats, indicated by semi-natural spaces, as main habitats (Hubert-Moy et al. 2012). An expert-based dispersal cost is designated for a large range of species associated with woody species and varies between a very low level (1% for the habitat considered, here semi-natural spaces) and a maximal level (100% for the least favourable land cover for dispersal, here urbanised spaces). Combining the least-cost distances between habitats outlines an ecological network measured by a cumulative dispersal cost, which is the total distance estimating the potential movement of species in the network, determined from the dispersal costs of the different classes of land cover. In order to obtain an element of comparison, an analogous method was used for public green spaces. Table 7.2 shows the dispersal costs attributed to the six main types of land cover defined here in the optimal scenario (community gardens are as permeable to species as semi-natural spaces). The movement calculated in this scenario was compared to that calculated in the scenario of urbanisation of community gardens, consistent with changes in a part of the community gardens (Calenge 2007; Di Pietro 2007) and supported by this same

Table 7.2 Dispersal cost (DC) attributed to the main types of land cover identified in the urban landscape in several scenarios: optimal community garden (S1), minimal community garden (S2), optimal public green space (S3) and minimal public green space (S4)

Land cover	DCs. optimal CG (S1)	DCs. minimal CG (S2)	DCs. optimal PGS (S3)	DCs. minimal PGS (S4)
Urbanised space	100	100	100	100
Agricultural space	50	50	50	50
Water	40	40	40	40
Interstitial space	30	30	30	30
Public green space	20	20	1	100
Community gardens	1	100	20	20
Semi-natural space (habitat)	1	1	1	1

study (see here below). The rate of variation of the total distance between the two scenarios (graphs) was used here to estimate the potential contribution of community gardens to the ecological continuity of the city. Graphab software was used.

7.3 Community Gardens, Conditional Elements of Urban Green Infrastructure

7.3.1 Changes in Community Gardens Over Ten Years (2005–2015)

In 2005, 34 clusters of community gardens were inventoried, located in seven of the fourteen municipalities of the agglomeration and with half of them (17 gardens) administered by several management organisations. In 2015, 29 of the 34 community gardens still existed, six gardens having disappeared due to residential (four gardens) or industrial (two gardens) urbanisation, the latter linked in particular to railway easements; a garden in the planning stage in 2005 has since been created. Thus almost 12% of the community gardens surveyed in 2005 disappeared over ten years due to urbanisation. Consequently, in 2015, 29 community garden clusters existed, located in five of the seven municipalities which had community gardens in 2005. Most of these gardens are located in three central municipalities of the agglomeration (Fig. 7.3).
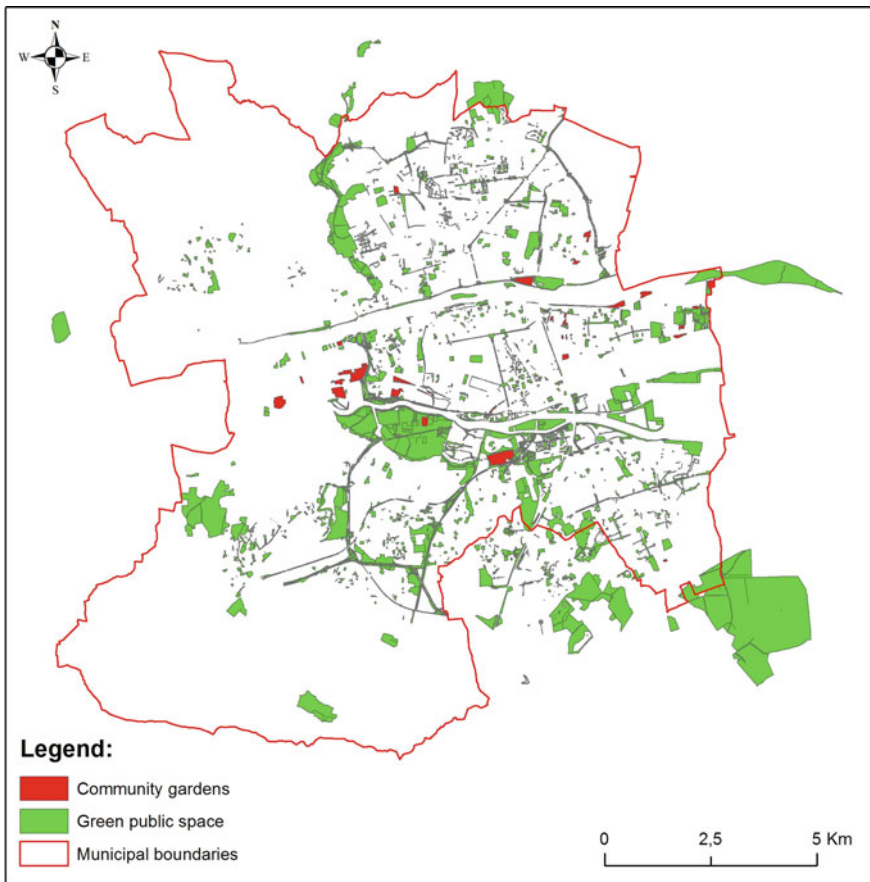
Fig. 7.3 Localisation of community gardens of the agglomeration of Tours in 2015

7.3.2   Local Diversity of Community Gardens

The local, land tenure and morphological characteristics of the 29 community gardens are presented in the box below.

Box 1. Land tenure and morphological characteristics of the 29 community gardens studied.

Regarding **land tenure characteristics**, community gardens are located in three areas of the municipal planning document: N (non-building land), U (urbanised) and FU (for future urbanisation). The N areas, which cover more than half of the gardens (16/29), are mainly linked to risk (14 gardens, of which four are located in a floodable area specifically intended for community gardens) and are close to transport infrastructures (two gardens). Other

gardens (eight) are located in U areas, residential areas (in the heart of a block: three gardens) or in activity and facility or combined areas. Finally, a few gardens (five) in zones to be urbanised in the short term are located in a peri-urban municipality committed to densifying its centre. Half of the community gardens (14/29) are situated in areas of high flood hazard (three gardens being in a very high flood hazard area); only five gardens are located outside flood hazard zones.

The majority of community gardens are managed by gardening associations (25/29); ownership includes local authorities—mainly municipalities—for almost half (12/29), some private individuals (five gardens), associations (four gardens), companies (two gardens) or several types of owners (six gardens).

With the exception of four extensive gardens (larger than six hectares) located in a floodable area, the size of most of the community gardens is limited (961 m^2—13.8 ha, median 7900 m^2); they consist of a very variable number of plots (6-511 plots, median of 32 plots; three gardens have more than 300 plots and three others have between 100 and 300 plots). The plot dimensions vary between 27 and 690 m^2 (median 300 m^2).

Regarding the internal morphology of the gardens, most of them (19/29) have plots surrounded by wire fencing, indicating fear of theft, frequently expressed by gardeners; only three gardens of a small surface area and including a small number of plots (between 6 and 32) have no internal fences. The upkeep of the gardens varies, and most of them (21/29) show an intermediate range of levels of upkeep between intensive (5/29) and abandoned (2/29).

An exploratory analysis of the diversity of community gardens (MCA, 57% of inertia on the two main axes) shows that the variables which contribute the most to local diversity are the garden size, the regulatory zoning (flood hazard area and municipal planning zoning) and the type of ownership and management. The main gradient of community garden diversity (axis 1 of the MCA: 44% of inertia) highlights extensive and intensively maintained gardens, located in low flood hazard areas. The secondary gradient (axis 2: 13% inertia) opposes gardens managed by local authorities and situated in areas to be urbanised, against those belonging to associations, and situated in urbanised areas (Fig. 7.4).

The type of management, but not the type of ownership, is in fact correlated with the urban planning zoning, gardens managed by local authorities being linked to an allocation of gardens in an area to be urbanised in the urban planning scheme, and those managed by an association being in the majority allocated on non-building land. There is no correlation between the type of owner and manager of community gardens. The size of the gardens (surface area and number of plots, two correlated variables) and the hazard area is negatively correlated: the stronger the hazard, the smaller the garden. Flood hazard is also negatively correlated with the type of fencing: as the hazard level increases, fewer gardens are fenced.
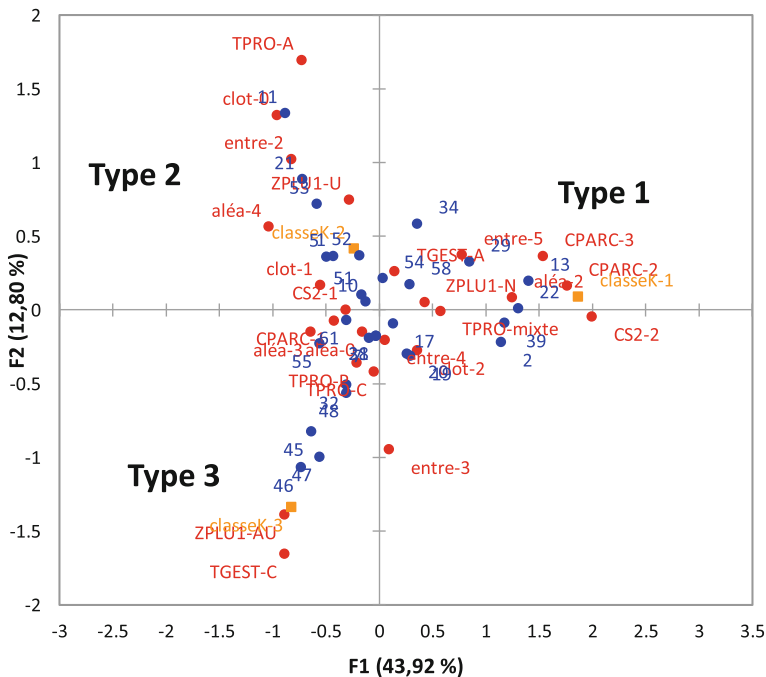
Fig. 7.4 Three types of community gardens (first factorial plan of the multiple correspondence analysis of local variables; digits indicate the community gardens, characters indicate the variables)

Three types of community gardens have been identified (classified using k-means clustering): type 1: large clusters of community gardens consisting of several hundred fenced and well-maintained plots (5 gardens); type 2: relatively small gardens with very varied morphological (upkeep and fences) and land tenure (ownership and hazard) characteristics (18 gardens); type 3: gardens managed by local authorities (while most gardens are managed by associations) and situated in areas to be urbanised, with high flood hazard (6 gardens). Thus, alongside a gradient of very varied community gardens, two opposing groups are highlighted by the analyses: well-established gardens (large and well-maintained) and gardens which are most likely to be urbanised in the medium term, located in areas to be urbanised in the urban planning scheme and managed directly by the local authorities without the intermediary of an association.

7.3.3 Link Between the Local Biodiversity of Community Gardens and the Urban Landscape

The characterisation of the diversity of land cover around the community gardens shows that for all the radii tested (100, 200 and 500 m around the garden) interstitial

and urbanised spaces are the most common land covers surrounding the gardens. The former are inversely proportional to agricultural and aquatic spaces; urbanised space is negatively correlated with semi-natural space; the proportion of agricultural space is positively correlated with semi-natural spaces and negatively correlated with public green spaces. The question is whether land cover next to community gardens conveys the urban gradient, and whether it is correlated with the distance to the centre of the agglomeration. For the three radii tested, this is confirmed only for the portion of agricultural and interstitial spaces, which are correlated with the distance to the centre of the city (the latter also being correlated with the degree of flood hazard).

What is the relationship between land cover and local diversity of community gardens presented above? The canonical correspondence analyses conducted on each of the three radii show that the gardens managed by local authorities and located in areas to be urbanised and of high flood hazard (type 3) are associated with a high proportion of interstitial space (wasteland, private gardens) in a small (100 and 200 m) or large (500 m) radius around the garden. Overall, land cover next to the gardens contributes to about a third of their land tenure and morphological diversity (24% for the 100 m radius and 30% for the 200 m radius) and the largest radius (500 m) explaining the greatest proportion of diversity (35% of the inertia). It is particularly the interstitial spaces (wasteland or private gardens) which contribute to the local diversity of gardens (at all the tested distances) and also the urbanised spaces (at 100 and 500 m).

7.3.4 Localisation of Community Gardens in Relation to Fluvial and Infrastructure Constraints of the Agglomeration

Observing the localisation of community gardens in terms of the constraints that space imposes on urbanisation, floodable areas and linear transport infrastructures show that half of the community gardens(14/29) are located in areas of high flood hazard (of which three are in very high risk areas); only five gardens are located in areas with no flood hazard. Furthermore, 31% of the community gardens are close to a railway line (within 100 m) and 21% to a main road network. These values rise to 62% of the community gardens close to a railway line and 69% of the community gardens close to a main road network when considering the 500 m distance (Fig. 7.5). This suggests that the localisation of community gardens in the urban area is widely but not totally linked to non-building criteria of the land.

7.3.5 Contribution of Community Gardens to Ecological Continuity

The potential ecological continuity was calculated in an optimal scenario (community gardens considered as a habitat in the same way as semi-natural spaces)
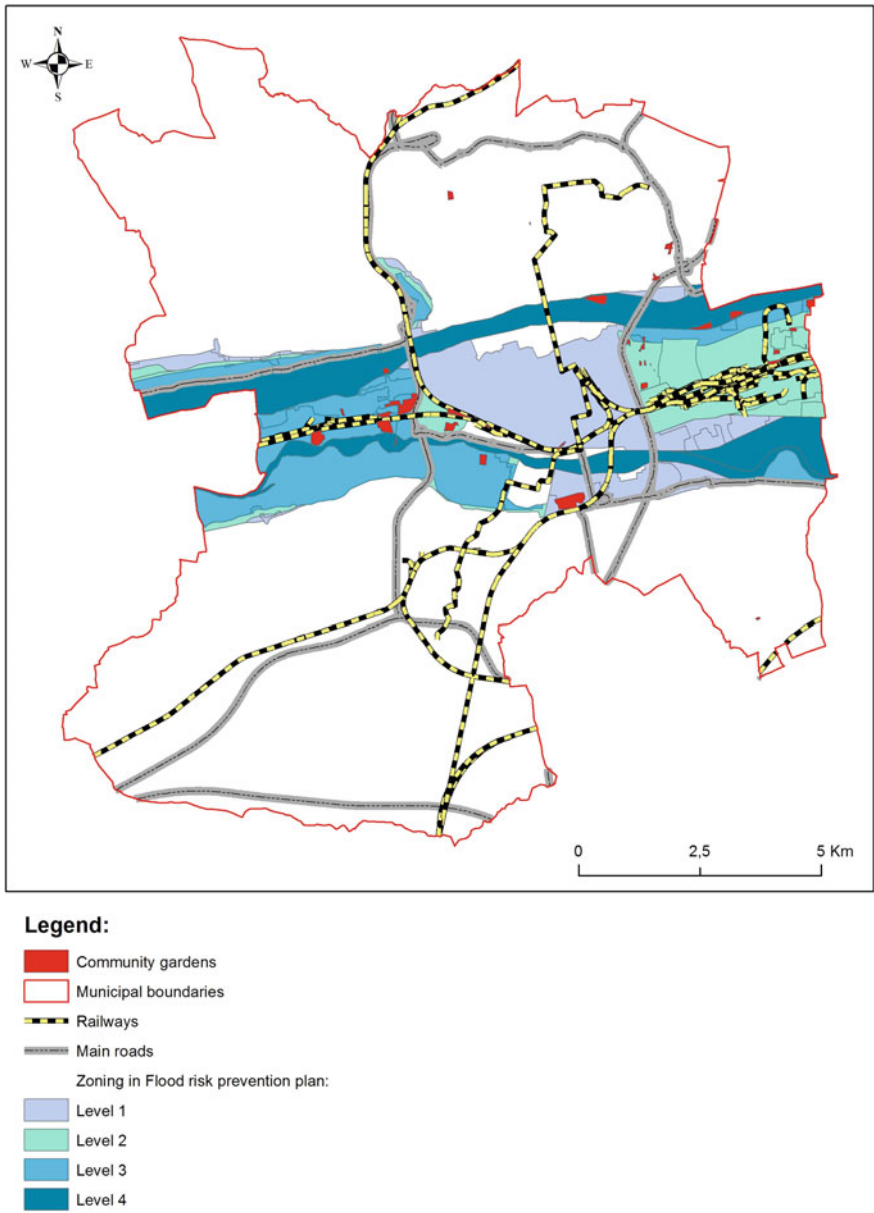
Fig. 7.5 Localisation of community gardens in relation to floodable areas, motorways and railway lines of the agglomeration of Tours

Table 7.3 Elements estimating the potential ecological continuity of community gardens compared to public green spaces

Type of urban green space	Surface area (%)	Loss of optimal ecological continuity in the case of urbanisation (%)
Public green spaces	96.38	74.11
Community gardens	3.62	6.36
Total	100	100

and in the minimal scenario (urbanisation and thus disappearance of community gardens). The loss of ecological continuity in the case of urbanisation of community gardens was 6.36% of optimal continuity; an analogous calculation applied to public green spaces (scenario of urbanisation of public green spaces) resulted in a loss of ecological continuity of 74.11%. Community gardens represent, however, small surface areas: 3.62% of green spaces (public green spaces and community gardens) on our site (Table 7.3).

7.4 Discussion and Conclusion

Compared to other types of urban public green spaces, such as parks and gardens, considering their small surface area, community gardens have considerable potentiality for the urban green infrastructure, as demonstrated by the measure of potential ecological continuity provided by community gardens at the agglomeration scale: the loss of ecological continuity if community gardens were urbanised is proportionally greater than their surface area.

Community gardens are a type of space which is more unstable than public green spaces, although less precarious than urban wastelands intended for rapid urbanisation (Kattwinkel et al. 2011). In fact, we have shown that over ten years almost 12% of community gardens have disappeared as a result of residential or industrial urbanisation (and more particularly railway development on our site), in particular in municipalities having few community gardens: over ten years, community gardens have become concentrated in the central municipalities of the agglomeration.

From the large range of situations studied, current community gardens include both stable large, well-maintained gardens and gardens located in areas to be developed, managed directly by local authorities and probably intended for urbanisation in the medium term. Indeed, the garden size and regulatory zoning (flood hazard area and municipal planning zoning) are the main variables contributing to the diversity of community gardens. This suggests that the localisation of community gardens in the urban area is widely but not totally linked to the non-building criteria of the land.

The most unstable gardens are linked to a high proportion of interstitial space (wasteland and private gardens) around the garden, at all the radii tested. Since this type of land cover is correlated with the distance to the centre of the agglomeration,

it is thus the most outlying community gardens which are threatened with disappearance due to urbanisation. These clusters of community gardens, located on building land, can play a role as a land reserve for the local authorities, for whom the community garden represents a means to enhance urban wastelands pending clarification of urbanisation projects; in this case, community gardens are temporary or even precarious spaces.

Furthermore, we have highlighted the localisation of another part of community gardens in floodable areas on non-building land and close to transport infrastructures: half of the community gardens are located in high flood hazard areas and around a third are located less than 100 m from a railway line or a main road network. These aspects support the stability of these gardens, while also being a major element to appraise their potentiality for the urban green infrastructure: marginalizing these community gardens in the urban space, although probably disadvantageous for some residents, could also constitute an advantage for ecological continuity in the city. Relegated by urban pressure to areas where building is not possible (Joimel et al. 2013; Ernwein and Cavin 2014), rejected to floodable zones or road and railway easements (Paris et al. 2013), a portion of community gardens can play a role as a discontinuous ecological corridor due to their position along linear axes in the city: water courses, expressways and railway lines (Fig. 7.6).

Although their position in the city can reinforce the ecological corridor role of certain community garden clusters, tested here for a range of hypothetical species of

Fig. 7.6 A community garden alongside an expressway

forest environments, the gardening practices used on them can limit their capacity to contribute to species dispersal in the city (Cameron et al. 2012). Indeed, in line with some recent research projects on soils of community gardens in several European countries (Hursthouse and Leitão 2015; Voigt and Leitão 2015) and in France (Grenet et al. 2016), findings have highlighted the role of past and current use on the soil characteristics of community gardens: levels of heavy metals (Schwartz et al. 2012; Bechet et al. 2016) and nutrients (Schwartz et al. 2012).

Yet we know that the whole range of horticultural practices are found in community gardens, from the most intensive and pesticide intensive, to the most organic (Guyon 2008), as in individual gardens. Gardening practices in community gardens and their links with the socio-demographic features of gardeners and the diversity of urban plant communities are the subject of an ongoing research project supported by the French Ministry of the Environment (Programme Ecophyto).

The value of community gardens in strengthening urban biodiversity depends, on the one hand, on their durability, linked to their localisation on building land and to local authority projects and, on the other hand, on the horticultural practices applied on these areas by the gardeners. To conclude, we suggest that the potentialities of community gardens for urban biodiversity should be appreciated with regard to these two conditions: habitat durability on one hand and horticultural practices implemented on the other hand.

References

Agustina I, Beilin R (2012) Community gardens: space for interactions and adaptations. Procedia Soc Behav Sci 36:439–448. https://doi.org/10.1016/j.sbspro.2012.03.048

Alaimo K, Packnett E, Miles RA, Kruger DJ (2008) Fruit and vegetable intake among urban community gardeners. J Nutr Educ Behav 40:94–101. https://doi.org/10.1016/j.jneb.2006.12.003

Algert SJ, Baameur A, Renvall MJ (2014) Vegetable output and cost savings of community gardens in San Jose, California. J Acad Nutr Diet 114:1072–1076. https://doi.org/10.1016/j.jand.2014.02.030

Antrop M (2004) Landscape change and the urbanization process in Europe. Landsc Urban Plan 67:9–26. https://doi.org/10.1016/s0169-2046(03)00026-4

Armstrong D (2000) A survey of community gardens in upstate New York: implications for health promotion and community development. Health Place 6:319–327. https://doi.org/10.1016/s1353-8292(00)00013-7

Baudry S (2011) Les community gardens de New York City: de la désobéissance civile au développement durable. Rev Fr Etud Am 3:73–86

Baudry S, Scapino J, Aubry C et al (2014) L'espace public à l'épreuve des jardins collectifs à New York et Paris. Géocarrefour 89:41–51

Bechet B, Joimel S, Jean-Soro L et al (2016) Spatial variability of trace elements in allotment gardens of four European cities: assessments at city, garden, and plot scale. J Soils Sediments. https://doi.org/10.1007/s11368-016-1515-1

Bendt P, Barthel S, Colding J (2013) Civic greening and environmental learning in public-access community gardens in Berlin. Landsc Urban Plan 109:18–30. https://doi.org/10.1016/j.landurbplan.2012.10.003

Beucher S, Rode S (2009) L'aménagement des territoires face au risque d'inondation: regards croisés sur la Loire moyenne. Mappemonde 94:1–19

Bouvier-Daclon N, Sénécal G (2001) Les jardins communautaires de Montréal: un espace social ambigu. Loisir Soc 24:507–529

Brun M (2015) Biodiversité végétale et délaissés dans l'aménagement urbain. Contribution potentielle des délaissés urbains aux continuités écologiques. Université François Rabelais, Thèse de Doctorat en Aménagement de l'espace et urbanisme, 432 p + Annexes

Calenge C (2007) Les jardins familiaux de l'agglomération tourangelle: un environnement ambigu. In: Serrano J, Larrue C (eds) Les espaces périphériques urbains et le développement durable: analyse à partir du cas de l'agglomération tourangelle. UMR CITERES, Tours (France), pp 166–182

Cameron RWF, Blanuša T, Taylor JE et al (2012) The domestic garden—its contribution to urban green infrastructure. Urban For Urban Green 11:129–137. https://doi.org/10.1016/j.ufug.2012.01.002

Chan J, DuBois B, Tidball KG (2015) Refuges of local resilience: community gardens in post-Sandy New York City. Urban For Urban Green 14:625–635. https://doi.org/10.1016/j.ufug.2015.06.005

Clergeau P, Jokimäki J, Snep R (2006) Using hierarchical levels for urban ecology. Trends Ecol Evo 21:659–662. https://doi.org/10.1016/j.tree.2006.09.001

Cohen M, Baudoin R, Palibrk M et al (2012) Urban biodiversity and social inequalities in built-up cities: new evidences, next questions. The example of Paris, France. Landsc Urban Plan 106:277–287. https://doi.org/10.1016/j.landurbplan.2012.03.007

Consalès JN (2003) Les jardins familiaux de Marseille, Gênes et Barcelone. Entre enjeux potentiels et fonctions réelles de l'agriculture urbaine. Rives méditerranéennes 15:2–10

Consalès JN, Joimel S, Cordier F (2016) De l'argument à l'action: la biodiversité au service des jardins familiaux. Projets de paysage

Corrigan MP (2011) Growing what you eat: developing community gardens in Baltimore, Maryland. Appl Geogr 31:1232–1241. https://doi.org/10.1016/j.apgeog.2011.01.017

D'Andrea N, Tozzi P (2014) Jardins collectifs et écoquartiers bordelais: de l'espace cultivé à un habiter durable? Norois 231:61–74

Davies ZG, Fuller RA, Loram A et al (2009) A national scale inventory of resource provision for biodiversity within domestic gardens. Biol Conserv 142:761–771. https://doi.org/10.1016/j.biocon.2008.12.016

Deperrois M, Galloyer A, Josse A-C et al (2005) Les jardins familiaux de l'agglomération tourangelle. Recensement et analyse. Université François Rabelais, Magistère Aménagement, Tours, p 47

Di Pietro F (2007) Etat des lieux des jardins familiaux dans l'agglomération tourangelle: vers une délocalisation face à la pression urbaine. In: Serrano J, Larrue C (eds) Les espaces périphériques urbains et le développement durable: analyse à partir du cas de l'agglomération tourangelle. UMR CITERES, Tours (France), pp 154–165

Dubost F (2007) Du jardin ouvrier au jardin partagé: un rôle social et environnemental. Institut National du Patrimoine, La bibliothèque numérique de l'INP, n°4

Ernwein M, Cavin, S (2014) Au-delà de l'agrarisation de la ville: l'agriculture peut-elle être un outil d'aménagement urbain ? Discussion à partir de l'exemple genevois, Géocarrefour 89: 31–40

Foltête J-C, Giraudoux P (2012) A graph-based approach to investigating the influence of the landscape on population spread processes. Ecol Indic 18:684–692. https://doi.org/10.1016/j.ecolind.2012.01.011

Foo K, Martin D, Wool C, Polsky C (2014) The production of urban vacant land: relational placemaking in Boston, MA neighborhoods. Cities 40:175–182. https://doi.org/10.1016/j.cities.2013.12.006

Frauenfelder A, Delay C, Scalambrin L (2014) Potagers urbains vs jardins familiaux? Réforme urbaine et controverses autour du beau jardin et son usage légitime. Espac sociétés 3:67–81. https://doi.org/10.3917/esp.158.0067

Gaston KJ, Fuller R, Loram A et al (2007) Urban domestic gardens (XI): variation in urban wildlife gardening in the United Kingdom. Biodivers Conserv 16:3227–3238. https://doi.org/10.1007/s10531-007-9174-6

Gaston KJ, Warren PH, Thompson K, Smith RM (2005) Urban domestic gardens (iv): the extent of the resource and its associated features. Biodivers Conserv 14:3327–3349. https://doi.org/10.1007/s10531-004-9513-9

Ghose R, Pettygrove M (2014) Actors and networks in urban community garden development. Geoforum 53:93–103. https://doi.org/10.1016/j.geoforum.2014.02.009

Girardin P (2002) Jardins familiaux, jardins privés… Quand le mieux est l'ennemi du bien. Courr l'environnement l'INRA 23:17–22

Goddard MA, Dougill AJ, Benton TG (2009) Scaling up from gardens: biodiversity conservation in urban environments. Trends Ecol Evol 25:90–98. http://doi.org/10.1016/j.tree.2009.07.016

Goddard MA, Benton TG, Dougill AJ (2010) Beyond the garden fence: landscape ecology of cities. Trends Ecol Evol 25:90–98. http://doi.org/10.1016/j.tree.2009.07.016

Grenet M, Rémy E, Canavèse M, Berthier N (2016) Des jardiniers à l'épreuve du sol urbain. L'exemple de jardins collectifs en France. Projets de paysage

Guitart D, Pickering C, Byrne J (2012) Past results and future directions in urban community gardens research. Urban For Urban Green 11:364–373. https://doi.org/10.1016/j.ufug.2012.06.007

Guyon F (2008) Les jardins familiaux aujourd'hui: des espaces socialement modulés. Espac sociétés 134:131–147. https://doi.org/10.3917/esp.134.0131

Hubert-Moy L, Nabucet J, Vannier C, Lefebvre A (2012) Cartographie des continuités écologiques: quelles données pour quelles échelles territoriales? Application à la sous-trame forestière. Rev Int Géomatique 22:619–640. https://doi.org/10.3166/rig.22.619-640

Hursthouse AS, Leitão TE (2015) Environmental pressures on and the status of urban allotments. In: Bell S, Fox-Kämper R (eds) Urban allotment gardens in Europe. Routledge, UK, pp 147–169

Joimel S, Chenot É-D, Cortet J et al (2013) Jardins potagers collectifs: quelle intégration urbaine pour quels services rendus ? In: Bradel V (ed) Urbanités et biodiversité. Presses Universitaires de St.Etienne, Paris, pp 158–170

Kattwinkel M, Biedermann R, Kleyer M (2011) Temporary conservation for urban biodiversity. Biol Conserv 144:2335–2343. https://doi.org/10.1016/j.biocon.2011.06.012

Kong F, Nakagoshi N (2006) Spatial-temporal gradient analysis of urban green spaces in Jinan, China. Landsc Urban Plan 78:147–164. https://doi.org/10.1016/j.landurbplan.2005.07.006

Kong F, Nobukazu N, Yin H, Akira K (2005) Spatial gradient analysis of urban green spaces combined with landscape metrics in Jinan City of China. Chinese Geogr Sci 15:254–261. https://doi.org/10.1007/s11769-005-0038-2

Kowarik I (2011) Novel urban ecosystems, biodiversity, and conservation. Environ Pollut 159:1974–1983. https://doi.org/10.1016/j.envpol.2011.02.022

Lardon S, Loudiyi S (2013) Agriculture urbaine et alimentation: entre politiques publiques et initiative locales. Géocarrefour 3:2–10

Laugier R (2012) L'étalement urbain en France. Synthèse documentaire. MEDD, CRDALN

Loram A, Tratalos J, Warren PH, Gaston KJ (2007) Urban domestic gardens (X): the extent & structure of the resource in five major cities. Landsc Ecol 22:601–615. https://doi.org/10.1007/s10980-006-9051-9

Loram A, Warren PH, Gaston KJ (2008) Urban domestic gardens (XIV): the characteristics of gardens in five cities. Environ Manage 42:361–376. https://doi.org/10.1007/s00267-008-9097-3

Lussault M (1993) Tours: Images de la ville et politique urbaine. Presses de l'Université F. Rabelais, Collection sciences de la ville

Mathieu R, Freeman C, Aryal J (2007) Mapping private gardens in urban areas using object-oriented techniques and very high-resolution satellite imagery. Landsc Urban Plan 81:179–192. https://doi.org/10.1016/j.landurbplan.2006.11.009

McDonnell MJ (2011) The history of urban ecology: an ecologist's perspective. In: Niemelä J, Breuste JH, Elmqvist T, et al. (ed) Urban ecology: patterns, processes, and applications, ox

Mehdi L, Weber C, Di Pietro F, Selmi W (2012) Évolution de la place du végétal dans la ville, de l'espace vert à la trame verte

Muratet A, Porcher E, Devictor V et al (2008) Evaluation of floristic diversity in urban areas as a basis for habitat management. Appl Veg Sci 11:451–460. https://doi.org/10.3170/2008-7-18530

Nassauer JI, Wang Z, Dayrell E (2009) What will the neighbors think? Cultural norms and ecological design. Landsc Urban Plan 92:282–292. https://doi.org/10.1016/j.landurbplan.2009.05.010

Okvat HA, Zautra AJ (2011) Community gardening: a parsimonious path to individual, community, and environmental resilience. Am J Community Psychol 47:374–387. https://doi.org/10.1007/s10464-010-9404-z

Paris M, Chelkoff G, Linglart M (2013) Nature domestiquée en bord de route. In: Bradel V (ed) Urbanités et biodiversité. Presses Universitaires de St. Etienne, Paris, pp 171–181

Passidomo C (2016) Community gardening and governance over urban nature in New Orleans's Lower Ninth Ward. Urban For Urban Green 1–7. https://doi.org/10.1016/j.ufug.2016.01.001

Pickett ST, Cadenasso ML, Grove JM et al (2011) Urban ecological systems: scientific foundations and a decade of progress. J Environ Manage 92:331–362. https://doi.org/10.1016/j.jenvman.2010.08.022

Promojardin (2012) Le marché du jardin amateur. Année 2011. Synthèse

Santamaria F (2000) La notion de «ville moyenne» en France, en Espagne et au Royaume-Uni// The notion of «medium-sized town» in France, Spain and the United Kingdom. Ann Georgr 109:227–239. https://doi.org/10.3406/geo.2000.1866

Schwartz C, Petit C, Rémy E (2012) Les sols de jardins, supports d'une agriculture urbaine intensive. Vertigo 18. https://doi.org/10.4000/vertigo.12858

Smith RM, Gaston KJ, Warren PH, Thompson K (2005) Urban domestic gardens (V): relationships between land cover composition, housing and landscape. Landsc Ecol 20:235–253. https://doi.org/10.1007/s10980-004-3160-0

Smith RM, Thompson K, Hodgson JG et al (2006) Urban domestic gardens (IX): Composition and richness of the vascular plant flora, and implications for native biodiversity. Biol Conserv 129:312–322. https://doi.org/10.1016/j.biocon.2005.10.045

Thompson K, Austin KC, Smith RM et al (2003) Urban domestic gardens (I): putting small-scale plant diversity in context. J Veg Sci 14:71. https://doi.org/10.1658/1100-9233(2003)014[0071:udgips]2.0.co;2

Tozzi P, D'Andrea N (2014) Écoquartiers français et jardins collectifs: actualité et perspectives. Vertigo 14(2)

Vallet J (2009) Gradient d'urbanisation et communautés végétales d'espaces boisés. Approche à plusieurs échelles dans trois agglomérations du Massif armoricain. Université d'Angers, Thèse de doctorat en Biologie des Organismes, 258 p + Annexes

Voigt A, Leitão TE (2015) Lessons learned. Indicators and good practice for an environmentally-friendly urban garden. In: Urban Allotment Gardens in Europe. pp 165–197

Wang H, Qiu F, Swallow B (2014) Can community gardens and farmers' markets relieve food desert problems? A study of Edmonton, Canada. Appl Geogr 55:127–137. https://doi.org/10.1016/j.apgeog.2014.09.010

Weber C, Mehdi L (2013) Ecosystems services provided by urban vegetation: a literature review. In: Rauch S, Morrison G, Norra S, Schleicher N (eds) Urban environment. Springer, Berlin, pp 119–131

Werquin A, Demangeon A (1997) L'entrelacs du végétal et de l'urbanisation. Les Ann la Rech Urbaine 74:40–49

Author Biographies

Francesca Di Pietro is an Associate Professor in Environmental Geography at F. Rabelais University, Tours, France. Her research focuses on plant communities in anthropogenic and urban landscapes including urban habitats (public greenspace, urban wastelands and community gardens), road verges and field margins. She studies the features, the uses and the perceptions of urban plant communities, at the habitat and landscape scales.

Lotfi Mehdi earned a Ph.D. in spatial and urban planning. As an urban ecologist, he works on urban ecosystems and their interactions with the green structure, according to both the ecological and anthropogenic approaches: assessment of ecological connectivity and ecosystem services. Moreover, in the Maghreb countries, his work focuses on the inclusion of green spaces in urban policies. He also works with several private or public institutions as an expert in the field of urban ecology and the implementation of the urban green structure.

Marion Brun earned a Ph.D. in spatial and urban planning after a Master in Environmental Engineering. Currently, engineer in environmental geography, her research covers urban biodioversity, from an ecological perspective (specific and functional diversity of plant communities) as well as from operational (management) and social perspectives (nature's representations).

Céline Tanguay a landscape architect, works on topics such as landscape, environment (*trame verte et bleue*) and local agriculture. She mainly provides thematic expertise in the fields of urban and peri-urban development in Tours' agglomeration urban planning agency; she is also teacher and researcher in the field of land-use planning and environment.

Chapter 8
The Kitchen Garden Between Rationalisation and Ecology: The Eyes of the Gardening Magazines (1950–1999)

Stéphane Wandriesse

Abstract Gardening magazines designed to a large public are an interesting testimonial of the advent of ecology if we take into account the valuable advice they provide. It was during the second half of the twentieth century that these magazines a growing importance to ecology, whereas technological progress and the highest agricultural yields were cardinal rules in the years 50 and 60 and to a lesser extent until the 70s, it was only in the 80s that the multiple advantages of organic gardening were recognized. This trend was confirmed in the last decade of the twentieth century and has ever since been considered as a major leading policy for the «green» editorial concept.

Keywords Kitchen garden · Organic gardening · Press magazine
Economic crisis · Environment

> From time immemorial, the gardener has been struggling against nature, weeds invasion, climatic changes, frost and drought. He has always tried to improve the quality of the soil. In the past, before the arrival of chemical pesticides, it used to be a daily challenge requiring his constant presence (Quellier 2012).

As an artificial location for the production and consumption of vegetables, herbs and small fruits, a kitchen garden offers the gardener the possibility to act on a medium he has to adapt, transform and modify. During the second half of the twentieth century, these practices were reconsidered because of the new concept of the relationship between man and nature suggested by the ecology (Matagne 2003).

S. Wandriesse (✉)
Temos, University of Angers, Angers, France
e-mail: stephane.wandriesse@agrocampus-ouest.fr
URL: http://cerhio.fr/

The word «ecology» was first introduced by the German zoologist and embryologist Ernst Haeckel in 1866 and by the botanists of the end of the nineteenth century with a view to studying the relationships between the human beings and their environment. Later on, the ecology «the most human among all the Nature sciences reached economic and political subjects through a very effective press committed to supporting the defence and promotion of the environment[1] (Deléage 1991). Besides, at the end of the twentieth century in France gardening magazines offered to their readers a valuable tool to inform them of the changes of a domestic garden.[2]

In this study, my purpose is to point out how, from 1950 until the end of the 90s, these magazines dealt with the environmental concept and through what means they have contributed to implement new environmental standards. The chronological division here suggested hinges on two different parts: the end of the 70s, and the turn of the 90s, thus corresponding to two significant stages in the history of the environment and their impact on gardening magazines (Matagne 2003; Acot 1988; Worster 1992).

8.1 The Prevailance of Productive Profitability and Rationalisation (from the Fifties to the Seventies)

After the post-war food shortage, the time came for making the kitchen gardens more productive by implementing new techniques in order to produce food in larger quantities. Accordingly, *Rustica* tackled the problem of the fair division of fertilizers insisting on the fact that the use of chemicals was indispensable in a kitchen garden. Notwithstanding the dieticians' offensive claim that fertilizers were responsible for most diseases and consequently had to be banned, the magazine still pointed out that «the British and the Dutch actually used from four to five times as many fertilizers as we did and nevertheless were not affected by modern diseases». The advantages of using fertilizers were emphasized: earlier crops, higher yields, better taste quality, larger size and better preservation.[3]

Plastic materials and chemical solutions were regarded as the best protection against pests of all kinds. Fruit trees were protected from spring frosts by plastic

---

[1]For instance, among these magazines, there are *La gueule ouverte* (founded in 1972), *Le sauvage* (founded in 1973), *Les quatre saisons du jardinage* (founded in 1980 by members of the association Terre vivante, founded in 1979).

[2]In addition to local press sources and others of audio–visual nature (Inathèque) that have been indentified but not yet used, there is a corpus of three magazines (*Rustica*, created in 1928; *L'Ami des jardins et de la maison*, created in 1931; *Mon jardin et ma maison*, created in 1958).

[3]«Le rendement des jardins est fonction d'une juste répartition des engrais», *Rustica,* n°28 du 9 juillet 1950, p. 584.

foils.[4] Moles, snails, slugs, Colorado beetles and leek worms had to be eradicated through the means of pesticides including sprays and powders.[5] DDT was considered as the most famous insecticide.[6] All the chemical products were submitted to legal provisions obliging the gardener to use them. For instance, a decree of 29 April 1948, provided that chemical treatments had to be used to eliminate Colorado beetles.[7] Synthetic fungicides such as Dithane or Captane to prevent tomato diseases were presented as quick-acting remedies.[8] Moreover, in many advertisements for defoliants, weeds were considered as a nightmare for the «gardener worth his salt».[9]

At that time, the ideal kitchen garden obeyed to strict order and rationalisation (Cabedoce and Pierson 1996; Weber 1998). Rows and beds had to be carefully laid out.[10] This concept derived from the principles conveyed by the magazine *Rustica* and many others. The profitability issue led to reconsider all the gardening techniques. Thus, as far as seeds were concerned, in order to face the risks of undesirable fecundations it was of paramount importance that a seed selection should be effected to ensure the purity of the different varieties.[11] This theory was reinforced by a host of agronomists or horticulturists who were convinced by the advantages of the technological progress, especially in the field of genetics. This gave rise to many controlled mutations and hybridations. A scientist vision was thus conveyed to the readers as the following quotation proves:

> The present possibilities to improve and create new varieties enable us to consider the future of agriculture with confidence. The continuous development of our scientific knowledge and their applications to selective methods must enable the creation of new varieties for an ever-increasing quality fit to the conditions of our modern life and culture.[12]

The garden of tomorrow, as devised at that time, was above all a «garden-made easy» thanks to the many technological innovations. An article about an exhibition organized by the firm Vilmorin set forth the gardener's dream: automatic watering system including a network of buried hoses, autonomous battery-powered lawnmowers, plastic bells, prefabricated swimming pools, electrical scarecrows were the latest technological advances shown at the Vilmorin exhibition. A fully automated greenhouse offered the possibility to grow vegetables at any season of the year thanks to three different climatic options. Artificial lights, heating devices for leaf

---

[4]«La protection des arbres fruitiers à l'aide de films plastiques», *Rustica*, n°15 du 13 avril 1958, p. 372; «Paillage et films plastiques», *Rustica*, n°19 du 10 mai 1964, p. 672.

[5]«Pour détruire les limaces», *Rustica*, n°18 du 6 mai 1951, p. 436; «Mes poireaux ont le ver», *Rustica*, n°27 du 3 juillet 1960, p. 1052.

[6]«L'équipement antiparasitaire au potager», *Rustica*, n°27 du 3 juillet 1960, p. 1053.

[7]«Soignez vos pommes de terre», *Rustica*, n°21 du 27 mai 1951, p. 471.

[8]«Contre quelles maladies traiter les tomates», *Rustica*, n°28 du 10 juillet 1960, p. 1088–1089.

[9]«Herboxy», publicité pour désherbant, *Rustica*, n°13 du 29 mars 1964, p. 467.

[10]«Rationalisons le potager», *Rustica*, n°14 du 2 avril 1961, p. 458.

[11]«Faut-il produire ses semences au jardin potager?», *Rustica*, n°25 du 24 juin 1951, p. 583–4.

[12]«Génétique et horticulture», *Rustica*, n°15 du 13 avril 1958, p. 360.

moulds, sprinkler and drizzle systems, automatic sun-shading devices pests detectors were part and parcel of a robotised garden.[13]

Few were the magazines, which set forth the benefits of a «natural» garden. In a leading article Louise de Vilmorin—a novelist, journalist and poetess—did not hesitate to criticize the latest mechanical achievements. She asserted that men have become the slaves of the machine. She insisted on the advantages that nature could offer. A natural garden is the «man's pride» she asserted.[14] At the same time, the beneficial aspect for men's health was emphasized. An article titled «a vitamined garden» singled out the «vitaminotherapeutic properties of growing vegetables and claimed that it was the best prevention against deficiency diseases.[15]

Together with an article setting forth the advantages of using chemical fertilizers, a large advert reminding of the benefits provided by different sorts of animal manure can be found.[16] Somewhere else, there are some advice for making a compost bin in which dead leaves, wastes of all kinds and household refuse will make an excellent manure for vegetables.[17] They speak of «green manure» obtained by recycling sound vegetal produce such as beans tops, peas, lettuces, cabbages, flowers, lawn-movings. A large contest was set up by «Fertiligene Super Organique» who claimed the production of bigger, but above all healthier vegetables because they were 100% naturally grown.[18]

As early as 1973, the magazine *L'Ami des jardins et de la maison* announced the development of an organic insecticide called Bacteospein as a result of a partnership between l'Institut Pasteur, l'Institut National De La Recherche Agronomique and Rhone-Poulenc. It was a selective solution against caterpillars but harmless to useful insects such as bees and ladybirds and innocuous for men and animals.[19]

Sometimes, some rare warnings were published pointing out that these products were a double-edge weapon as they kill all kinds of insects without making any distinction between useful and noxious species.[20]

However, at the end of the 70s those warnings became stricter as a result of the new mentality for the defence of the environment (Michaud 1989).

---

[13]«Le jardin de demain», *Rustica*, n°34 du 21 juillet 1960, p. 1271.

[14]DE VILMORIN, Louise, «Un jardin pour enraciner les hommes», *Rustica*, n°15 du 13 avril 1958, p. 354.

[15]«Le jardin vitaminé», *Rustica*, n°18 du 4 mai 1958, p. 477; «L'oignon facteur de santé», *Rustica*, n°14 du 2 avril 1961, p. 459.

[16]«Vos engrais chimiques» et «Culture sans fumier?», *Rustica*, n°4 du 22 janvier 1961, p. 116–117; «Le fumier de poules au jardin», *Rustica*, n°9 du 26 février 1961, p. 292.

[17]«Fertilisation: un parc à compost», *Rustica*, n°48 du 27 novembre 1960, p. 1763; «La réalisation d'un tas de compost», *L'Ami des jardins et de la maison*, n°593 de novembre 1973 p. 54–55.

[18]«Fertiligène super organique», *Rustica*, n°15 du 15 avril 1958, p. 374; «Fertiligène», *Rustica*, n° 9 du 1er mars 1970, p. 14.

[19]«La lutte biologique entre dans le jardin de l'amateur», *L'ami des jardins et de la maison*, n°593 de novembre 1973, p. 56 (Actualités).

[20]«Insecticides du sol», *Rustica*, n°47 du 19 novembre 1961, p. 1657.

8.2 Gardening Magazines: A True Reflection on the Advent of the Environment (End of the Seventies and Eighties)

At a European level, in the spring 1979, a survey published by *Rustica* enhanced the gardening techniques implemented by several member countries of the European Community. In France, gardening accounted for 41% of the households. 64% grew vegetables for their own consumption thus covering two-thirds of their gardens. No mention of organic gardening was found in the double page article.[21] However, the novelty came from Belgium and Germany where our neighbours were becoming confirmed environmentalists. Though they had been for a long time heavy consumers of chemical products, now they discovered the benefits of the traditional gardening techniques of former times.[22]

Another factor lies in the economic crisis, which invites people to question the consumer society and induces them to combat all forms of waste. At the same time, a gardener from Tours introduced a few tips to prevent wastage: plastic bottles could be used as a simple but effective watering system. He also advocated the use of seedling tunnels. Crop rotation and intercropping are considered as relevant techniques. Specific advice is given for making water-saving devices and recycling systems.[23] The same applies to culinary habits.[24] Meal scraps and leftovers will have to be reused. Recipes were given which were very similar to those published by *Rustica* in time of food shortage (Wandriesse 2013).

A third factor proving the interest for the environment lies on the credit allowed to the theory that agriculture is submitted to cosmic influences. Relying on experiments carried out by Eugene Kolisko (antroposopher) and by Matteo Tavera (founder of Nature Et Progres), an article titled «*Nature et Cultures*» tends to define agriculture as a cosmic activity ruled by celestial factors. This theory has been defended by the supporters of the «biodynamic agriculture» (a theory to some extent associated to organic agriculture) which consists in spreading pulverised plants on vegetables according to a biodynamic calendar.

Among the techniques easily applicable in a garden, it is worth mentioning the use of liquid mettle manure fermented in rainwater as an excellent fertilizer and an effective protection against plant diseases. Horsetail liquid manure is just as well advised for their anticryptogamic properties (to eliminate mushrooms).

---

[21]«Le jardin de France», *Rustica*, n°482 du 21 mars 1979, p. 19–20.

[22]«Le jardin de Belgique», *Rustica*, n°482 du 21 mars 1979, p. 14–15; «Le jardin d'Allemagne», *Rustica*, n°482 du 21 mars 1979, p. 30–31.

[23]«Récupérer l'eau de pluie pour l'arrosage», *Mon jardin et ma maison*, n°157 de juin 1971, p. 86; «Lutte contre le gaspillage: le combat d'un jardinier», *Rustica*, n°511 du 10 Octobre 1979, p. 10–11; «Attention sécheresse», *Rustica*, n°810 du 3 juillet 1985, p. 26; «Récupérer l'eau de pluie pour l'arrosage», *Mon jardin et ma maison*, n°157 de juin 1971, p. 86.

[24]«La cuisine antigaspillage ou l'art d'accommoder les restes», *Rustica*, n°511 du 10 octobre 1979, p. 14–15.

Agrobiodynamic solutions are available at Urapha (*l'Union pour les Recherches et l'Application des Pratiques Agrobiodynamiques et Homéopathiques en Agriculture*).[25]

Both gardening magazines and their readers are showing a clear interest in these new ideas and practices.

In a reader's tribune, a young father writes to his magazine *Rustica* about his regrets to see too small a part of the review devoted to the organic culture, though he understands the necessity for the magazine to satisfy everybody. According to this reader, if the organic culture is not so widely represented it is because it is a «French discovery» referring to the method Lemaire and Boucher developed in 1959. He says that he is applying this method, which consists in eliminating all kinds of chemical products and rising a sead-weed (the «lithothamme») as a fertilizer. He points out that a domestic gardener is not a «market-gardener» and stresses that those who have such practices do not have any problems with pesticides, but they might to analyse the soil of their gardens and question their ecological conscience.[26]

Through this exchange between the review and his reader, we can notice an explicit link between «the organic culture and the ecology». Furthermore, this example shows the prudent attitude adopted by *Rustica* to grant a larger part to organic gardening but with a moderate enthusiasm.

In view of this demand from their readers, the magazines regularly publish articles setting off the main advantages of biological gardening: healthy and tasty vegetables cultivated in a sound soil without any chemical products. Resorting to biological culture means that you want to be different from your neighbour who may endanger your own production with the use of noxious products as evidenced by relevant photographs.[27]

In their introductions, these magazines remind the reader of save basic principles: biological gardening is not a culture without fertilizers or treatments.[28] This involves a comprehensive review of the practices hitherto in use. Thus, as far as fertilization with no soluble chemical products is concerned, «it is quite the opposite of what we have so far been doing!».[29] Composting, green fertilizers,

---

[25]«Nature et cultures», *Rustica*, n°514 du 31 octobre 1979, p. 27–28; «Jardinez entre ciel et terre», *Rustica*, n°785 du 9 janvier 1985, p. 26.

[26]«La lettre de la semaine: Jardinage biologique», *Rustica*, n°480 du 7 mars 1979, p. 7; Bertoldi, Sylvain, «La "saga" des débuts de l'agriculture biologique, l'aventure Lemaire d'après les fonds déposés aux Archives municipales d'Angers», *Archives d'Anjou*, 2010 n°14, numéro spécial Histoire du végétal, p. 147–156.

[27]«Votre semaine en vert, Photographie légendée: ennemis de l'écologie les produits du voisin», *Rustica*, n°477 du 16 février 1979, p. 33.

[28]«Le jardinage biologique», *Rustica*, n°489 du 9 mai 1979, p. 12–13.

«Culture biologique: Conservez vos légumes par fermentation lactique», *L'ami des jardins et de la maison*, n°667 d'octobre 1980, p. 25.

[29]*Ibidem.*

mineral fertilization (through ground rocks) aim at feeding the soil, which must necessarily be covered with straws, weeds or wastes.

Intensive or chemical agriculture is severely criticized as plants are thus overfed and therefore weakened. On the contrary, organic agriculture tends to reinforce the plant. If defensive methods have to be developed, they necessarily must be natural (like traps, plants biological stimulating properties, fauna).

Regularly, articles enhancing the interest for combining plants with mutual strengthening virtues can be read in the press.[30] As to only treatments tolerated, they must have a vegetal origin and must be innocuous for the consumer. It is also most important to convince the reader of the excellence of the yields granted in compliance with a natural balance to be respected.[31] The articles are signed by new contributors who are major supporters for an organic agriculture.[32] These partnerships are most profitable as they enable to feed the debates between the supporters of different techniques. This is true as far as weed eradication is concerned. In a depth study on weed killing, gardeners were divided in two groups: «on one side those who powder, water or pulverize, on the other those who hoe, weed or harrow».[33] *L'Ami des jardins et de la maison* strives to calm down the debates in a large synoptic chart setting off the pros and cons of the two viewpoints and even suggests an adequate combination to get rid of particularly aggressive weeds.[34]

It is noticeable that organic gardening is fast developing and instead of being limited to the garden, the environmental philosophy is now being applied to the multiple aspects of everyday life. In June 1980, *Rustica* published a guide for a «green life» in which the reader was invited «to get married to Nature». Through simple questions and short insets, the guide provided advice and tips in order to cultivate without using chemical products, to clean homes, make beauty products, heal animals, etc.[35]

---

[30]«Mariage: plantes amies ou ennemies», *Rustica*, n°489 du 9 mai 1979 p. 14–15; «Des légumes nettoyants», *Rustica*, n°533 du 12 mars 1980, p. 12–13; «Culture biologique: Cultivez plusieurs légumes dans une même planche», *L'Ami des jardins et de la maison*, n°663 de mai 1980, p. 26.

[31]«Culture biologique: Désherbez sans produits chimiques, voici comment faire», *L'Ami des jardins et de la maison*, n°664 de juin 1980 p. 26; «Culture biologique: Ne traitez qu'à bon escient», *L'Ami des jardins et de la maison*, n°714 de juin 1985 p. 28.

[32]Some other examples can be quoted: as early as 1979 Joseph Pousset (defender of a natural agriculture in his experimental farm in l'Orne); Paul Pascotto (agricultural engineer in 1975, author of organic gardening courses under the name of *Agrobios*, and contributor to the magazine *Rustica*; Victor Renaud, collector of ancient vegetables; Claude Aubert (founder of Terre *vivante*), and contributor to *L'Ami des jardins et de la maison.*

[33]«Désherbage chimique ou manuel», *L'Ami des jardins et de la maison*, n°714 de juin 1985, p. 68–69.

[34] *Ibidem.*

[35]«Guide de la vie en vert», *Rustica*, n°547 du 18 juin 1980, p. 10 et suivantes; «Médecine douce au potager», *Rustica*, n°490 du 16 mai 1979, p. 54–55; «Les recettes de santé d'un jardinier», *Rustica*, n°491 du 23 mai 1979, p. 10–17; «La santé par les légumes», *Rustica*, n°788 du 30 janvier 1985, p. 22–23.

A close link was thus woven between environmental protection and health benefits. Recipes and soft medicines were accompanied by comprehensive studies and photographs.[36] In order to make the most of an organic kitchen garden and to preserve the quality of the vegetables, old methods of preservation were reintroduced.[37]

Another argument often put forward to convince the most reticent readers was the easiness and convenience with which organic gardening practices could be adopted.[38]

In the 60s robotisation was just a gardeners's dream for a garden without toil. The 80s aimed at having the concept of environmental gardening adopted by everybody. Over the next decade, this tendency was clearly accepted and developed by most editing lines.

8.3 An Organic-Editing Policy Within an Environment Landscape (Last Decade of the Twentieth Century)

In the early 90s, the organic kitchen garden relied on keen supporters. Jean-Paul Thorez, who wrote many practical guides on this subject (Thorez 1992), stated that unlike agriculturists who were bound to lay their lands fallow, the gardeners of the late twentieth century were considered as the «new monks who brought the land into cultivation». Planted fields, meadows, brushwoods or even timberyards were fit to be turned into kitchen gardens. Organic kitchen gardens of course! [39] There is a close connection between food and vegetarian cooking.[40]

The most frequent recommendations stressed the necessity to till the soil in a shallow and gentle manner, to use animal or vegetal fertilizers like manure, compost, rock or horn powder exclusively, to adopt plants with insecticide properties,

---

[36]«Médecine douce au potager», *Rustica*, n°490 du 16 mai 1979, p. 54–55; «Les recettes de santé d'un jardinier», *Rustica*, n°491 du 23 mai 1979, p. 10–17; «La santé par les légumes», *Rustica*, n° 788 du 30 janvier 1985, p. 22–23.

[37]«Culture biologique: Conservez vos légumes par fermentation lactique», *L'Ami des jardins et de la maison*, n°667 d'octobre 1980, p. 25.

[38]«Culture biologique: le compost, un fertilisant à la portée de tous», *L'Ami des jardins et de la maison*, n°660 de février 1980, p. 24; «Potager: des astuces pour vous simplifier la vie», *L'Ami des jardins et de la maison*, n°711 de mars 1985, p. 62–63.

[39]Thorez, «Naissance d'un potager: 4 cas exemplaires», *Rustica*, 6 janvier 1993, p. 10-13.; «Culture biologique: La courge autour du monde», *L'Ami des jardins et de la maison*, n° 760 de février 1990 p. 54; «Culture biologique: l'aneth à la cuisine et au jardin», *L'Ami des jardins et de la maison*, n°772 d'avril 1991, p. 90 et suivantes; «Culture biologique: Légumes anciens, une nouveauté», *L'ami des jardins et de la maison*, n°770 de février 1991, p. 62; «Nos conseils 1992 pour jardiner sain», *Rustica*, 25 décembre 1991, p. 25–44; «Réussir les légumes bio», *Rustica*, 13 mai 1998, p. 36–38;

[40]«Éditorial: Cuisine sauvage», *Rustica*, 24 avril 1991, p. 3 «Enquête Cuisine végétarienne: Tout commence au potager», *Rustica*, 23 décembre 1992, p. 9–12.

copper and sulphur, or even beneficial insects to improve the structure of the soil, to protect the fauna and to adapt the vegetal species to the region where they are cultivated for a larger, better and stronger food production.[41]

Moreover, the organic assets are emphasized. On the one hand, the aesthetic aspect is enhanced with the use of green fertilizers the flowers of which add a decorative touch to a garden. On the other, the economical argument: No more wastage! Household refuse is systematically composted, mulching techniques are applied to save water, specific treatments are home-made, hoeing and weed eradication are limited to avoid the gardener painful backaches.[42]

Furthermore, it is to be noticed that organic gardening is now considered as a common practice. Thus, in order to reconcile their readers, the magazine editing policies accepted to compromise as shown in the thesis put forward by Mickaël Bess in his book «*La France vert-clair*» (Bess 2011). The adjective «light green» proves the moderation and ambiguity with which environmental policies are accepted in France. According to BESS, the consumer society wants to win on both sides: tradition and modernism, ecology and consumerism. As a result, it is not surprising to find some advice for organic and traditional practices on the same pages.[43] It is important to point out the difference between these magazines designed to a large audience and a review such as *Terre vivante* exclusively devoted to organic production techniques.

However, the environment protection is a concept shared by most French people. In an opinion poll, *Rustica* asserts that it is a priority for 76% of the French.[44] Here the tone is more imperative: the environment is presented as an emergency and water considered as a priority.[45] However, there is also a contradiction between some major environmental catastrophes (like Chernobyl) and the individual gardening practices, which are not directly responsible for theses disasters.[46]

---

[41]«Le jardin biologique: Engrais bio maison», *L'Ami des jardins et de la maison*, n°840 de juillet 1997, p. 58; «Le coin du bio: Luttez contre les chenilles dans votre semaine au potager», *Rustica*, 9 août 1990 p. 4–5; «Contre les parasites, aidez les légumes à résister», *Rustica*, 13 février 1991, p. 14–18; «Enquête: Et si les insectes remplaçaient les produits chimiques?», *Rustica*, 6 mars 1991, p. 5–7; «La vraie nature au naturel» (sur les produits phytosanitaires), *Rustica*, 29 mai 1991, p. 16; «Jardin biologique, le carnet pratique: Faites fuir les limaces», *L'Ami des jardins et de la maison*, n°838 de mai 1997, p. 76; «Le coin du bio: Semez l'engrais vert dans votre semaine au potager», *Rustica*, 1er août 1990, p. 6–7; «Votre semaine au potager. Amendez le sol et les merveilles de Victor», *Rustica*, 17 octobre 1990 p. 6–7; «Tel sol, tel légume: les combinaisons gagnantes», *Rustica*, 30 décembre 1992 p. 14–17; «Les algues une vague de bienfaits pour le sol», *Rustica*, 13 janvier 1993, p. 14–16.

[42]«Jardin biologique», *Rustica*, 24 février 1999, p. 24.

[43]«D'un jardin à l'autre», *L'Ami des jardins et de la maison*, n°760 de février 1990, p. 46 et suivantes.

[44]«Le combat pour l'environnement, Sondage Sofres-Rustica», *Rustica*, 2 Janvier 1991, p. 5–8.

[45]«SOS sécheresse», *L'Ami des jardins et de la maison*, n°765 de juillet 1990, p. 14 et suivantes.

[46]«Enquête: Jardiniers faisons plus pour la nature!», *Rustica*, 1er Janvier 1992 p. 9–11; «Enquête: Cultures biologiques, Nature et Santé justifient les moyens», *Rustica*, 8 Avril 1992, p. 9–11.

Furthermore, the environmental philosophy goes far beyond the gardening techniques. It is associated to other traditional values such as profit-sharing schemes and induction courses developed by «Le Centre d'Aide par le Travail», «Nature et Progrès», et «Jardins de Cocagne» who combine solidarity and organic agriculture. The same applies to family allotments whose aim not only consists in inducing people to take care of the environment but also to teach organic techniques to handicapped people.[47]

Far beyond the fence of a garden, their major concern consists in making people more nature-minded. In public parks, some «*Maisons de la Nature*» were set up together with La Fête des Plants, which is to be held every year.[48] Schools are considered as a favourable ground for developing environmental principles and gardening as an excellent pedagogic tool.[49] A close link is set between gardening and citizenship. These magazines have been developing a forward-looking vision on the environment pointing out the paradoxical link existing between the consumer and his garden, the former demanding immediate results, the latter requiring a long-term policy.[50]

Whatsoever, it is unquestionable that gardens and environment are closely linked. For the sociologist Françoise Dubost, this phenomenon is due to an anti-urbanization attitude. For Henri Delbard, managing director of a production and distribution company founded in 1985 the garden, is a compensation for the loss of social family and religious values.[51]

The gardener of the twenty-first century will be more careful with plants and animals and more environment-minded. Half of the people who have a garden do not use any chemical products for fear of their toxic consequences.

Just as well, the interest for technological innovations shown during the booming 60s, 70s and 80s was oriented to the use of not only safer and more

---

[47]«Enquête en Meurthe-et-Moselle: Les premières récoltes des potagers du cœur», *Rustica*, 29 septembre 1993, p. 41 et suivantes; «Enquête dans les Côtes-d'Armor: Les succès horticoles d'un centre d'aide par le travail», *Rustica*, 26 janvier 1994, p. 43–45. Le label «Nature et Progrès» fixe un cahier des charges très strict d'amendements et de traitements; «Enquête potager et solidarité: Légumes bio sur abonnement», *Rustica,* 3 mai 1995, p. 43–45; «Enquête centenaire des jardins familiaux: Histoire d'un renouveau», *Rustica*, 3 avril 1996, p. 59–61.

[48]«Enquête dans les jardins publics: Changement de décor», *Rustica*, 8 mai 1996, p. 43–45; «Retour vers la Nature», *Mon jardin et ma maison*, n°461 de juin 1998, p. 79; DUBOST, Françoise, *Vert patrimoine*: *la constitution d'un nouveau domaine patrimonial*, Paris, Éd. Maison des Sciences de l'Homme, 1995.

[49]«Enquête Le jardinage à l'école, une idée qui germe», *Rustica*, 4 septembre 1991 p. 5–7; «Enquête Les écoliers jardinent», *Rustica*, 8 février 1995, p. 41–45.

[50]«Le monde du jardin toujours en mouvement. Le jardin à l'aube de l'an 2000», *Mon jardin et ma maison*, n°461 de juin 1998, p. 61. (Numéro anniversaire)

[51]«Le jardin révélateur de la société française. Le jardin à l'aube de l'an 2000», *Mon jardin et ma maison*, n°461 de juin 1998, p. 64.

comfortable but also noiseless and less polluting gardening devices.[52] In 2000, the «green wave» is obvious in all gardening magazines.

8.4 Conclusion

On the eve of the twenty-first century, the ecology was part and parcel of the responsible techniques and practices advocated by gardening magazines.

For a time almost ignored and, in some cases, never recognized as such, the environmental concept gradually rose during the 50s and 60s as a result of the economic crisis, foreign models and new policies.

Owing to a growing demand from their readers, most magazines have been striving to develop new means of production more respectful of Nature.

From the 90s, they have been granting the environment a legitimate importance. No longer limited to organic gardening, from now on the ecology is presented within a social, educational and patrimonial background. In this respect, these magazines have succeeded in arousing an environmental conscience in their readers. Man is now considered as the ally of Nature.

References

Acot P (1988) Histoire de l'écologie. Presses Universitaires de France, Paris

Bertoldi S (2010) La "saga" des débuts de l'agriculture biologique, l'aventure Lemaire d'après les fonds déposés aux Archives municipales d'Angers. Archives d'Anjou 14:147–156

Bess M (2011) La France vert clair, écologie et modernité technologique 1960–2000. Champ Vallon, Seyssel

Cabedoce B, Pierson P (1996) Cent ans d'histoire des jardins ouvriers, 1896–1996. La Ligue Française du Coin de Terre et du Foyer, Éditions Créaphis, Grâne

Deléage J-P (1991) Histoire de l'écologie. Une science de l'homme et de la nature, La Découverte, Paris

Dubost F (1995) Vert patrimoine : la constitution d'un nouveau domaine patrimonial. Éd. Maison des Sciences de l'Homme, Paris, p 1995

Dubost F (1997) Les jardins ordinaires. Éditions L'Harmattan, Paris

Matagne P (2003) Aux origines de l'écologie. Innovations 18(2):27–42

Michaud DA (1989) L'avenir de la société alternative, les idées 1968-1990. Éditions L'Harmattan, Paris

Quellier F (2012) Histoire du jardin potager. Armand Collin, Paris

Thorez JP (1992) Le petit guide du jardinage biologique: potager et verger. Terre Vivante Éditions, Paris

---

[52]«L'essor biotechnologique et le jardin», *Mon jardin et ma maison*, n°461 de juin 1998 p. 69; «Du bio à l'électrique», *Mon jardin et ma maison*, n°461 de 1998, p. 66.

Wandriesse S (2013) *Rustica, une revue pour mieux vivre (1928–1949)*, Mémoire de Master d'Histoire des régulations sociales, under the direction of Yves DENÉCHÈRE and Cristiana OGHINA-PAVIE, at Angers University, U.F.R. de Lettres, Langues, Sciences Humaines, 2013, p 307

Weber F (1998) L'honneur des jardiniers, les potagers dans la France du XXe siècle. Éd. Belin, Paris

Worster D (1992) Les pionniers de l'écologie. Une histoire des idées écologiques, Sang de la terre, Paris

Author Biography

Stéphane Wandriesse graduated from l'Institut d'Etudes Politiques de Paris and has been teacher at Agrocampus Ouest Angers, a school for engineers in horticulture and landscape since 1996. After a Master's in the History of Social Regulations for the magazine Rustica at Angers University, he is writing at the present time a thesis on contemporary history under the direction of Yves Denéchère and Cristiana Oghina-Pavie. His study is devoted to kitchen gardens through the press and the media in the second half of the twentieth century in France.

Chapter 9
Making Space for Disorder in the Garden: Developing Biophilia to Conciliate Aesthetics and Biodiversity

Mathilde Riboulot-Chetrit, Laurent Simon and Richard Raymond

Abstract As part of the current wave of environmental awareness, inhabitants in the heart of the Paris agglomeration are increasingly being made aware of pro-biodiversity gardening techniques. But can certain practices such as keeping spontaneous vegetation in one's garden be reconciled with the type of relationship inhabitants have with—and more specifically their representations of—this space? Inhabitants develop a multifaceted relationship with their gardens in which nature (in its broadest sense), visual order and aesthetics occupy a central role. The functions and usages attributed to the garden condition gardening practices whereby inhabitant-gardeners demand regular upkeep of these spaces so as to keep nature "in order". Within these multidimensional relationships, we categorise those respondents who base their interest in gardens around a specific focus on the living world as "biophiles". Gardens in the heart of the Parisian agglomeration may therefore appear to be spaces that favour interaction between inhabitants and certain entities that they perceive from the living world. Also, these individuals have a less orderly and controlled conception of vegetation in their gardens than the other people interviewed. "Biophiles" are therefore more tolerant of spontaneous vegetation than other individuals because this *laissez-faire* attitude fits both with their relationship to their garden and their own aesthetic representation of this space. This means that domestic gardens can support a specific relationship with ordinary biodiversity underpinned by gardening practices that are more in phase with living matter.

Keywords Private garden · Biophilia · Spontaneous vegetation · Biodiversity Aesthetic

M. Riboulot-Chetrit (✉) · L. Simon
LADYSS UMR 7533, Panthéon-Sorbonne University, Paris, France
e-mail: mathilde.riboulot@gmail.com

R. Raymond
LADYSS UMR 7533, associated with Eco-Anthropology
and Ethnobiology UMR 7206, CNRS, Paris, France

9.1   Introduction

Home gardens are of twofold interest for managing ordinary biodiversity: they are
both potential "species-friendly" areas (Gaston et al. 2005; Marco et al. 2010; Smith
et al. 2006); and spaces in which inhabitants are heavily involved (Bhatti and
Church 2000; Frileux 2013; Hondagneu-Sotelo 2010; Loram et al. 2011). The term
"biodiversity" may be understood and defined in many different ways however,
regardless of the approaches used, it invariably refers to the variety and variability
of living matter (Arnould and Simon 2007; Marty et al. 2005). As part of this
research, we have decided to focus on this ordinary biodiversity mainly via its plant
composition. Vegetation, perceptible and visible both to researchers (in the
humanities and social sciences and in ecology) and to inhabitants, is an effective
means of studying one of the components of ordinary urban biodiversity.
Inhabitants may use gardening to develop a day-to-day relationship with plants,
nature and the lay witnesses of biodiversity (Dunnett and Qasim 2000). Aside from
fostering awareness, in securing the commitment of these people to the protection
of this may be of considerable importance biodiversity in their living spaces or in
relatively faraway places (Goddard et al. 2010). Such observations call for a more
detailed examination of relations between inhabitants and ordinary biodiversity
within private gardens (Riboulot-Chetrit 2015).

Inhabitants generally develop a highly specific relationship with their garden and
feel that it belongs to them. These people play an essential role in planning and
organising these spaces both as users and gardeners. The different ways in which
they use this outside space usually mean that the inhabitant-gardeners tend them on
a regular basis and this is partly apparent in a quest for order that is frequently
associated with enclosures and boundaries. In *Le jardin en mouvement* (The garden
in movement 2007) Gilles Clément describes the related vocabulary (borders,
hedges, lawns, etc.) and gardening techniques deployed to maintain this order (such
as cutting the grass, pruning, weeding). However, the emergence of green gar-
dening towards the end of the twentieth century provided the gardener with another
mission (Wandriesse, same publication) (in addition to the existing functions of
producer and architect according to Gilles Clément), that of protecting species and
life in general, even extending to "*safeguarding life inside the enclosure placed
under their protection*" (Clément 2011: 100). Gardening practices give gardeners a
determining role in managing the biodiversity within their gardens. In the current
context of increased environmental awareness, and more specifically biodiversity
preservation, thanks to public policies or the media for example, inhabitants are
indeed more aware of biodiversity-friendly gardening techniques such as allowing
spontaneous vegetation.[1] Writing on this topic, Dubost (1999: 23) contends that the

---

[1]By spontaneous vegetation, we mean vegetation (regardless of whether it is of exotic or
indigenous origin) that spontaneously grows in a space.

emergence of ecology and biodiversity has resulted in the "*rehabilitation of all things wild*". We may therefore wonder whether a biodiversity-friendly practice like having some wasteland in one's garden (Muratet 2006) is compatible with the type of relationship inhabitants have with their gardens and more specifically, how they represent this space? Moreover, a number of researchers have demonstrated that contact with ordinary nature (such as regularly frequenting green spaces, feeding birds or tending flowers) may have a positive bearing on an individual's relationship with biodiversity (Freeman et al. 2012; Goddard et al. 2013; Nilon 2011). We shall therefore seek to ascertain whether inhabitants living in the heart of the Paris agglomeration[2] who have a close relationship with nature via their leisure pursuits, have a more biodiversity-friendly relationship with their garden.

To help tackle some of these questions, the findings analysed in this chapter are taken from doctoral research into inhabitants and private gardens adjacent to stand-alone houses (generally built either during the first-half of the twentieth century or post-1980) in three communes located in the heart of the Paris agglomeration (Paris, Sceaux and Champs-sur-Marne—Fig. 9.1—Riboulot-Chetrit 2016). The study is organised around a database mainly comprising responses to self-administered questionnaires (585) completed between May and August 2012, rounded out by illustrations (110 photographs taken by those surveyed). Because respondents lived in stand-alone housing with a garden located in the centre of the Paris agglomeration, the population sample surveyed had a relatively high socio-economic profile.[3]

Because the layout and upkeep of home gardens is influenced by the relations inhabitants have with their gardens, we will first study the potential diversity of such relations. We will note that visual order and aesthetics play a key role in these relations. Secondly, we will focus on what leads inhabitant-gardeners to keeping or getting rid of spontaneous vegetation from their gardens, and we will suggest a number of pointers for enhancing biodiversity in these private spaces.

---

[2]There are several definitions of the centre of the Paris agglomeration, understood as a space of variable size around Paris, depending on the criteria used (Fouchier 2007). For the purpose of this research, we will apply the definition employed in the SDRIF project: the heart of the Paris agglomeration corresponds to "*all of the built-up communes running out from the centre of Paris that are urbanised* […] *and dense*" [IAU Ile-de-France (institute of planning and development for the Greater Paris region), *Le cœur de l'agglomération* 2015]. Because this is indeed the case with the sites chosen for this research based on the SDRIF map, these sites are deemed to be in the centre of the Paris agglomeration.

[3]60% of respondents had completed at least five years of university studies, 42% of people surveyed belonged to the "Executive & intellectual profession" category, and 50% earned on average at least €4000 euros a month.

Fig. 9.1 Study locations characterised by stand-alone housing in the centre of the Paris agglomeration

9.2 What Form(s) of Order in Relationships with the Garden?

9.2.1 Functions and Uses of Private Gardens: Aesthetic, Well-Ordered Spaces

Analysing our textual material and illustrations helps to provide an understanding of inhabitants' relationships with their garden and the elements underlying such relationships.[4] Respondents have a number of things in common, regardless of their leisure pursuits or socio-economic profiles. For half of them, gardens represent spaces of vegetation and/or nature. They are also highly specific places due to the privacy that enables gardeners to enjoy their pleasures alone. This feature encourages those surveyed to consider gardens as their own space in and about which they have no hesitation in displaying their emotions and attachment: "*my love for my garden and my flowers keeps me in touch with the fundamental things of life*". The emotional attachments between inhabitants and their gardens apparent in vocabulary that mainly denotes intimacy and laying claim to something recall aspects of the concept of "living" developed by Mathieu et al. (2004). Respondents

---

[4]These relationships with gardens are studied based on the reasons put forward by inhabitants interviewed as to why it is important to have such a space, the activities they pursue there and their preferred places within this garden.

also explain the importance of having a garden by the fact that it is an amenity in which they can enjoy themselves pursuing various activities (gardening, DIY, playing, picnicking, receiving guests, etc.) and this is borne out by other research (Bhatti and Church 2000; Cohen et al. 2014; Frileux 2013; Goddard et al. 2013). The garden is also a rich source of other benefits (for relaxation, contemplation, "recharging one's batteries", etc.). Lastly, those surveyed frequently stress the beauty of this space and its various constituent elements. Aesthetic factors are of overriding importance in the choice of what to plant (Frileux 2013; Goddard et al. 2013; Hondagneu-Sotelo 2010; Marco et al. 2010). And our research confirms this: in answer to the question "*which plant species do you prefer in your garden?*", seven respondents out of ten replied, "*plants with beautiful flowers*". In her work on aesthetics, Blanc (2008) shows that the aesthetic experience is inseparable from feelings, sensoriality and sensitivity. The intimacy of the garden allows some people to express their own sensitivity, to make an aesthetic judgments and even enjoy aesthetic experiences on their garden and/or the nature therein (Riboulot-Chetrit 2016). An analysis of illustrative material confirms the bonds that link inhabitants to their gardens (Fig. 9.2). Respondents' prefer floral, diverse spaces, deemed to be beautiful, well-kept and pleasant, in which several activities may be pursued. As other research has shown (Frileux 2013; Quellier 2012), we may note that the aesthetic qualities of a garden are usually linked to cleanliness and order, two primarily visual criteria. On the other hand, photographs of the least valued gardens show poorly kept gardens considered to be untidy, frequently inaccessible and sometimes containing vegetation that has got out of control or, conversely, sick or dying vegetation.

As well as a space in itself and for oneself, our findings also indicate that inhabitants consider the garden to be a place to be shown to others. Gardens are convivial spaces in which inhabitants like to receive guests (Cohen et al. 2014; Marc and Martouzet 2012; Riboulot-Chetrit 2017). The urban garden is also usually visible from the street and belongs to a number of different dwellings. The resulting neighbourhood effects impact the relationship between inhabitants and their garden. It is not unusual for inhabitants to evaluate their garden *vis-à-vis* their neighbours': "*I'm always looking at other people's gardens to see how I can improve my own, sow new varieties for example, or prune my trees more effectively*". We encounter this idea in research carried out by Frileux (2013) or by Dubost (1999), which refers to a moral obligation to explain why an inhabitant always wishes to have their garden looking as well as their neighbour's so as not to be responsible for bringing down the tone of the neighbourhood. Tending a garden may therefore be subject to invisible pressure and a homogenising dynamic between gardens to conform to the standards of upkeep in a specific residential area. Moreover, residents would appear to influence each other in relation to the forms, colours and layout of plants in their garden (Marco et al. 2008). This is reflected in the fact that over half of all participants in our survey say they discuss their garden with the other inhabitants in their area. Of those who provided details of their conversations, over half said that they recommend plants "that grow well", give each other advice on garden layout and congratulate each other on the results obtained: "*we contemplate and compare our little pieces of heaven and we make sure to complement each other when they*

Place in the garden that the respondent likes most

Place in the garden that the respondent likes least

Photo 3: "*It's practically impossible to get to it and it's difficult to tend this part…so it's not very nice!*"
Garden located in Champs-sur-Marne

Photo 1: "*It's lovely because it's well tended and nicely pruned with abundant flowers […] and the kids can play there.*"
Garden located in Sceaux

Photo 2: "*We spend a lot of time here: we garden, we read, we take our meals, etc.*"
Garden located in Sceaux
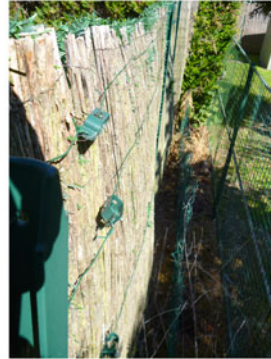
Photo 4: "*A forgotten, abandoned corner that I don't go to anymore. It's become impracticable through neglect.*"
Garden located in Sceaux

Photos received in July, 2012.

Fig. 9.2 Appreciation of gardens partly related to upkeep, control and the aesthetics of the space (Photographs 1–4)

are really beautiful and well-kept". So, as well as reflecting a social bond created out of garden(ing), this interaction between neighbours can impact how these spaces are tended and the gardening practices used. As Freeman et al. (2012) noted, putting one's garden on show is also revealing one's own self, personality and even one's identity. Home gardens are closely bound up with how individuals represent themselves and how they wish to be seen by others.

For these various different reasons (i.e. activities, self-representation, inclusiveness, neighbourhood considerations), those interviewed considered that gardens need to be properly tended. This upkeep frequently goes hand in hand with controlling space and what we may term as an orderly aesthetic. For most inhabitants, the overall garden aesthetic must be thought out and organised in a subtle manner

through the prism of controlled vegetation, as expressed by this respondent: "*there should be an overall harmony to the garden. It should give an impression of natural beauty even though everything is actually carefully thought, calculated and deployed.*" The order attributed to the garden is underpinned by a personal wish but it is also driven by social dynamics.

9.2.2 When a Focus on Living Matter Influences Relationships with Gardens

If there are indeed similarities in the relationships between inhabitants and gardens, then two groups emerge from the body of respondents in terms of how they view certain components of this space. This can eventually have an influence on how gardens are tended. The bulk of inhabitants associate the importance of having a garden with the plant domain housed therein, especially with the word "nature" (which figures 156 times in answer to the question "*Why is it important for you to have a garden?*"). Nevertheless, the way in which the plant world is perceived is not the same for all inhabitants.

Textual analysis of the text corpus reveals that the words "greenery" and "green" are frequently employed when respondents seek to justify the necessity of having a garden (89 occurrences in total). Several pieces of research demonstrate the generalised and fairly reductive use of this vocabulary (Calenge 1997; Dubost and Lizet 2003; Le Bot and Sauvage 2011). The findings of Frileux (2013), for example, highlight green both as an aesthetic value in the garden and as an ideal of nature. Raymond and Simon (2012) consider that the social demand for nature is underpinned to a large extent by aesthetics and feeling, giving rise to the idea that the elements of nature promoted in the city are essentially seen as green objects whose living features are not really (or not at all) taken into account. A more searching analysis of our findings reveals that 65% of individuals who employ these terms have a "nature profile", in other words they are engaged in a nature-related activity. The fact that the research literature suggests that contact with nature can favour an individual's relationship with biodiversity has led us to construct the "nature profile" variable[5] to ascertain whether respondents engaged in nature-related activities have a specific relationship with their garden that impacts the way in which they keep that garden. When we look more closely at their responses, we note that most people with this sort of profile mainly link the importance of having a garden to the greenery that comprises it, the colour green and to nature in general: "*It's important to have a garden in the city because this*

---

[5]This variable draws on both the practice of a "nature-related leisure activity" (an outdoor nature-related sport such as hillwalking), and/or membership of a "nature-based association or federation" [e.g. *Ligue Protectrice des Oiseaux* (National League for the Protection of Birds)], and/or reading a "nature magazine" (such as *Nature en France*).

means more greenery and allows nature to be seen"; "*all this greenery, reconnects us a little to nature*", or "*proximity to nature and a view of nature*". These very general terms alone would appear to explain the importance of having a garden without clearly evoking what this greenery and nature is composed of. These responses suggest that the survey appears to forget the very existence of living organisms partly characterised by the colour green.

However, another set of individuals is apparent from the manner in which they perceive the plant world from their garden by using a more specific lexicon referring to life processes. They express their relationship with the garden through a clear focus on the living world. This group initially employs the word "nature" just like most of the other respondents, but unlike a significant proportion of the latter, the use of this term evokes much more than just greenery in general, thus confirming the diverse ways in which the term "nature" is understood as highlighted by other research (Maris 2010; Raymond 2003; Raymond and Simon 2012). This plurality in the very definition of the word "nature" leads us to analyse each response individually without employing any generalisation. In order to test the attention that these gardeners may pay to biodiversity, considered here to be a complex living system (Barbault 2006), we have decided to retain only those responses that include the term "nature" and that use this word to express the living world in its globality or plurality. The other terms present in the selected sentences help determine the meaning of the word "nature". At the risk of being too selective and to help us analyse these responses, we have applied a sub-selection procedure to the sentences that include the word "nature" and only those that also include terms relating to life, and/or flora and/or fauna and express a biological or ecological function have been retained. Consequently, out of the 61 sentences retained for the purpose of this analysis, 59 are deemed to refer to the living world as a whole or in terms of its diversity: "*need for a relationship with nature, to see flowers and trees bloom and to be able to study birds.*" Next, 24 individuals that we met with justified the importance of having a garden by evoking life in general ("*I need to see a garden and the life that it encloses*"), or more particularly, via its diversity ("*to be exposed to life with flowers, birds and butterflies*"). As the following extract illustrates, these people express a clear attachment to the living world: "*the garden is a way of having a link to living matter and seeing plants and trees grow according to the seasons and having a link to nature*". Lastly, among the justifications given for the need to have a garden, we note the responses containing terms linked to the lexicon of flora and fauna. Responses such as "*the pleasure of vegetation*" or "*having flowers*" are included as sentences that express more of an attraction for vegetation in general or flowers per se, rather than any real interest for the living world. Conversely, the following example testifies to an undisputed attachment to the processes of life: "*gathering fruit, the colour of flowers, observing the diversity of species*". In total, 124 respondents or 21% of the entire sample stands apart from the others because they clearly display a specific bond with living matter when they refer to their relationship to the garden by employing words drawn from the lexicon of nature, the living world and flora, and fauna to a lesser extent. This category of individuals is distinguished by a number of criteria: they

tend to live more in the suburbs and have bigger gardens. Sixty-four percentage of these people are aged between 40 and 59. Most have children and are relatively highly qualified (68% have completed at least five years of postgraduate studies). Their professions are deemed to be in the average or higher-than-average bracket and they are high earners (58% of biophiles have an average monthly income of at least €4000 euros). Frileux (2013: 69–70) also noted this sensitivity to living matter when she wrote that a minority of people that she met have "*a highly developed awareness of the individual existence of plants*".

We have opted to use the term "biophile" to describe those inhabitants who express a high degree of sensitivity to the "living world". The hypothesis of "biophilia" was first advanced in 1964 by the psychologist and psychoanalyst Fromm (2002) before being taken up and popularised in 1984 by the biologist, entomologist and socio-biologist Wilson (2012) and being assigned various different definitions. Our research employs the notion in its simplest sense (attachment, attention, interest in living matter). In the light of our research findings presented previously, the garden is depicted as a space in which biophilia in the broadest sense may be given free rein. Indeed, the concept of biophilia makes it possible to understand humans' relationship with nature and with living beings. Reflecting upon biodiversity and our interaction with living matter (whether human or otherwise) is also a reflection upon oneself (Maris 2010; Lévêque 2008) and may challenge our own representation of ourselves. Because the related intimacy and ownership are often highlighted by respondents, the private garden could be a space conducive to such reflections.

While order and aesthetics generally appear to be two essential criteria underpinning the bonds between inhabitants and their gardens, an analysis of the photographs sent by respondents indicates that the places preferred by biophiles differ from those photographed by other respondents (whether they have a "nature profile" or not—Fig. 9.3). Snaps taken by non-biophiles almost systematically depict ordered vegetation whereas those taken by biophiles indicate greater tolerance for uncontrolled vegetation. Those individuals who express an interest in the living world within their gardens explain why they like spaces where vegetation is relatively uncontrolled and consequently appear to have a less aesthetic representation of nature: "*the beauty of my garden is related to the fact that it is colourful, vibrant and not always perfectly-tended*". Therefore, when tending their garden, gardeners need to make choices concerning the vegetation they wish to have (or not have), on the form this should take, and on the resulting aesthetic consequences.

Photo 5: *"It's the part that I like best because it's well kept so it's beautiful and we can enjoy it."*
Garden located in Sceaux *– non-biophile* respondent

Photo 6: *"I love this spot because it's proof that the garden should grow freely."*
Garden located in Sceaux *– biophile* respondent

Photos received in July, 2012

Fig. 9.3 Comparing parts of the garden appreciated by non-biophiles and biophiles (Photographs 5–6)

9.3 Sensitivity to Living Matter, Aesthetics and (Dis)Order in the Garden in Gauging the Relationship with Spontaneous Vegetation

9.3.1 Leaving a Planted Area in One's Garden in a Wild State: A Pro-biodiversity Practice

In the current biodiversity preservation environment, government environmental policy and the media are increasingly encouraging inhabitants to adopt pro-biodiversity techniques. For example, amateur gardeners are encouraged to keep an area in their garden in a wild state.[6] However, as reflected in the definition of "wild" provided around the mid-1980s in *Le dictionnaire pratique du jardin* (A practical dictionary of the garden) directed by Mioulane (1985: 265), keeping such spaces within domestic gardens was not always standard advice: wild "describes indigenous plants that grow spontaneously in certain places *that are of no interest for gardens,*[7] *or various different plantations*". Today, at both city and garden levels, wasteland, which is known for its floral diversity is a source of food and habitat for numerous species and—far from being devoid of interest—is considered a support for biodiversity (Muratet et al. 2008; Shwartz et al. 2013). Wilder vegetation can be more conducive to other groups of organisms (such as insects, birds or small mammals) and accentuate the diversity of living matter in this space (Menozzi et al. 2011; Muratet et al. 2008). It has been shown that lawns containing

---

[6]To avoid repetition, the term "wasteland" will be employed in the same manner as "space in a wild state".

[7]The underlining is the authors'.

spontaneous plant species have a positive impact on the diversity and abundance of pollinating insects, particularly honeybees and bumblebees (Ahrne et al. 2009; Kearns and Oliveras 2009; Shwartz et al. 2013). Keeping spontaneous vegetation generally involves less work for the inhabitant-gardener. Therefore, notions of order and aesthetics are apparent when studying what motivates inhabitant-gardeners to leave (or not to leave) a space fallow and sometimes to keep spontaneous vegetation in their gardens. How do inhabitants react to advice to leave part of their gardens untended? What encourages them to keep (or remove) spontaneous vegetation? In addition to having a specific relationship with living matter, respondents deemed to be biophiles are also conspicuous in having an aesthetic representation of their gardens—and especially plants—that is much less ordered than other inhabitants. In the light of these different observations, are they more tolerant of spontaneous vegetation than other respondents and if so, why?

9.3.2 Spontaneous Vegetation That Creates Refused or Accepted Order Is a Function of the Degree of Biophilia of the Inhabitant-Gardeners

Out of all the people interviewed, nearly two-thirds declare that they do not have any space kept in a wild state in their gardens and a significant proportion of respondents claim not to keep plants that "grow on their own". The most common reason given by half the inhabitants whose gardens do not contain wasteground is the fact that the garden is too small (Fig. 9.4). This primarily applies to those inhabitants who live in Paris. Most claim that their plot of ground is too small to allow them to "*lose space*". This finding appears to be attributable to a lack of space rather than any lack of interest on the part of inhabitants. If we ignore the high proportion of respondents who do not answer this question, the second reason advanced by those sampled who have no wasteground in their garden concerned aesthetic criteria related to order: "*the pleasure I get from a well-ordered garden; nothing should be out of place, otherwise it's not a garden*". Such explanations are mainly proffered by much older (at least 75 years old) non-biophiles for whom "*gardens should be well-kept*". For such gardeners, a space maintained in a wild state within one's garden constitutes an imperfection. Generally speaking, all of our findings demonstrate that the oldest amateur gardeners are much greater advocates of traditional gardens in a non-ecological manner than other respondents. Moreover, over 100 respondents of all ages justify not keeping spontaneous plants by the fact that they find them unaesthetic and consider that they deform their garden. These unwanted plants are a source of disorder and evidence of neglect on the part of inhabitant-gardeners themselves and of the space of which they are in charge. As they stress, they run contrary to the control over gardens that many strive for: "*They should be removed as they give an impression of neglect. What would the neighbours say?*"; "*They are not nice and they distort the beauty of other*
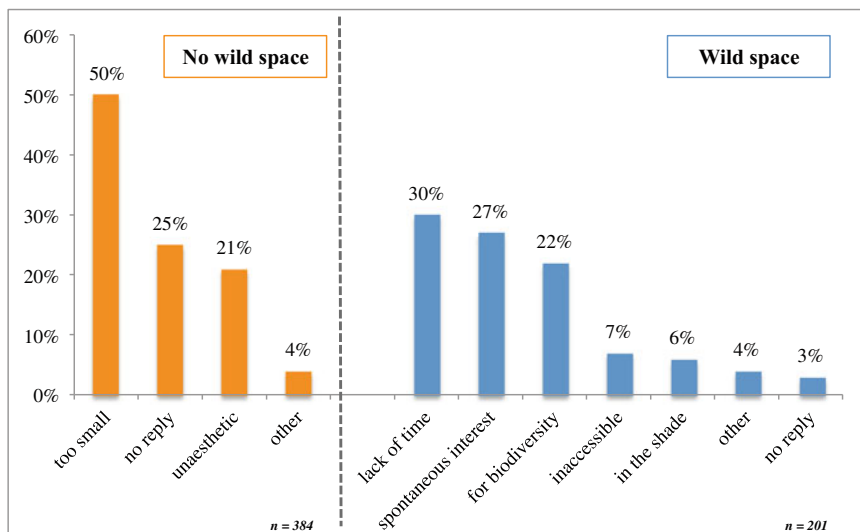
Fig. 9.4 Reasons why respondents do (or do not) have wild space in their gardens. *Source* 2012 survey, data and calculations M. Riboulot-Chetrit

plants"; "*They disrupt the homogeneousness of those that I decided to plant*". This last quote leads on to another reason mentioned by 45 inhabitants. These individuals remove certain plants because they get in the way of others that they have selected and planted. Seen in this light, those plants that grow on their own are intruders that challenge the well-planned, established order that gardeners seek to impose on their own space: "*they mess things up*"; "*in natural competition, I make sure that the plants I have planted win*". Lastly, another reason mentioned by 42% of respondents concerns the fact that these plants are too invasive [an explanation also provided by the inhabitants interviewed by Frileux (2013) when justifying the absence of indigenous species in hedges]. The vocabulary employed is evidence of dissatisfaction linked to intrusive vegetation that could constitute a challenge to notions of neatness for certain people: "*I have to get rid of them otherwise they take over my garden*"; "*it is hard work but you do what you have to do to get rid of them, otherwise they pop up everywhere and my garden becomes unrecognisable.*" Here, we note respondent's use of the possessive determinant "my" or the first-person singular pronoun to denote possession of certain selected plants as opposed to others that are not wanted by inhabitant-gardeners. This undoubtedly denotes an estrangement of nature or "wild nature".

Furthermore, while we have seen that the garden and gardening can create social bonds, this space and activity can also be a source of discord. More than one-quarter of participants claim to have had disagreements with their neighbours because of their gardens. The primary cause of such conflicts—mentioned by over nine out of ten individuals—is "*overgrown or invasive vegetation*". Respondents go on to denounce the "*intrusion*", "*surge*", "*onslaught*", "*proliferation*", or in more

measured terms, the "*presence*" in their gardens of trees, wisteria, plants, roots, pine cones or leaves from neighbouring garden spaces. All such inhabitants stress a lack of control exercised over vegetation by a neighbour or greater order needed: "*the neighbour doesn't look after his garden at all. It's been let run wild and consequently my beautiful garden has been overrun by parasitic plants, bindweed or other weeds. I have to work twice as hard to keep it in order*". Among those who advance such explanations, we note the overrepresentation of people with a "nature profile" which confirms that these respondents have a very orderly aesthetic representation and as such differ markedly from "biophiles". Drawing on the ENS Lyon gardens case study, Arnould (2012: 23–24) writes: "*Enclosing or confining amounts to mission impossible, particularly for living matter.* […] *The biodiversity thus created is an open biodiversity*". Living matter can neither be stayed nor compartmentalised. A garden tended in a manner conducive to biodiversity is not an immobile place but an evolving, interacting space that shifts and changes. And herein lies all the complexity: the balance that the inhabitant-gardener must strive for between tending the garden that she/he wants on their land, and a garden conducive to biodiversity; between control over living matter and this *living matter* itself.

Even though the majority of respondents do not want spontaneous vegetation in their garden, over one-third of people surveyed still have some wasteground on their land. From a statistical perspective, having such a space is only contingent on one criteria related to the inhabitant-gardener, i.e. the attention she/he pays to living matter. Indeed, over half of all biophiles have set aside a wild space, compared with less than 30% of other respondents. As Fig. 9.4 illustrates, the primary reason for inhabitants having a wild space is lack of time for tending the entire garden and it is more the hectic pace of life that accounts for neglected spaces rather than any real choice on the part of the amateur gardener. So, while these types of spaces are conducive to biodiversity, they largely exist independently of the will of inhabitants. Nevertheless, most of the people who put forward this argument also explain that this vegetation does not bother them and even appear to feel comfortable with what others may perceive as disorder. The second reason advanced by over three-quarters of people surveyed who leave aside a patch of wasteground concerns their attraction to spontaneous vegetation (Fig. 9.5, photographs 7 and 9). Most of these people are deemed to be biophiles, and this constitutes a deliberate choice. They see wasteground as a good thing that lends a garden a particular aesthetic dimension and is also perceived as favourable to living matter, as borne out in this extract: "*it's an English-style garden. It's free and that's why I find it beautiful*"; "*to lend it a slightly wild appearance in which different species can really thrive*". This proves that having a particular sensibility to living matter in one's garden may give rise to pro-biodiversity practices because the consequences of these practices are compatible with an aesthetic appreciation of the garden. These aesthetic representations, which are underpinned by notions of spontaneousness and less intervention on the part of the gardener, also serve as justifications for keeping plants that grow on their own: "*their beauty, form and colour brighten up the garden*"; "*they enhance my garden because they arrive of their own accord and are a boon for*

Photo 7: "*My wife sewed this mix of flower to add a touch of wildness.*"
Daisy (*Leucanthemum vulgare*), carnation (*Dianthus*), California poppy (*Eschscholzia californica*), etc. This photo and the accompanying description of upkeep are proof of the confusion that can exist around the whole notion of what "wild" actually means.
Biophile respondent – Garden located in Champs-sur-Marne

Photo 8: "*Look, there's an insect on the carnation!*"
We frequently encounter this longhorn beetle (*Stictoleptura fulva*) on daisies (which are also present in the fallow spot in photo 7).
Biophile respondent – Garden located in Champs-sur-Marne

Photo 9: "*I prefer gardens that are free and grow on their own.*"
There are spontaneous plants (notably grasses) on the ground as well as a hardy ornamental plant (*Geranium macrorrhizum*: geranium with extensive roots). We also find bushes and an ivy-covered wall (*Hedra helix*) which, even though it was planted, now extends beyond its assigned space (the wall) and is starting to "devour" the bench. Biophile respondent – Garden located in Champs-sur-Marne
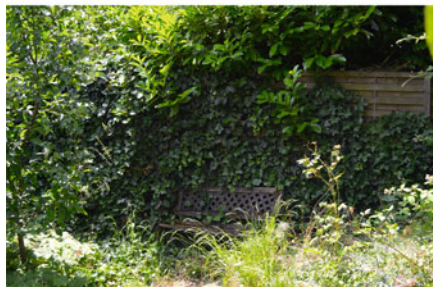
Photo 10: "*We leave a part of the garden fallow. This attracts insects and small animals that the children may observe, but we still try to keep it well tended.*"
Here we have a combination of spontaneous plants (both long grasses and small plants such as field bindweed) and ornamental plants.
Biophile respondent – Garden located in Champs-sur-Marne

The picture 9 gives the idea of a wild area barely circumscribed, whereas in the two other cases (pictures 7 and 10), what the amateur gardeners consider as "areas left wild" are well bounded and remain organized.

Photos : M. Riboulot-Chetrit, June, 2015

Fig. 9.5 Three illustrations of what inhabitant-gardeners consider to constitute a "wild spot" (photographs 7–10)

butterflies". The third reason that encourages inhabitant-gardeners to set aside a wild space is very interesting in terms of our research topic: nearly one-quarter of respondents with such a space—a majority of who are biophiles—keep it to preserve biodiversity (Fig. 9.5, photographs 8 and 10). Indeed, some of these gardeners mention biodiversity from its functional perspective: "*so that birds can get food*"; "*to provide shelter for hedgehogs*"; "*so that small animals have a place to feed and relax*". Nevertheless, photographs 7 and 10 (Fig. 9.5), together with interview extracts, show that in spite of this attraction for the spontaneous and/or biodiversity, inhabitant-gardeners, including biophiles, still exercise control over

this patch and circumscribe limits by sewing flowers on the fallow land. Consequently, this allows them to keep a certain control over their territories despite the presence of what they deem to be wild nature.

9.3.3 Encouraging Attention to Living Matter and a Less Ordered Aesthetic to Adopt More Pro-biodiversity Practices

These different findings show that having a patch of wild vegetation in one's garden and maintaining spontaneous vegetation signifies that the inhabitant-gardener must rethink the tended space, reconsider the notions of order and upkeep they associate with these and re-examine gardening habits and practices acquired or frequently inherited. If we draw on the aforementioned example of a "wild" patch whose definition has shifted (from "devoid of interest" to "positive for biodiversity"), we note that the same must hold for those representations that are projected by this concept. For the gardener, choosing pro-biodiversity practices such as maintaining a wild patch is contingent on surmounting both the physical and mental enclosure that guides the representation of this space.

So-called wild vegetation challenges both the inhabitant-gardener and his/her garden ownership relationship and the form of order she/he wishes to impose there. In *Eloge des vagabondes (In praise of wanderers)*, Clément (2014: 161) writes: "'*Wasteground' infused with shame, designates a loss of power for Man over his territory*". Allowing spontaneous vegetation to get into your garden is accepting to partially lose control over/of one's property. Having such a space means authorising non-selected plant elements and welcoming others frequently perceived as intruders. Favouring biodiversity by means of such practices also means enabling a visual shift in one's garden that is outside of one's control. This means going beyond what the amateur gardener himself would consider to be disorder.

In his work Toujours la vie invente (Life is constantly inventing), Clément (2008: 39) wrote of "the ideal garden": "We should really aim for what pleases us inside, what suits us, and not what is supposed to suit us based on what is acceptable in a nice civilised society". Within the scope of the private garden, for the moment, the new responsibility entrusted in spite of themselves on amateur gardeners does not greatly influence the manner in which they see their ideal garden. Only biophiles stand apart from other respondents. The attention devoted to living matter is the only criterion that guides those people surveyed who have had the experience of a patch of wasteground in their garden, albeit with a minimum of control. Moreover, these people are generally aware that this practice favours biodiversity. This tolerance for less controlled vegetation is attributable to the fact that these individuals have a different aesthetic representation of their gardens, partially built on a form of accepted—and even desired—disorder. If we wish to

encourage amateur gardeners to prefer practices beneficial to living matter on their private land, it would appear necessary to gradually make them aware of this living world and alternative aesthetic. Gardening to favour biodiversity must go hand in hand with encouraging those gardeners towards a new gardening aesthetic (Barrault 2012) in parallel with the related required upkeep. This support could be used in public pro-biodiversity policies. Indeed, our research indicates that public policy-based incentives have positive repercussions on the take-up by certain respondents of biodiversity-friendly gardening practices. By multiplying the number of related campaigns, public policies have a role to play in biodiversity management within private gardens. They could not merely encourage another private gardening aesthetic but also stress the importance of living matter within these gardens. Moreover, fostering citizen awareness of the living world has already begun through certain participative science programmes such as Observatories de la Biodiversité dans les Jardins (Observatory of biodiversity in gardens) (Cosquer et al. 2012). If inhabitant-gardeners find an interest in living matter within this space, they are more likely to accept a role from society that gives them more responsibility. Consequently, the ideal garden may be thought out and planned in biodiversity-friendly form.

Alongside information and awareness-raising campaigns, neighbourhood meetings about gardens could also be organised. The experiment carried out by Van Heezik et al. (2012) demonstrates that enhancing the biodiversity knowledge of private garden owners leads to positive changes in their approach to gardening and encourages them to garden in support of indigenous biodiversity within their garden. Our study demonstrates that a non-negligible proportion of people surveyed, especially those with a "nature profile", appeared eager to participate in this type of initiative, especially to learn to garden in a more ecological manner. These events could constitute forums for inhabitant-gardeners from the same sector to exchange, or where biophiles interested by such meetings could share their aesthetic representations of the garden, their knowledge and experiences. Finally, if representations of gardens and the links between these places and those who look after them evolve in a biodiversity-friendly way, the (partially visual) influence of neighbouring gardens(ers) could provide support for communal incentive initiatives and neighbourhood events by enabling the gradual circulation and adoption of more biodiversity-friendly gardening practices.

9.4   Conclusion

Inhabitants have a multifaceted relationship with their gardens in which order and aesthetics are two essential underlying criteria. Our research confirms certain findings already present in research literature. The functions and usages attributed to the garden condition gardening practices whereby the inhabitant demands regular upkeep so as to keep nature in order. Moreover, those people with a "nature profile" clearly link the importance of having a garden to the nature contained therein.

However, these individuals do not generally display any specific interest in the living world and more readily evoke overall aesthetic nature as a source of greenness and greenery. Therefore, the "nature profile" category does not make it possible to gauge the specific relationship between living matter and these species. Practising nature-related leisure pursuits undoubtedly signifies a willingness to (re)connect with nature but not necessarily to the forms of life that underlie that nature. However, another group—biophiles—stand apart from the other respondents. These people display a genuine sensitivity to living matter in their relationship with the garden. For them, the importance of the garden lies essentially in the living species found therein. They employ the terms that refer to the biological or ecological functioning of these species. Gardens in the heart of the Parisian agglomeration may therefore appear to be spaces that favour interaction between inhabitants and certain entities that they perceive from the living world, and as such constitute "meeting forums" (Raymond 2015). Also, these individuals have a less orderly and controlled conception of vegetation in their gardens than the other people interviewed.

Keeping spontaneous vegetation in one's garden is often seen as a source of disorder for most non-biophile inhabitants. This lack of control over vegetation goes against the image that they have/wish to project of themselves as well as against the carefully ordered nature that they wish to enjoy. Adopting this type of ecological practice necessarily leads inhabitant-gardeners to go beyond their organised representation of their gardens and rethink the type of image that their space projects. If the amateur gardener opts for ecological activities, she/he must learn not to battle the elements of their garden but to incorporate these into their practices and achieve a different type of balance. Pro-biodiversity gardening practices involve less emphasis on enclosures and accepting to lose a certain degree of control and authorise what are deemed to be "intruders". Favouring biodiversity through one's gardening practices also means reassessing one's space, comfort and gardening habits.

Our findings demonstrate that biophiles are more tolerant of spontaneous vegetation than other individuals because this *laissez-faire* attitude fits both with their relationship to their garden and their own aesthetic representation of this space. A number of research articles demonstrate that these green urban (private or public) spaces make it possible to (re)connect to nature (Bhatti and Church 2000; Freeman et al. 2012; Frileux 2013; Shwartz et al. 2014; Standish et al. 2012). Nevertheless, if we wish to enhance biodiversity in these spaces, it is necessary to get past this observation and encourage a connection between *living matter* and the individual. Therefore, it is this sensitivity to living matter and this aesthetic form that need to be leveraged in order to favour biodiversity in private gardens via gardening practices that could also be encouraged by local policies and campaigns.

References

Ahrne K, Bengtsson J, Elmqvist T (2009) Bumble bees (Bombus spp.) along a gradient of increasing urbanization. PLoS ONE 4(5):e5574

Arnould P (2012) Un jardin dans la ville-Quelle biodiversité urbaine pour demain? L'exemple du jardin de Gilles Clément à l'ENS de Lyon. Territoire en mouvement 12. Available via http://tem.revues.org/1436. Accessed 1 Jan 2014

Arnould P, Simon L (eds) (2007) Géographie de l'environnement. Editions Belin, Paris

Barbault R (2006) Un éléphant dans un jeu de quilles. L'homme dans la biodiversité. Editions du Seuil, Paris

Barrault J (2012) Les pratiques de jardinage face aux risques sanitaires et environnementaux des pesticides: les approches différenciées de la France et du Québec. Ph.D. thesis in sociology. Toulouse 2 Jean Jaurès University, Quebec Montreal University

Bhatti M, Church A (2000) I never promised you a rose garden: gender, leisure and home-making. Leisure Stud 19(3):183–197

Blanc N (2008) Éthique et esthétique de l'environnement. EspacesTemps.net. Available via http://www.espacestemps.net/articles/Ethique-et-esthetique-de-environnement. Accessed 13 Jul 2014

Calenge C (1997) De la nature de la ville. Ann Rech Urb 74:12–19

Clément G (2007) Le jardin en mouvement: de la vallée au champ via le parc André-Citroën et le jardin planétaire. Sens & Tonka, Paris

Clément G (2008) Toujours la vie invente: réflexions d'un écologiste humaniste. Edition de l'Aube, La Tour d'Aigues

Clément G (2011) Une brève histoire du jardin. L'OEil neuf. JC Behar, Paris

Clément G (2014) Eloge des vagabondes: herbes, arbres et fleurs à la conquête du monde. Robert Laffont, Paris

Cohen M, Baudoin R, Dajoz I, Godron M, Grésillon E, Palibrk M, Cornet N, Simon R (2014) Les jardins de deux quartiers parisiens. Biodiversité, gestion et appropriation habitantes. In: Menozzi M-J (ed) Les jardins dans la ville, entre nature et culture. Presses Universitaires de Rennes, Rennes, pp 289–304

Cosquer A, Raymond R, Prévot-Julliard AC (2012) Observations of everyday biodiversity: a new perspective for conservation? Ecol Soc 17(4):2. Available via http://www.ecologyandsociety.org/vol17/iss4/art2. Accessed 4 Mar 2013

Dubost F (1999) Plates-bandes et herbes folles: les ethnologues au jardin. In: Brunon H (ed) Le jardin, notre double sagesse et déraison. Autrement, Paris, pp 17–30

Dubost F, Lizet B (2003) La nature dans la cité. Communications 74:5–18

Dunnett N, Qasim M (2000) Perceived benefits to human well-being of urban gardens. HortTechnology 10:40–45

Fouchier V (2007) Le cœur d'agglomération. Quelques éléments sur des définitions potentielles et sur ce qu'en dit le projet de SDRIF. Institut d'aménagement et d'urbanisme Ile-de-France, Paris

Freeman C, Dickinson KJM, Porter S, Van Heezik Y (2012) "My garden is an expression of me": Exploring householders' relationships with their gardens. J Environ Psychol 32:135–143

Frileux P (2013) Le bocage pavillonnaire: une ethnologie de la haie. Creaphis Éditions, Grâne

Fromm E (2002) Le cœur de l'homme. Sa propension au bien et au mal. Editions Payot et Rivages, Paris

Gaston KJ, Smith RM, Thompson K, Warren PH (2005) Urban domestic gardens (II): experimental tests of methods for increasing biodiversity. Biodivers Conserv 14:395–413

Goddard MA, Dougill AJ, Benton TG (2010) Scaling up from gardens: biodiversity conservation in urban environments. Trends Ecol Evol 25(2):90–98

Goddard MA, Dougill AJ, Benton TG (2013) Why garden for wildlife? Social and ecological drivers, motivations and barriers for biodiversity management in residential landscapes. Ecol Econ 86:258–273

Hondagneu-Sotelo P (2010) Cultivating questions for a sociology of gardens. J Contemp Ethnogr 39(5). Available via http://jce.sagepub.com/content/39/5/498. Accessed 17 May 2013

IAU Ile-de-France (2015) Le cœur de l'agglomération. Available via http://www.iau-idf.fr/liau-et-vous/mediatheque/expositions/a-classer/archives/les-grands-paris-dunemetropole-durable/axes-de-reflexion/le-coeur-de-lagglomeration-quelle-definition.html. Accessed Feb 2015

Kearns CA, Oliveras DM (2009) Environmental factors affecting bee diversity in urban and remote grassland plots in Boulder, Colorado. J Insect Conserv 13:655–665

Le Bot JM, Sauvage A (2011) Les habitants et la biodiversité. In: Clergeau P (ed) Ville et biodiversité. Les enseignements d'une recherche pluridisciplinaire. Presses Universitaires de Rennes, Rennes, pp 67–104

Lévêque C (2008) La biodiversité au quotidien. Le développement durable à l'épreuve des faits. Editions Quae, IRD Editions, Paris

Loram A, Warren P, Thompson K, Gaston K (2011) Urban domestic gardens: the effects of human interventions on garden composition. Environ Manage 48:808–824

Marc JV, Martouzet D (2012) Les jardins créoles et ornementaux comme indicateurs sociospatiaux: analyse du cas de Fort-de-France. VertigO - la revue électronique en sciences de l'environnement. Hors-série 14. Available via https://vertigo.revues.org/12526. Accessed 17 May 2013

Marco A, Dutoit T, Deschamps-Cottin M, Mauffrey JF, Vennetier M, Bertaudière-Montes V (2008) Gardens in urbanizing rural areas reveal an unexpected floral diversity related to housing density. C. R. Biologies 331:452–465

Marco A, Barthelemy C, Dutoit T, Bertaudière-Montes V (2010) Bridging human and natural sciences for a better understanding of urban floral patterns: the role of planting practices in mediterranean gardens. Ecol Soc 15(2):2. Available via http://www.ecologyandsociety.org/vol15/iss2/art2/. Accessed 10 May 2011

Maris V (2010) Philosophie de la biodiversité. Petite éthique pour une nature en péril. Buchet Chastel, Paris

Marty P, Vivien F-D, Lepart J, Larrère R (2005) Les biodiversités, objets, théories, pratiques. CNRS Editions, Paris

Mathieu N, Morel-Brochet A, Blanc N, Gajewski P, Grésillon L, Hebert F, Hucy W, Raymond R (2004) Habiter le dedans et le dehors: la maison ou l'Eden rêvé et recréé, Strates, 11. Available via http://strates.revues.org/430. Accessed 9 Feb 2014

Menozzi MJ, Marco A, Léonard S (2011) Les plantes spontanées en ville, revue bibliographique. Etude Acceptaflore. Edition Plante & Cité. Available via http://www.ecophytoznapro.fr/data/revue_biblio_ind.pdf. Accessed 3 Jun 2013

Mioulane P (1985) Le dictionnaire pratique du jardin. Hachette, Paris

Muratet A (2006) Diversité végétale en milieu urbain: l'exemple des Hauts-de-Seine. Ph.D. thesis in ecology, Paris 6 Pierre et Marie Curie University

Muratet A, Porcher E, Devictor V, Arnal G, Moret J, Wright S, Machon N (2008) Evaluation of floristic diversity in urban areas as a basis for habitat management. Appl Veg Sci 11:451–460

Nilon CH (2011) Urban biodiversity and the importance of management and conservation. Landsc Ecol Eng 7(1):45–52

Quellier F (2012) Histoire du jardin potager. Armand Colin, Paris

Raymond R (2003) La concertation sur l'espace cultivé et la nature dans le Vexin français. Economie Rurale 273(1):169–183

Raymond R (2015) Les territoires de la biodiversité. A la recherche d'une cohabitation entre société et biodiversité. In: Conseil Général de la Seine-et-Marne (ed) Atlas dynamique de la biodiversité en Seine-et-Marne, Tome 4 Relations sociétés et biodiversité, p 47–60

Raymond R, Simon L (2012) Biodiversité: les services écosystémiques et la nature en ville. Rev For Fr LXIV 3:339–350

Riboulot-Chetrit M (2015) Les jardins privés: de nouveaux espaces clés pour la gestion de la biodiversité dans les agglomérations?, Articulo - Journal of Urban Research, Special issue 6, Available via http://articulo.revues.org/2696

Riboulot-Chetrit M (2016) Les habitants et leur jardin. Relations au vivant, pratiques de jardinage et biodiversité au cœur de l'agglomération parisienne. Ph.D. thesis in geography, Paris 1 Pantheon-Sorbonne University

Riboulot-Chetrit M (2017) Les habitants et leur jardin du cœur de l'agglomération parisienne, une relation multidimensionnelle: de l'espace intime à une attention manifeste au vivant. In: Caiozzo A, Foulon B (ed) Etudier le jardin en Sciences humaines et sociales. Méthodologie, problèmes et enjeux. Presses Universitaires de Valenciennes, Valenciennes (in press)

Shwartz A, Muratet A, Simon L, Julliard R (2013) Local and management variables outweigh landscape effects in enhancing the diversity of different taxa in a big metropolis. Biol Cons 157:285–292

Shwartz A, Turbé A, Julliard R, Simon L, Prévot-Julliard AC (2014) Outstanding challenges for urban biodiversity conservation research and action. Glob Environ Change 28:39–49

Smith RM, Thompson K, Hodgson JG, Warren PH, Gaston KJ (2006) Urban domestic gardens (IX): composition and richness of the vascular plant flora, and implications for native biodiversity. Biol Cons 129(3):312–322

Standish RJ, Hobbs RJ, Miller JR (2012) Improving city life: options for ecological restoration in urban landscapes and how these might influence interactions between people and nature. Landsc Ecol 28:1213–1221

Van Heezik YM, Dickinson KJM, Freeman C (2012) Closing the gap: communicating to change gardening practices in support of native biodiversity in urban private gardens. Ecol Soc 17 (1):34

Wandriesse (same publication)

Wilson EO (2012) Biophilie. Editions Corti, Paris

Author Biographies

Mathilde Riboulot-Chetrit wrote a Ph.D. thesis in geography at Paris 1 Pantheon-Sorbonne University (*Inhabitants and their garden. Connections to the living, gardening practices and biodiversity within of the greater Paris area*—2016). Her research focuses on ecosociological diversity and mainly concerns the questions of interaction between inhabitants and nature/the living/urban biodiversity (uses, attitudes, representations, biophilia, etc.).

Laurent Simon is professor at Paris 1 Pantheon-Sorbonne University. He is member of the National Council of Universities and was Director of the Department of Geography of Paris 1 University. His research focuses on ecosociological diversity, urban biodiversity and forest biodiversity. He is the author or co-author of more than 20 international publications since 2005 and of several books. He is expert for the National Agency of Research and has been at the head of different research programmes since 2007.

Richard Raymond is a researcher at the French National Center for Scientific Research (CNRS). With other researchers from different fields (political science, sociology, geography, anthropology, ecology…), he aims at analysing the factors contributing to collective forms of involvement regarding the future of territories and the ways in which these social actors integrate biodiversity and landscapes into their actions. His research focuses on the sharing of ideas, knowledge or beliefs among these factors.

Part III
How Gardens are Part of the Urban Landscape Policies and Practices

Chapter 10
A New Design for Urban Gardens: Being Framed in the Green Infrastructure

Sandrine Glatron

Abstract Green infrastructure and urban gardens seem to have an intertwined destiny, biodiversity constituting for both of them a new order that guides their legitimization, their inscription in the urban space, the modalities of their organization and management. How do gardens, and urban agriculture in general, contribute to biodiversity in cities and are integrated into the development of the green infrastructure for that specific matter? How are they taken into account in the planning of such infrastructures, in the discourses and design of the latter? How, finally, do they become an element of the discourses and the awareness of the inhabitants about the question of the green infrastructure and could constitute elements of anchoring of the policy to associate/sensitize the citizens to this urban project? By varying the focal length and observation scales of the green infrastructure, from a bird eye view to a ground view (worm view), we will see in this chapter how urban gardens are integrated into the design, political and ideological objectives of green infrastructures as well as into the practices of city dwellers in relation to biodiversity through various European examples.

Keywords Green infrastructure · Urban gardens · Biodiversity
Multifunctionality · Urban planning · Strasbourg · Marseille

Thinking about the urban environment, we could question the very possibility of a rich biodiversity because of the classic antinomy between city and nature, biodiversity being a reflection of "Nature", a natural history of which humanity would be excluded or had only an ancillary role (Micoud 2005). However, many works carried out by scientists, by local authorities or even by city dwellers themselves within associations or observation campaigns highlight the importance of biodiversity in cities, especially of the fauna. In order to reinforce this ordinary

S. Glatron (✉)
Dyname UMR 7367, CNRS, Strasbourg, France
e-mail: Sandrine.glatron@misha.fr

biodiversity, the strategies that are favourable to it all over the world have led to the promotion of policies designed to limit its erosion or even encourage its restoration to the bosom of cities.

At the European level, since the Council Directive of 2 April 1979 on the conservation of wild birds, various measures are aiming at protecting species. The most noteworthy, strongly relayed by awareness-raising actions, is the Natura 2000 policy: in May 1992, the European Union adopted the Habitats Directive, a legislation designed to protect the most seriously threatened habitats and species across Europe. It's a complement of the Wild Birds Directive previously mentioned and creates a network of sites called Natura 2000. These sites consist in special areas of conservation. In the same idea, the green infrastructure meets this objective of protecting endangered species. Among the European biodiversity strategies aimed at halting the global biodiversity loss, the green infrastructure is promoted by the European Commission as a "cost-effective alternative to traditional infrastructure".[1] In France, the green and blue infrastructure (la trame verte et bleue—TVB) is one of the key measures of the "Grenelle de l'environnement", an environmental round table launched in 2007 by French President Nicolas Sarkozy to bring the various stakeholders to discuss the actions and policies that would be undertaken over the following ten-year period to support sustainable development and ecology. The green and blue infrastructure spread out in the different environments by extending the idea of ecological continuity to the domain of terrestrial waters (blue frame), insofar as the hydrological linear offers great possibilities in terms of connectivity, whether in the aquatic environment itself or on land, along the river banks.

The notion of green (and blue) infrastructure is therefore listed as a priority of the Grenelle de l'environnement,[2] via the French laws called Grenelle 1 and 2 about the "national commitment to the environment". These laws have territorialized the national green and blue frame and have made it an instrument of public action via the regional schemes of ecological coherence (schémas régionaux de cohérence écologique—SRCE). The blue infrastructure relies on the water planning and management schemes (schémas directeur d'aménagement et de gestion des eaux— SDAGE—et schémas d'aménagement et de gestion deseaux—SAGE), both planning tools, designed by the French "water law" of 1992 to manage the water resource of the whole territory, in a balanced and sustainable way, at various scales. The green and blue infrastructure is a framework and a major tool for planning: it intends to promote the ecological restoration of the territory.[3] Declined on several scales, the whole Europe to the district (commune), the green and blue

---

[1]http://ec.europa.eu/environment/nature/index_en.htm.

[2]Law 2010-788 «portant engagement national pour l'environnement (ENE)» so-called Grenelle 2, was adopted on 12 July 2010.

[3]The Grenelle 2 law Stipulates in Article L.121, transcribed in the article L371-1 of the *Code of the Environment*: "I. The green infrastructure and the blue infrastructure aim to stop the loss of biodiversity by participating in preserving, managing and restoring the milieu, as much as necessary for ecological continuity, while taking into account the human activities, and in particular agricultural activities, in rural areas".

Fig. 10.1 Components of the green infrastructure in order to ensure connectivity through the conservation or restoration of ecological corridors. *Source* Various sources, among which environmental bank.com

Restoration areas

Stepping stones

Matrix

Core green area = nodal zone = biodiversity reservoir

Ecological / landscape corridor
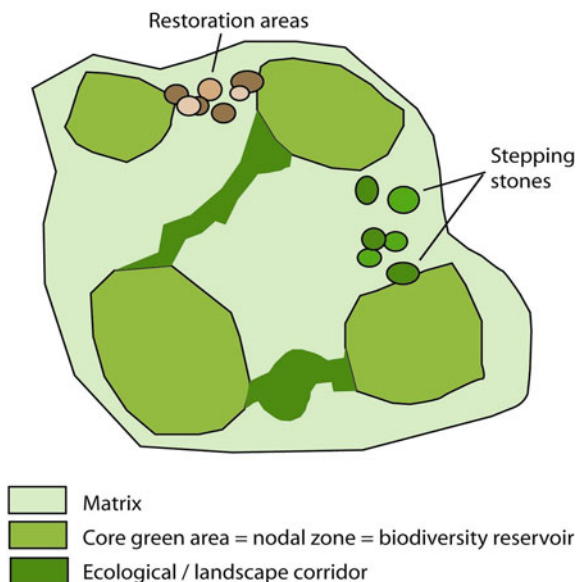
infrastructure policy is supposed to be applied in all types of environment, whether "natural", rural or urban.

This framework is based on the principles of landscape ecology which proposes the scheme of a now well-known functional approach that can be found in many documents whether scientific and operational or of dissemination to the public (Fig. 10.1).

The role of the green infrastructure is to "maintain or even reinforce the resilience and functionality of ecosystems (…) in order to preserve the evolutionary processes necessary for their adaptation and to maintain the biodiversity. Moreover, in a context of global change, species must be able to move in order to find the best environmental conditions to live. The definition, preservation and restoration of the green and blue infrastructure (trame verte et bleue—TVB) are a priority, while being vigilant about its impact on the movement of invasive exotic species and vectors of disease. Ecological continuities are particularly **based on the so-called ordinary biodiversity. They also have their place in urban areas"** (…).[4]

Urban areas are therefore concerned by the green and blue infrastructure. They appear as particularly sensitive spaces for various reasons:

---

[4]Principles set out in the National Biodiversity Strategy (2011–2020), a programming and action document originally published in 2004, which reflects one of the major thrusts of the National Strategy for Sustainable Development. This Strategy is set out after the French ratification of the Convention on Biological Diversity (1994) established at the Rio Summit in 1992. This Strategy has been revised in 2011 (2011–2020) after Grenelle 2 was promulgated.

1. even though cities occupy a minor portion of the globe—according to scientific estimates, ranging from 0.2 to 2.4% of terrestrial land area circa 2000 (Potere and Schneider 2007; Seto et al. 2011)—urban sprawling is persistent on all continents, threatening many natural habitats; moreover, they dominate modes of land occupancy widely responsible for the fragmentation of the environments (e.g. the expansion of road network and soil waterproofing). Besides, cities origin lifestyles that heavily weigh on the biodiversity while increasing mobility, pollution, important drainage of natural resources, destruction of habitats (Seto et al. 2012);

2. in the landscape ecology scheme and approach (Fig. 10.1), the urban matrix is very impervious and requires voluntary and strong planning measures to keep or set up ecological corridors;

3. urban spaces shelter the majority of the earth human population, who constitute a potential reservoir of awareness: the exemplification that green infrastructure proposes in cities is likely to play an important role in the development of "green" ideas and the fight against the erosion of biodiversity.

   In this multidimensional approach, urban green places constitute spatial and "ideological" support of great importance. In addition to public parks, these green places should include allotments, private gardens and community gardens, although the latter are still a minority in the area occupied by urban gardens; they are growing in popularity making possible to respond to a multifunctionality that policies encourage and search to explicitly attribute to the green infrastructure, at various scales.

   Green infrastructures and urban gardens therefore seem to have an intertwined destiny, biodiversity constituting for both of them a new order which guides their legitimation, their inscription in the urban space, the modalities of their organization and their management (Riboulot-Chetrit 2015). How do gardens, and more broadly urban agriculture, contribute to biodiversity in cities and are integrated as such into the development of green infrastructures? How do they participate, in discourses and designs, in the planning of green infrastructures? How, finally, do they become an element of discourse and awareness of the green network for the inhabitants and can constitute elements of anchoring of the policy to associate/sensitize the urban inhabitants to this urban project? By varying the focal length and observation scales of the green infrastructure, from a bird view to a worm view, we will see in this chapter how urban gardens are integrated into the design, the political and ideological objectives of the green infrastructure and the practices of city dwellers in relation to biodiversity.

   Through various European examples, from my own research fields mainly focused on Strasbourg (France), to cases drawn from the scientific literature and documents published on the internet by the local authorities, I will show that gardens are an interesting brick in the establishment of ecological continuity. The tools and methods used to plan and implement the green infrastructure, when viewing the framework from the sky (bird eye), "naturally" integrate urban gardens to establish the design of this infrastructure (I). Focusing on the

policies speeches outreached in the city planning documents as well as in the communication media supports to the public, I will see how gardens, inserted in the green infrastructure, are explicitly carrying the multifunctionality and ecosystemic services of nature spaces in the city[5] (II). However, I will eventually question this common purpose to understand the "measured" reality of biodiversity that these gardens potentially bring to urban areas: we can perceive that the biodiversity keeps needing further exploration and that it encounters specific obstacles when considered in the very urban situation (III).

10.1   Gardens as an Element of the Urban Landscape Integrated into Urban Green Areas: The Macro-scale Approach

10.1.1   A Bird Eye First Approach of the Vegetalized Places in the City

The satellite imagery used to map spaces and lands has shown how much green space, including gardens, can be important in cities. For example, as part of a research project on the assessment of the urban green infrastructure,[6] Consalès et al. (2012) published a map of "Marseille in negative", which highlighted how the urban area appears to be "green", even in the vicinity of the city centre, which is so mineral when seen from the ground (Fig. 10.2). Of course, it should be mentioned that Marseilles incorporates vast natural areas, including protected areas, within its communal borders: significantly, part of the Calanques national park, a limestone mountain range overlooking the sea, extends to the south-east communal territory of the agglomeration and occupies nearly half of Marseille district. Furthermore, scrublands, positioned in aureole around the urban space, contribute to dress the map of green areas. Thus, the large hillside range occupies a fundamental place within the ecological mesh of the urban area. But they are far cry from being the only natural spaces of the metropolis. The authors of the study describe the three different "units" according to the increasing density of "green" on the Marseille negative map.

---

[5]In this paper, we don't deal with the controversial alimentary function of the urban gardens, as the main focus is on biodiversity.

[6]Trames Vertes urbaines, Evaluation des trames vertes urbaines et élaboration de référentiels: une infrastructure entre esthétique et écologie pour une nouvelle urbanité (Urban Green infrastructures, Assessment and development of references: an infrastructure between aesthetics and ecology for a new urbanity); research project founded by the French National Research Agency—ANR—Villes durables (2008, 2009–2012) with Nathalie Blanc (CNRS, LADYSS) and Philippe Clergeau (CNRS, Muséum d'Histoire naturelle) as leaders.
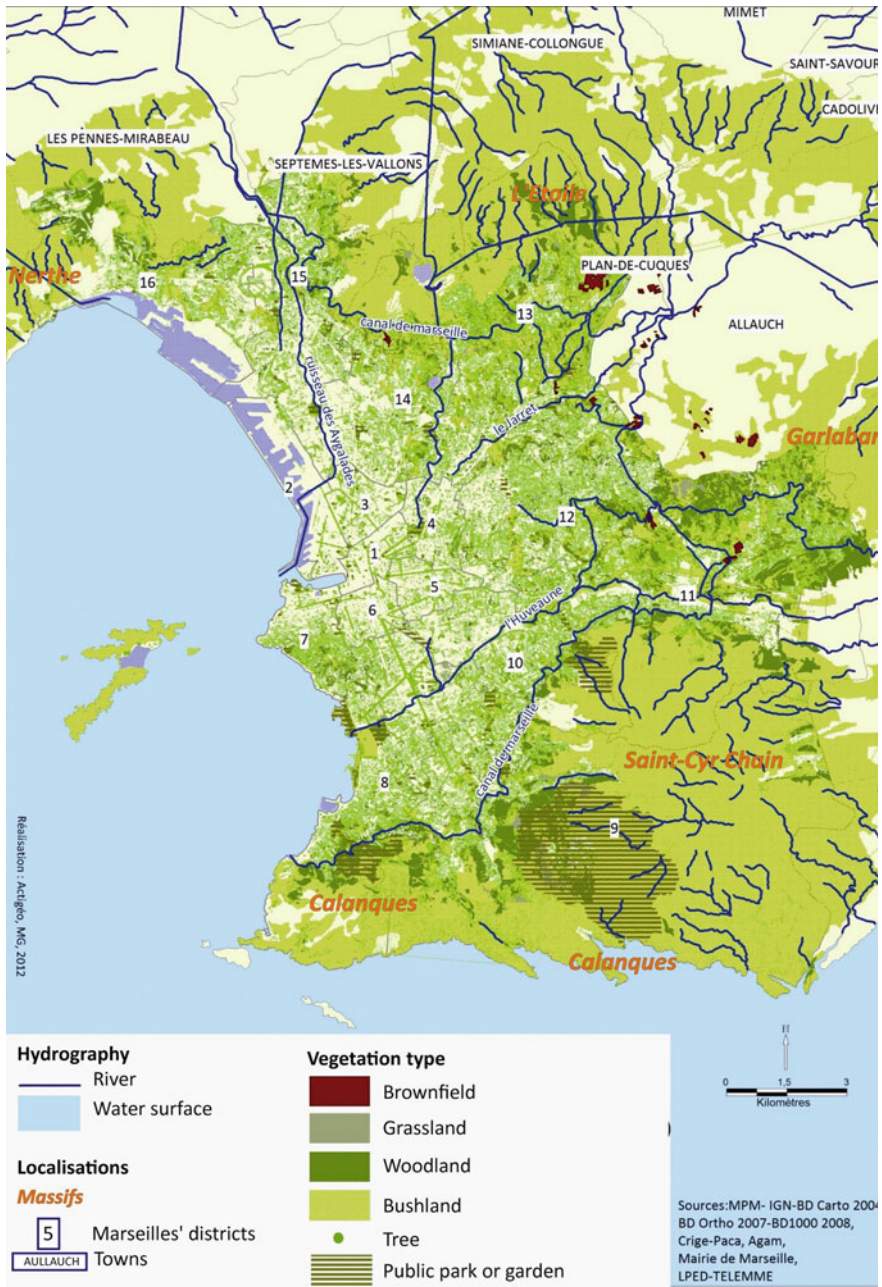
Fig. 10.2 Marseille in negative: the vegetalized areas in the urban area. *Source* Consalès et al. (2012)

1. A low density of green characterizes the first aureole. It corresponds to the more or less flat coastal fringe on which the central and pericentral urban areas have spread over. In this unit, which is largely dominated by a dense urban matrix, natural spaces are almost exclusively composed of tree alignments linked to roads and public gardens (parks and squares) or private gardens (gardens in the house blocks), inherited from the Industrial Revolution urbanization period.

2. An obvious increase in the density of the green can be observed in the second aureole. Green space takes place on the set of small hills, plateaux and slopes which forms the foothills of the peripheral limestone massifs. It is the domain of the *terradou* (terroir = soil): the former agricultural suburb of Marseilles. Mostly structured in the nineteenth century, thanks to the construction of the Marseilles canal, around village nuclei and large bourgeois properties (the *bastides*), this agricultural suburb became residential zones during the Thirty Glorieuses, according to a mode of loose urbanization generating many vegetalized "voids". Here, nature-like spaces seem to be essentially composed of private gardens (in collective housings and residential housing areas) as well as wasteland and abandoned areas, formerly agricultural space, covered with low spontaneous vegetation, on flat surfaces, and high vegetation like wood, on hillside slopes. This high vegetation, mainly composed of pine forests, occupies either the terroirs formerly devoted to cultivation terraces (*restanques* or *bancaous*) or sectors which remained on the margins of urbanization being located on steep slopes.

3. The third and final land unit is entirely green. It corresponds to the limestone massifs all around the communal zone. They are natural or semi-natural environments mainly composed of garrigues: in this respect, they are real reservoirs of communal biodiversity, subject of various protection logics. To the north, the Nerthe, Etoile and Garlaban massifs are protected by local planning tools (natural areas in the Plan of Land Use), while in the south, the Marseilleveyre massif and the Calanques are now a national park (Consalès et al. 2012).

Depending on the city, there is a large disparity in the types of green space thus mapped and typified in many databases and maps such as those reproduced below (Fig. 10.3).

The "old" town centres, dominated by collective housing, are equipped with a green frame mainly consisting of squares and parks. In the peripheral ring, the habitat is less dense and the detached houses prevail while the distance is growing away from the city centre. Lifestyles and urban traditions, however, change the cityscapes, particularly concerning the vegetation proportion and the form of the green framework: the single-family house surrounded by a private garden is more rapidly present on the urban gradient in the Anglo-Saxon world than in the Latin cities.

It is sometimes difficult to have more detailed information on green spaces. It obviously depends on the scale of observation and, above all, on the rendering scale of the studies. The scale of the urban area as a whole remains necessary for the reflection on the green continuities. Today, it is relatively easy to extract
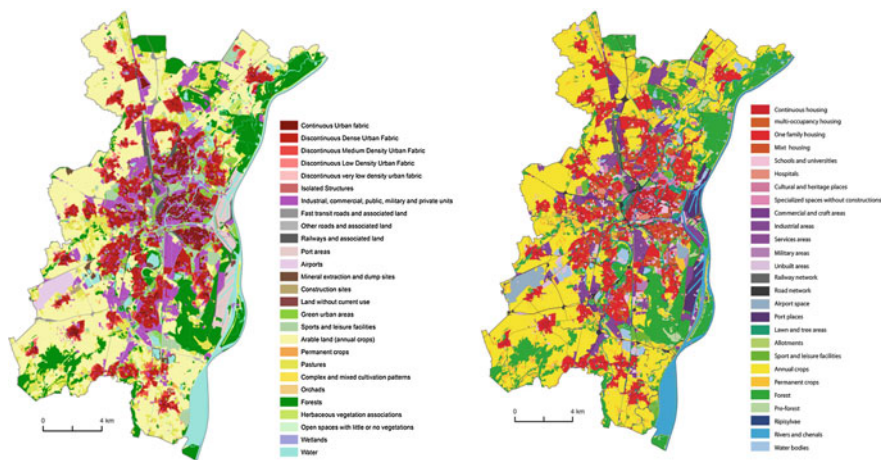
Fig. 10.3 a, **b** The place of vegetation in cities: maps with categories that generalize the land occupancy. The example of urban atlas and the municipal database for the urban area of Strasbourg. *Source* Urban atlas and Strasbourg Eurometropolis

Végétation arborée

Végétation herbacée
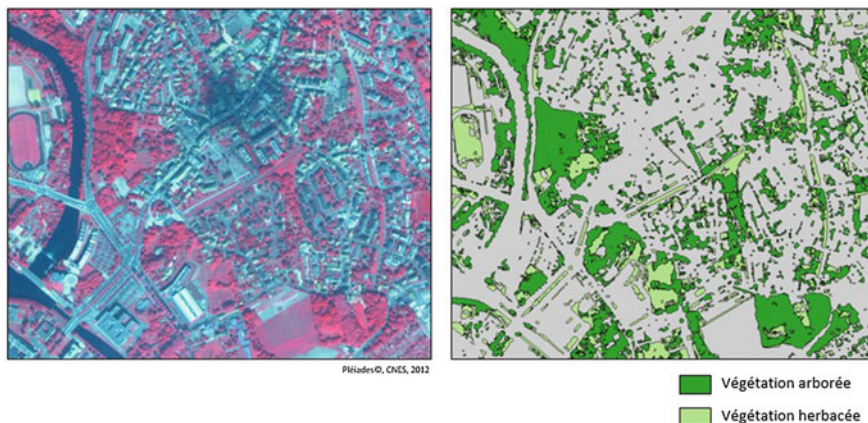
Fig. 10.4 Precise green map by extraction and processing of very high-resolution spatial image (Rougier 2017), Pleiades image extract

vegetation from satellite images and thus obtain a fine picture of the vegetation, fragmented and dispersed in the city (Fig. 10.4). Numerous works in geography, geomatics and in operational environments attempt to typologize these green spaces, to differentiate the plant arrangements, using a classification method. This is the case of Simon Rougier's doctoral research entitled "Contribution of satellite images with very high spatial resolution coupled with multi-source geographical data for the analysis of urban spaces" (Rougier 2016). For his study of the urban green infrastructure, S. Rougier bases his classifications on

three types of green spaces: tree vegetation, herbaceous vegetation and agricultural plots. He combines a morphological approach with a functional approach. Then, he proposes a classification of urban spaces based on the combination of green spaces and built-up areas. These arrangements between green and grey lead to nine urban classes, each subdivided into 2–8 subclasses according to the combinations of different green elements and grey elements and their dimension, density, compactness of the various building components, presence of vegetation and water. The map (Fig. 10.5) results in very fine

Space without urban elements
- NA (agricultural area)
- NB (tree area)
- NC (grassland)
- ND (water body)
- NE (border area)
- NF (railway and road network)
- NG (isolated built area)
- NH (built area with specialized functions)

Urbain space
- UA (built area - inner city type)
- UB (built area collective housing)
- UC (built area inner village type / family housing)
- UD (built area individuel housing type)
- UE (built area with mix individuel / collectif housing)
- UF (specialized area)
- UG (railway, road, water network)
- UH (non built area)
- UI (wide mix area)

Fig. 10.5 Urban map of Strasbourg according to a complex classification of spatial types, based on the morphological combination of the green infrastructure and the grey matrix (Rougier 2016)

indications on the composition of the urban fabric in relation to the presence of natural spaces (vegetation and water), but it provides only morphological, not functional, information which only allows a first approach in terms of biodiversity. For example, we don't know anything about the species composition, the nature of the soil and if visitors attend the patches. Therefore, the function of these patches in the green infrastructure, as biodiversity reservoir or part of the corridor, can't be precised at this step.

Approaching the urban fabric thanks to aerial or satellite images makes it possible to partly free from the ground truth to account for the spaces vegetation occupies. However, we are not knowledgeable about the composition of these spaces, their functionality and, consequently, their biodiversity. Pu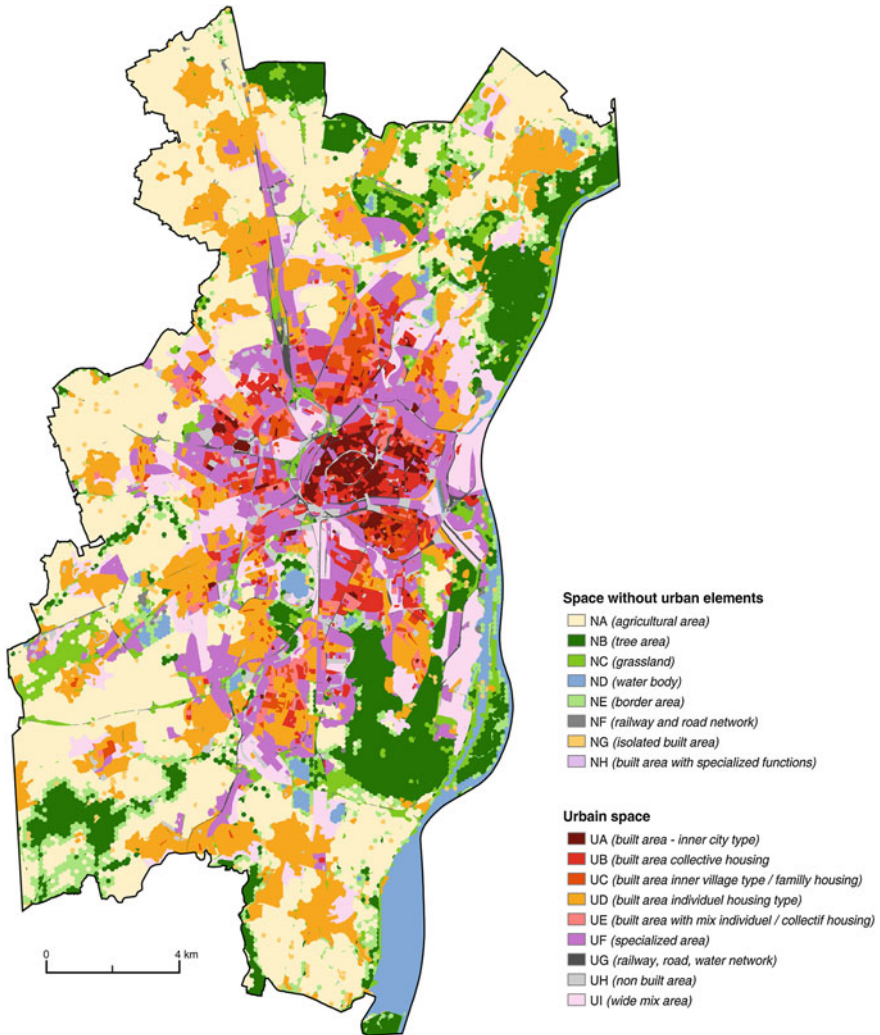blic green areas are relatively well identified and monitored by public authorities. But in the dense city centre, they often represent only a very small area, although they may be interesting because of their unit surface, some representing entire and unfragmented "patches" of nature.

10.1.2 The Spatial Importance of Urban Gardens in City

Quantifiable on "simplifying" maps in terms of composition and functionality, in this way, green areas account for up to 30% of the surface area of cities. The gardens themselves sometimes reach more than a third of the "environmental" area, as reported by Goddard et al. (2010), for the European cities: "Estimates of the areas of gardens in the urban environment vary from 16% in Stockholm (Colding et al. 2006), through 22–27% in the UK (Gaston et al. 2005), to 36% in Dunedin (Mathieu et al. 2007). Gardens are a major component of the total green space in many UK cities, ranging from 35% in Edinburgh to 47% in Leicester (Loram et al. 2007)». The proportion of domestic gardens in the urban green space would even reach 50% in Dunedin, New Zealand (Mathieu et al. 2007), and we can easily imagine that the same is true in the USA, where individual habitat with backyard or gardens is the general rule: at the turn of the millennium, the total area of lawns in domestic gardens, mainly in urban areas, was estimated to more than 10 million ha, far in front of the area devoted to certain crops, like cotton (Robbins et al. 2001).

Given the very uneven distribution of green spaces in the urban area, private or public green places, including gardens, contribute to homogenizing the proportion and distribution of green space in the city. The "archipelization" of these spaces is crucial for the design of green frames because it allows establishing continuities where large but not equally distributed green patches could not have done so. It is especially noteworthy that they can be located up close to the city centres, which makes it possible to improve the proportion of vegetation where public green spaces occupy relatively small cumulative areas.

"Global" approaches, through cartography and spatial analysis, make it also possible to assess the very important part of gardens in the city's biodiversity: on the basis of the average tree capacity of plots, including fruit trees and biodiversity-friendly facilities such as ponds, hives, insect hotels or nest boxes, the BUGS programme team considered that gardens create a considerable reservoir as they would house nearly 30 million trees, 4.7 million nest boxes and 3.5 million ponds (Davies et al. 2009).[7] The contribution of gardens to habitats has been proved, although in a highly variable way depending on the species. For birds and insects, many studies have emphasized the importance of birds in the city in comparison with agricultural environments (e.g. Clergeau et al. (2001) in France, Chamberlain et al. (2009) for England) for several decades. This fact is particularly strongly supported by the propensity of gardeners to attract, protect and care for birds: «a total of 12.6 million (48%) of UK households feed wild birds (Davies et al. 2009), and such levels of supplementary feeding can influence avian abundance at regional scales (Fuller et al. 2008)». The gardens and their share of biodiversity-friendly facilities built by urban dwellers have a strong impact on representations and environmental awareness. In this way, their place in the green infrastructure is essential (see below) even if their role in the biodiversity is sometimes controversial, being deemed to promoting the most common species for example.

Taking into account the importance of gardens for the green infrastructure does not only rely on a "quantitative" approach (offering greater potential superficies of green areas). The fine spatial analysis shows that the gardens offer the opportunity to introduce green areas almost everywhere and to the very heart of the cities. Two examples of French cities, one of which is particularly dense, illustrate this point: Paris has 3327 ha of green space, which represents on average one-third of the city's surface area (10,500 ha). This amount includes the 1841 ha of the Boulogne and Vincennes woods (17.8% of the communal area and 54% of its green spaces) and 600 ha of private gardens (18% of the green spaces) (Paris city Council 2011). The Strasbourg map shows a similar pattern: based on the green extraction shown in Fig. 10.4, the vegetation forms over a third of the municipal territory (36.6%, with 28 ha out of the 78 ha of the city). Most of this area is occupied by the forests of the Robertsau to the north and of the Neuhof to the south: both account for 56.3% of the green space (Fig. 10.6). In addition to these forests, public parks and gardens represent 24.4% and the 4800 plots of allotments 7% of the green. Notably, they can be found up to the heart of the medieval town.

Gardens therefore have a non-negligible role to play in establishing the ecological frame that green infrastructures are planned to develop or conserve. Their participation is quantitatively greater or lesser depending on urban configurations on the one hand and on their spatial distribution on the other hand. Awareness of this important role is visible in the planning documents, demonstrating that beyond

---

[7]Biodiversity in urban gardens studies. For some findings, see for example http://www.bioregional.com/wp-content/uploads/2017/04/19219_WildlifeGardensReport_DIGITALFinal.pdf.
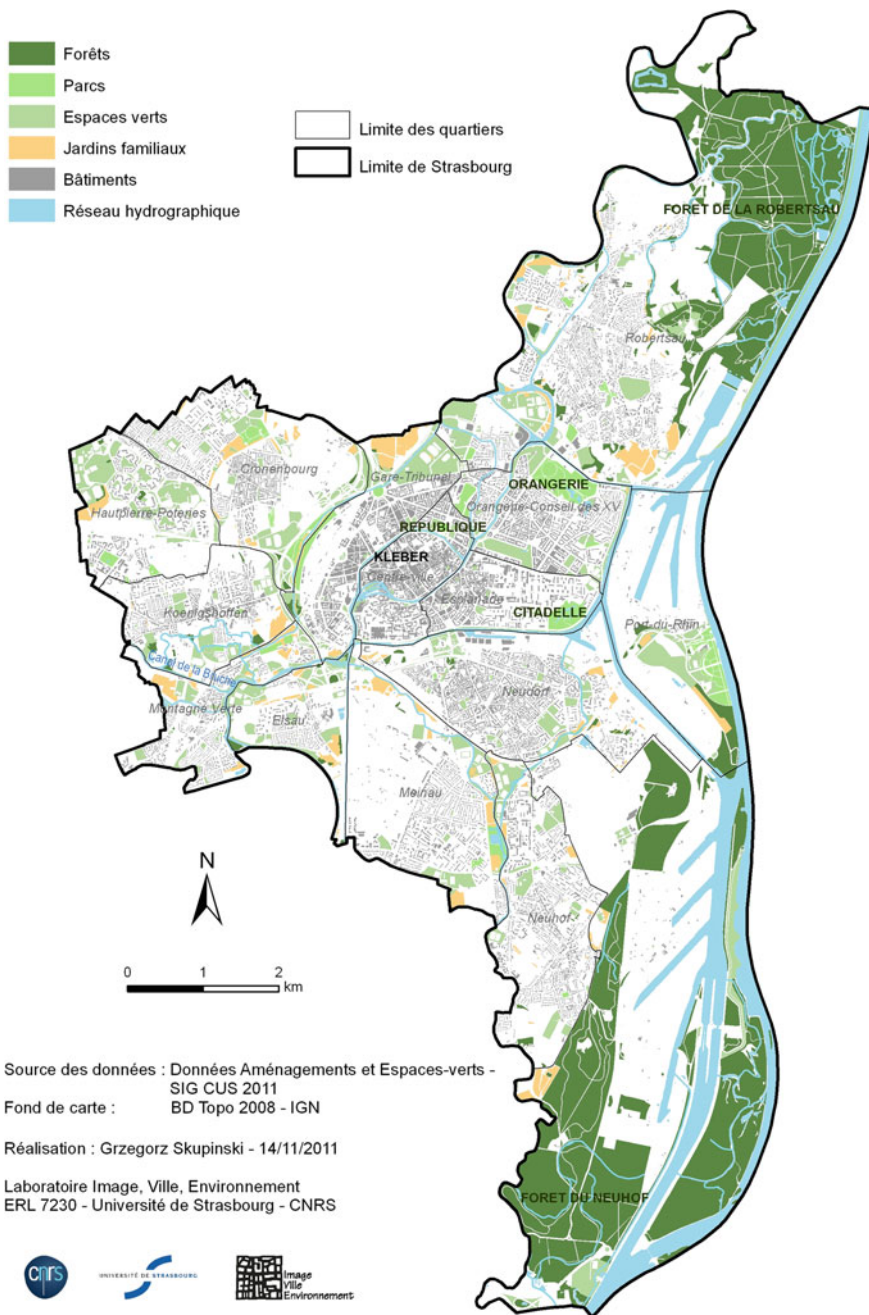
Fig. 10.6 Parks and various public or community gardens in Strasbourg

the planning design and the scientific approach, a political will for inclusion is affirmed, legitimizing the search for preservation of non-built land within the cities, seeking to extend the opportunities of green space by allowing the "public–private" partnership in the construction of an urban fabric that would favour the preservation of the biological capital of territories.

10.2 At the Meso-level Scale, a Concordant Legitimation of the Gardens and Green Infrastructure in the City Fabric

10.2.1 The Contribution of Gardens in the Urban Green Space: Political Recognition

The documents about the green infrastructure implementation show that the gardens are taken into account, especially from the second half of the 2010s. Thus, across France, the guides edited by local authorities to build up the green infrastructure often mention the wide range of spaces to considered in order to make it real, as in Brittany: "You are elected, technician of a community, inhabitant or simply a user of nature, you are concerned about the green and blue infrastructure because it includes all gardened and natural green spaces, public and private, rural and urban areas". That is what can be read in the guide *La trame verte et bleue, an opportunity for local authorities to perfect their territorial project*, published by the Architecture, Urban planning and the environment council of the Morbihan department (Conseil d'architecture, d'urbanisme et d'environnement—CAUE56 2012, p. 1). Similarly, in Troyes, in the presentation note of the study on the urban green infrastructure, the organization for the study and monitoring of the Territorial Coherence Scheme (Schéma de cohérence territoriale—SCOT) proposes, among other specific issues, to examine the family gardens and allotments while reflecting about biodiversity. The main idea is to highlight the potential continuities at the level of the agglomeration (DEPART 2015). Eventually, the document presenting the green and blue infrastructure of Strasbourg Eurometropolis incorporates "the gardens" in its chapter "zoom on elements of green framework", just after living hedges are mentioned (Strasbourg 2017, p. 11).

The scientific and technical approach, particularly the satellite imagery and the use of spatial analysis, is relayed by political discourse which emphasizes the need to include gardens, either private or public, in addition to the public green spaces, best referenced in the land use documents of public authorities, when implementing the urban green infrastructure. Above all, it is clear that urban gardens, whether domestic or in allotments, private or common gardens, respond to multifunctionality issues in the same terms as the green infrastructure, which makes it possible to legitimize their place within the urban area, a very coveted area.

Indeed, the cities, which continue to grow all over the world, are facing significant stakes of land pressure. At the same time, they must respond to the imperatives of sustainable development that encourage urban planning to be more compact (in order to limit spreading and related problems of congestion, urban sprawl and pollution). Various laws encourage the densification of buildings; for example, in France, the SRU law in 2000 (Solidarity and urban renewal)[8] and the national commitment law for the environment or Grenelle 2 can be cited as texts or frameworks references. These two laws supplement the planning laws *(Code de l'urbanisme)* with densification requirements in certain sectors and, for the second, the possibility for local authorities to ask for a payment in case of low-density project, *i.e.* a specific taxation for developers whose programmes are below the density threshold set in the local planning documents. Those ones must now refer to this notion of land occupancy, urban sprawl and density. In their presentation, the Territorial Coherence Scheme (SCOT) and the Local Urban Plan (Plan local d'urbanisme - PLU) must present a quantitative analysis of the consumption of agricultural, natural and forest areas and their evolution, in order to respond to "objectives for the moderation of space consumption and the fight against urban sprawl" (Articles L.122-1-5 et L.123-1-1 of the *Code de l'Urbanisme*). They precisely set quantified targets for reducing the consumption of natural, agricultural and forest areas and to specify measures to achieve these objectives. These recommendations are in some ways contrary to the preservation of natural spaces, of non-built places in the city. However, the justifications for these spaces are multiple. They have ecological effects by influencing climate and pollution, social effects by providing recreational and meeting places, economic effects not only by improving the health of urban dwellers (for the reasons cited above), but also by potentially providing food for some segments of the population, especially in southern cities (see, e.g. Cameron et al. (2012), who list all these benefits). This multifunctionality of green spaces, widely evoked in the scientific literature, is an argument used by planners and progressively integrated by urban dwellers to justify the conservation or even the restoration of green spaces in the city. This trend can be observed for both green places and urban gardens: their necessity is justified in order to meet various forms of norms, a new order directed towards the preservation of resources (air, water, soil), psychological and physical health and social peace.

---

[8]Loi n° 2000–1208 du 13 décembre 2000 relative à la Solidarité et au Renouvellement Urbain (*SRU*).

10.2.2   From Local to Global: The Multifunctionality of Gardens in Green Infrastructure

Conservation of biodiversity is a global challenge that the green infrastructure addresses, even in urban contexts. As a management measure, it is also often legitimized to contribute fighting against global warming. As a planning tool, it allows to articulate several spatial scales in the actions: from the city council territory to the continent, through the geographical levels of regions and countries. Timescales are also included in the green infrastructure conception, since the main idea is to build a permanent infrastructure, contributing to stakes not only planetary but also secular, starting from sometimes daily actions: this very point meets the gardens, objects of daily care at human height. They may have a strong symbolic role if the practical dimension can be discussed in terms of impact. In addition, they reflect a multitude of concerns that allow to combine multiple issues: resource issues (water, air, soils, biodiversity) and the quality of these resources, guaranteeing the good health of the environment and the people, food issues which are expected to become key issues in the face of increasing densities and urban pressure. For all this, gardens and green infrastructures are essential in the city.

City dwellers' well-being is also improved by responding to the "need for nature" that they express in the context of the high valuation of the environment in the discourses on sustainable development. This range of "qualities" both attributed to the green infrastructure and urban gardens is generally referred to as multifunctionality; the latter is often approached through the description and analysis of the ecosystemic services that these spaces of nature can render. The list of scientific references on this subject is huge. See for example: Lovell and Taylor (2013)[9]; Hansen and Pauleit (2014) for a literature review on multifunctionality for the green infrastructure, Cabral et al. (2017) for the gardens. The improvement of well-being, individual and public health and the sociability of gardening practice, in different garden configurations, are also widely documented by numerous scientific works, in particular (but not only), the research of psychologists and sociologists as detailed in several review articles, such as that of Genter et al. (2015). Case studies support the argument that allotment gardening positively impacts physical, psychological and social health (e.g. Soga et al. 2017; Cox et al. 2017).

Therefore, it seems coherent to claim a very particular place for the gardens in the green infrastructure: they accentuate the impression of proximity to nature while at the same time they are a resource for physical expense through gardening; various studies highlighted that they can also respond to the qualities that city dwellers, stakeholders and local authorities value in the green infrastructure. They are perceived, valued and used as places to meet, recreate and potentially calm down in the face of urban turmoil (Gobster and Westphal 2004). The recent scientific literature

---

[9]«Several specific ecosystem services that could be relevant for evaluating current and future urban green spaces include the following: plant biodiversity, food production, microclimate control, soil infiltration, carbon sequestration, visual quality, recreation and social capital».

points out that: «Urban gardens, such as allotments and community gardens, can be viewed as one of the earliest deliberate nature-based solution implementation to achieve multiple environmental and societal goals by promoting urban green spaces to provide benefits to human well-being» (Cabral et al. 2017).

Among the qualities of well-being provided by "nature in the city", the human dimension of promoting a local sociability is also attributed to gardens, especially collective ones, allotment (so-called family gardens in France) and even more community gardens: this is well described in the Chaps 5, 12, 13 and 15 (Haniotou and Dalipi, Lemorchand, Muramutsu, Sachse and DelMonte). Cities tend to foster this dimension, considering it is a warm contribution to the quality of life, to well-living in the city. In Strasbourg, for example, the standard agreement with the non-governmental organizations who manage the community gardens stipulates that they must be open to their neighbourhood and participate in its animation, in exchange for the provision of land to city dwellers. The city's definition of community gardens is as follows: "It is a convivial place open to the neighbourhood, which promotes the meeting between different generations and cultures. Based on the values of sharing, solidarity and creativity, it contributes to the creation of social ties". In the conditions of use of the land "act" (Article 7), it is stipulated that "the association will organize public and friendly events on the site, addressed to the inhabitants of the neighbourhood".[10] Therefore, the municipality expects the gardeners to participate in the social animation of the district by regularly organizing festive events, conferences, meetings in the garden. For one of the Strasbourg community gardens, we can mention, for example, the participation of gardeners during the neighbourhood associations' weekend (September every year) and the spring or autumn fest that brings together gardeners and city dwellers around Cooking or DIY workshop (Fig. 10.7). The local sociocultural centre is often associated with the management and animation of the gardens, which allows the association to benefit from a real building and to be opened to a wider audience. This dimension is therefore added to the "ecosystem services" of resources rendered by the gardens exactly in terms similar to those given by the green infrastructure, justifying all the more their "functional" integration with the latter.

The multifunctionality of both the gardens and the green infrastructure has been extensively studied, and it is also put forward in political discourse to legitimize the consideration and conservation of these "elements of nature" in the green infrastructure of cities (e.g. Breuste et al. 2008). Beyond the local socio-system, the entire ecosystem at various scales is preserved: biodiversity is strongly encouraged in gardens, on the same model as in the green infrastructure in which they are fully included and the ecosystem services they provide are identified (Bell et al. 2016, etc.) and praised by public authorities even if they are somehow embarrassed to preserve the green space because of the densifying "dogma" (Consalès et al. 2012).

---

[10]Agreement for the provision of a fenced-in area for the community garden use, http://www.strasbourgcapousse.eu/app/uploads/2017/03/convention-jardins-partages-.pdf.

Fig. 10.7 Community garden is a place for conviviality, open to the neighbourhood: a party at Lombric Hardi, Strasbourg (photograph and poster Franck Dautel)

10.3   Worm View: A More Dubious Assessment of How Gardens Participate in the Biodiversity of the Green Infrastructure

Because they are visible in the city, especially when collective, encouraged by the communities and praised by the city dwellers, gardens are interesting beacons for the conservation of biodiversity. However, beyond the political and social approaches that we previously described, their "real" participation in the conservation of biodiversity is still controversial.

10.3.1   Demonstration and Example: Making Visible Urban Policies Supporting Biodiversity and Enhancing Public Awareness

The multifunctionality of the green infrastructure and the urban gardens is obvious and emphasized by scientific literature as well as by political discourses. In the case of the spatial planning tool constituted by the green infrastructure, the publicity aspect is important to improve the acceptability of this type of urban fitting. Indeed, with increasing land pressure in the cities, convincing the politicians and the inhabitants of the huge repercussions of maintaining "nature" spaces is essential, even though the impacts cannot be measured in financial terms. This is the whole

issue of reflections on valuation, a concept developed by Dewey (2011), in which the notion of appraising, in the sense of assigning a value with the implied measurement operations, is combined with the "valuation" that has emotional dimensions. With this approach, the judgement on political choices finds a dual moral anchor: both in sensitive experience, recognizing the incarnated dimension of value, and in the cognitive, intellectual, place of deliberation, of questioning, of reflection. The very justification of the green infrastructure and the gardens in the urban pattern can thus go beyond an exclusively economized legitimation such as the one which uses the bias of ecosystem functions.

From then on, urban gardens can occupy a prominent place in the visibility which appears necessary for the policy of maintaining natural spaces, including those focused on the preservation of biodiversity. Indeed, the publicity they can make of them, in the sense of "making public" and showing, is important. This is borne out by the knowledge the city dwellers have about common gardens: 57% of respondents ($n = 326$) reported that they knew about gardens through their urban strolls, 21% thanks to the advertisement that the city council carry out via its website or the town gazette, and another 15% through their relationships.[11]

Through various local initiatives, particularly set up in gardens, public authorities promote public awareness of nature, contributing to and/or pursuing a normative approach to the urban sustainable urban development, supported by local political discourses. The gardens constitute anchor points of the green infrastructure, put in visibility in the urban landscape at human sight (the worm view opposed to the bird view). Urban public initiatives to protect the biodiversity of gardens include, for example, the whole range of Strasbourg's "Strasbourg ça pousse" initiative on gardens and biodiversity, which proposes a relatively dense programme of educational and festive events and seeks to foster a participatory approach. The city and the Eurometropolis of Strasbourg publish and disseminate numerous awareness-raising documents, guides on good practices such as *The Small Handbook on Natural Gardening*, leaned on the Zero Pesticides Campaign,[12] and the guide *To enhance biodiversity, let's plant local species.*[13] Such initiatives are plentiful, everywhere in Europe and in the world: more and more cities publish documents aimed at protecting the biodiversity of gardens. For example, the London Action Plan for Biodiversity identifies the priority habitats that are of particular interest and worth to be protected in the perimeter of the megalopolis. Among these, in addition to parks and green spaces, the private gardens are pointed out (http://www.gigl.org.uk/london-bap-priority-habitats).

---

[11]Student work in progress: Valdez Achucarro I, Master of Geography, June 2017. Results to be consolidated.

[12]http://media.strasbourg.eu/alfresco/d/d/workspace/SpacesStore/13a6160e-d750-49e7-9820-d4eb1b326936/manuel_jardinage.pdf et https://www.google.co.uk/search?q=zero+phyto+et+r%C3%A9actions+des+habitants&ie=utf-8&oe=utf-8&client=firefox-b-ab&gfe_rd=cr&ei=14E6WZjtNrDHXq3AsaAL#q=zero+phyto+et+r%C3%A9actions+des+habitants+strasbourg.

[13]http://www.strasbourg.eu/ma-situation/professionnel/gerer-mon-entreprise/plantons-local.

Similarly, ecological regulations and practices that promote, for example, the removal of chemical inputs into gardens are in line with the recommendations for the various "natural spaces" available in the city. They generally express explicit purposes for the biodiversity preservation. The issue of "ecological-friendly" practices in gardens joins and extends the promotion of the ecological practices that many local authorities follow for the treatment of green spaces, whether public or made available to the population to cultivate. This concerns the parks and gardens open to the public: in France, the Law of 17 August 2015 on the Energy Transition for Green Growth[14] provides for the phasing-out of synthetic plant protection products. This obligation confirms practices that are often widely established in municipal services, such as in Strasbourg where the "zero phyto" policy was set in 2008.[15] It mainly let to modifying the practices of the 150 gardeners on duty for the Eurometropolis by eliminating the spreading of pesticides in public spaces managed by the local public authorities. At the same time, a major advertisement campaign for this policy has been launched to trigger the citizens' support. Indeed, coupled with differentiated management practices, the programme has modified part of the urban landscape, causing in the early days sometimes outraged reactions of the inhabitants, according to what the employees responsible for the parks and gardens' maintenance observed.[16] The abandonment of pesticides, for public and environmental health purposes, concerns the spaces municipalities directly manage as well as those they make available for the inhabitants' use. Therefore, the prohibition on the use of chemicals also concerns allotments and community gardens on public properties. The standard Strasbourg Agreement for the provision of public land to collective gardening demonstrates this obligation: in its Article 7.9, the document states that "The Association undertakes to implement a high level respect for the environment, in particular through:

– the ban on the use of plant protection products and chemical fertilizers, apart from those authorized in organic farming;
– the implementation of waste sorting in the garden, and the development of green waste composting;
– economical management of natural resources, in particular water; the use of motor pumps is forbidden".

In addition to the prohibition of pesticides that should allow a spontaneous flora and fauna to flourish, biodiversity-friendly facilities, site development and practices are also encouraged, such as composting, which constitutes an extraordinary biodiversity resource thanks to the micro-fauna it brings. Although it is an "unthought" of the urban biodiversity as it often falls more within the sphere of waste management for policy stakeholders as for city dwellers, composting and life-friendly practices of soils are an important part of the constitution of a brown framework whose place in global biodiversity is to be underlined (Joimel 2015).

---

[14]Loi n° 2015–992 du 17 août 2015 relative à la transition énergétique pour la crossiance verte
[15]http://www.strasbourg.eu/environnement-qualite-de-vie/nature-en-ville/zero-pesticide.
[16]S. Brolly interview, Responsible for the Nature mission at the city-council, 26 June 2015.

Similarly, insect hotels (Fig. 10.8) are praised for their role in pollination, plant pest control and all sorts of important ecosystem functions for the conservation of biodiversity. Their very pedagogical virtues must be added to those of the gardens as a whole.

The objective of improving biodiversity in gardens so as to make it an essential link in the urban green infrastructure is reflected in many practices that are explicitly oriented towards not only "wild" but also cultivated biodiversity, with the introduction/reintroduction of ancient or forgotten varieties, the gift and exchange of which constitute a social and cultural activity in its own right.[17] Here, taking the Alsatian example, we can cite the role of associations such as Kerna ùn Sohma for "forgotten" varieties and Brin de paille for the promotion of permaculture. The association Kerna ùn Sohma was created in 2012, with the aim of promoting the cultivation of ancient varieties of cereals and vegetables. It is related to the network Farm Seeds (Semences paysannes) and gathers producers (farmers, market gardeners, winegrowers), processors (millers, bakers, winemakers), gardeners and consumers. It proposes a conservation activity: from small quantities of wheat of old varieties, the voluntary peasants reproduce seeds in order to adapt them to their terroirs. For vegetable seeds, gardeners focus on the production of seeds of a variety in order to allow exchanges between members of the association and to maintain plant diversity. This method helps plants to adapt to local conditions. The Brin de

---

[17]Submitted to the Senate on 2001, the French law on collective gardens highlights this function in its first chapter: "Collective gardens contribute to the conservation of the biodiversity of crops, fruits, vegetables and flowers by promoting their knowledge, culture, their nonprofit exchange between gardeners".

Paille association, on another hand, seeks to disseminate permaculture, an agricultural system based on the principles of plants associations observed in natural ecosystems to set up "permanent" gardens. Permaculture researches perennial varieties of edible plants adapted to the climate and the soil conditions and allowing to feed the gardeners throughout the year and in a balanced way. All these features, patterns and cultural practices foster biodiversity, particularly endemic biodiversity, and justify the urban gardens to be included in the green infrastructure. "The cultivation of agrobiodiversity is a feature of biodiversity not often considered in urban conservation management. Agrobiodiversity conservation, with an emphasis on the maintenance of landraces in urban gardens, can provide important opportunities for gene bank conservation" (Barthel et al. 2015 cited in Cabral 2017).

Another aspect of visibilizating local biodiversity policies finds a particularly convincing place of expression in gardens: public participation in species observation and measurement. Indeed, many programmes at the local and national level encourage individuals to collect "scientific" data in their plots. Examples include the popular "gardenwatch" initiatives, such as the RSPB Big Garden Birdwatch (http://www.rspb.org.uk/birdwatch/) and the British Trust for Ornithology Garden BirdWatch (http://www.bto.org/gbw/) in the UK, Project FeederWatch in the USA and in Canada (http://www.birds.cornell.edu/pfw/) or the citizen network Vigie Nature, in France, which works in association with the National Museum of Natural History (http://vigienature.mnhn.fr/). All these initiatives «underline the importance of gardens for raising awareness about biodiversity and the public understanding of science. Not only have these garden data revealed important population trends, but this "citizen science" movement also has huge potential for enhancing urban environments by coordinating public management actions to produce cumulative positive impacts on biodiversity» (Goddard et al. 2010).

Therefore, gardens are integrated into the green infrastructure from the point of view of its meaning: participating in the urban biodiversity and conserving spaces of nature in the city. This is achieved through their display as part of the green infrastructure in the discourses related to the latter. Seen from the "soil", it is also thanks to the various biodiversity-friendly developments that we described above, as well as to the natural practices encouraged in gardening. These various actions, directly linked to urban nature, beyond passive awareness-raising largely carried out by local authorities and associations, contribute to the empowerment of the city dwellers themselves: they participate in the construction of their territory, in addition to being part and sharing practices of a "community" anchored in a common space. The territory is taken care of and can be resourceful. In addition, this participation involves a transformation of environmental issues into everyday issues, accessible to everyone, leads to a democratization of the environmental appropriation, and thus of access to nature and environmental resources (Boyce and Shelley 2003). Beyond that, if there is recognition of biodiversity at the garden level, it is hoped that the inclusion in the green infrastructure, which is publicized, can draw attention to biodiversity on a wider scale and help to highlight the notion of connectivity and the importance of bio-continuities.

Despite the good geographical and political integration of gardens in the green urban infrastructure, we might ask if there's a real measured impact of gardens on the conservation and circulation of biodiversity on the meso- and micro-scales. What is the bio-geographical interest of urban gardens in the design of the green infrastructure?

10.3.2 Effects on Biodiversity to Be Confirmed

The overhanging approach (bird eye) shows that urban gardens constitute up to 50% of urban green space. Undoubtfully, taken as a whole, gardens are an interesting urban biodiversity reservoir enabling them to participate in the main role of the green infrastructure, especially if they are compared with the urban mineral matrix. This first approach has been refined by various researches on the gardens biodiversity: they show a globally species richness, especially for the flora. This richness is all the greater if the cultivated as well as the spontaneous species are taken into account. Several studies have attempted to list the flora of urban gardens. Diversity is observed, but quantification remains subject to wide variations: the total number of edible and non-edible species ranges from a hundred for Poznan (Speak et al. 2015) to nearly 360 in Manchester and Leipzig (Borysiak et al. 2016; Cabral et al. 2017).

Researchers have highlighted several limitations to the ecological interest of the gardens in global biodiversity. Firstly, the size of the green natural units concerned is an important issue because threshold effects can be observed in the biological richness of the environments. Secondly, if the central location of the gardens is an asset, as we have stressed in the first part, centrality can also play a role against the production of spaces favourable to biodiversity, due to the various types of pollution affecting these small ecosystems.

10.3.2.1 Back on the Physical Effects of "Patches": Size, Location, Fragmentation

Landscape ecology distinguishes different functions in the components of the green infrastructure: the reservoirs of biodiversity harbour living populations when the corridors ensure their circulation. For both functions, size and location effects are of importance to ensure viable habitats and connectivity for the reproduction, life and exchange of living species at different scales and according to the modalities of each species.

Numerous studies have shown the importance of the nearby environment, the insulation, i.e. not only the position of the patches in the matrix, but also the size of the patches to ensure the habitat functions (reservoirs) or the flows (corridors, continuous or in "stepping stones") (see Fig. 10.1). These effects should be even more decisive in the urban area where the matrix is poorly permeable, unlike in

rural areas where grasslands and heaths can both constitute reservoirs and corridors for the biodiversity. Ecologists differentiate between the green infrastructure components and assess the biodiversity richness of habitat areas (nodal areas, reservoirs) vs corridors. The size effect of the patches is analysed in various researches, in particular through the notion of fragmentation (Fahrig 2003), but few studies concern the urban environment. Urban woodland and lawns, in particular those of public parks, are the more explored in France (e.g. Mehdi 2010). Various urban ecology studies, such as those of Philippe Clergeau's team in France, BUGS project in England and others in America, show that the link with rural areas and the size of patches are not essential for biodiversity: "The BUGS project also demonstrated that neither small size nor isolation from countryside seems to be a problem; small, city-centre gardens support much the same invertebrate wildlife as large, suburban ones. Other recent research has tended to endorse this view; in Manhattan, New York, gardens with sunny, flower-rich patches supported diverse pollinator communities (Matteson and Langellotto 2010), and in Toronto, small "microcosms" (soil-filled pots, with or without vegetation) introduced into gardens recruited plants, seeds and invertebrates in much the same way as those placed in grassland or forest (Sperling and Lortie 2010)» (Cameron et al. 2012 p. 133).

The effect of the urban gradient is more often addressed, and it brings its share of surprises. For example, Cabral et al. (2017) show that the gardens of the close urban suburbs contain more biodiversity than the peri-urban gardens. Most of the differences between the different urban green spaces are based on the management modes rather than on the location or size of the patches. For example, analysing the evolution of the green infrastructure demonstrated that green spaces that were not protected by a particular status (heritage, ecological value, flood zone, etc.) have disappeared and are turned to fragments or highly artificial patches, affecting the biodiversity spaces available in the city (Mehdi 2010). Moreover, the biological richness is not uniform according to the environment (water, soil, subsoil), which makes the conclusions complex and difficult to generalize: a recent study on allotments and community gardens shows that lawns host a soil microbial biomass generally superior to those of areas dedicated to food and ornamental crops. The "aerial" flora and fauna, rather poor in grassland, are counterbalanced by the rich micro-fauna of the soils (Cabral et al. 2017; Consalès et al. 2016; Joimel 2015).

Finally, it seems that the quality of habitats is the most important driver for the cities biological richness. Studies carried out in urban areas by various scientific teams such as PG Angold in Britain (Angold et al. 2006) amply illustrate that. Biodiversity-friendly and ecological measures proposed in the gardens are to be encourage to contribute to a green infrastructure that fulfils its primary functions of preserving biodiversity.

10.3.2.2   Can the Very Anthropized Space Fully Participate in Improving Biodiversity?

The management modalities of the urban gardens are very important, and these, the macro-approach presented in the first part, cannot evidently identify them. Anthropogenic activities, particularly management operations and user practices, have a great influence on living communities, in every place. The intensity of exploitation and agricultural choices largely impact the richness and composition of garden species at least as important as the position in the urban pattern and along the gradient of urbanization. Comparing biodiversity in allotments and in community gardens, Cabral et al. (2017), who distinguish three levels of management intensity in the plots,[18] note that it is the intermediate level, with an intermediate intensity of cultivating on the one hand, and located in semi-urban environment on the other hand, that possesses the greatest and abundant floristic richness because it offers a structural complexity and a variety of micro-habitat fostering the best synergies in these environments between city and nature, between cultivated and spontaneous species. The gardens' rules have also a significant impact, at the same time for the regulated presence of trees and lawns, for tolerance to unmanaged areas and spontaneous vegetation on pathways and for the use of chemical inputs. From this point of view, participants in community gardens in Leipzig favour more spontaneous species than city dwellers who garden in allotments: 60% of them answered that they did not leave "wild" spaces (Cabral et al. 2017), while gardeners in the community gardens consider that wilderness is an important feature of their garden. We find the same rejection of the spontaneous flora, the weeds, in the Marseilles allotments investigated by the team of the French research programme JASSUR.[19] There, gardeners, while claiming to be in favour of nature, continue to have very "offensive" cultivation practices (tillage, digging, hoeing, scraping, raking) and are reluctant to leave wild biodiversity of plants and soils (Consalès et al. 2016).

The tolerance expressed by community gardeners towards the "wild" counterbalances the highly intensive attendance and frequentation in community gardens, linked to their collective aspects. It is part of a certain "philosophy" specific to these

---

[18]The researchers «identified three levels of management intensity matching gardening association code enforcement classification: high-intensity (compliant) plot, medium-intensity (non-compliant) plot and vacant plot. A high-intensity plot is defined as a plot with a high apparent level of maintenance (weeding, mowing and pruning on all available land), a medium-intensity plot is usually characterized by a small (or non-existent) lawn and no evidence of mowing, i.e. significant amount of weeds, occurrence of spontaneous vegetation on pathways or even non-managed patches of land, and a vacant plot is defined as an abandoned, over-grown plot» Cabral et al. (2017, p. 46).

[19]The research project Jardins ASSociatifs URBains et Cités Durables (community gardens and sustainable cities): Practices, Functions and Risks (JASSUR) brought together 12 partners who studied in an interdisciplinary way the uses and management of collective gardens (mostly allotments) in seven French cities, between 2012 and 2016.

recent gardening places. A philosophy shared by the supporting municipalities, on the one hand, and the involved city dwellers on the other. Municipalities are forcing organic management methods not only because it is imposed by the law (see supra) but also because they are convinced it's a sustainable practice and must be reflected in the garden, as we have seen in the example of the standard convention, in Strasbourg. For their part, city dwellers who adhere to community gardens have predominantly pro-environmental attitudes, all the more so because their profile responds to a sociology specific to inner-city areas in Europe. This set of orientations makes community gardens central areas where small wilderness areas enamel the city. On the other hand, the domestic gardens, if less frequented, are generally subject to more intensive exploitation which directs towards both a greater "sorting" of the species at the expense of wild flora and fauna and the addition of pesticides and adjuvants sometimes in contradictions with the existence of wild biodiversity. Researchers show that biodiversity is widely linked with the crops choices: BUGS scientists highlighted that biodiversity varies very little from one garden to another.

With regard to the intensity of exploitation of garden areas, another question arises: Can cultivated biodiversity constitute an obstacle to the biological richness and circulation of species? Observations on this point diverge, although a widespread opinion tends to attribute to alien species' hostile qualities, almost negative "intentions" towards domestic species (whether spontaneous or cultivated). For example, the BUGS study in England has shown that the advantage of endemic flora on biodiversity richness varies according to its ecosystemic functions: «exotic plants are little utilized by native pollinating insects. By contrast, the abundance and diversity of various invertebrate species captured in gardens in Sheffield, UK, were rarely related to native plant species richness, indicating that "wildlife-friendly" gardens need not be dominated by native planting» (Goddard et al. 2010). Invasive species, whether animal or plant, often derived from importation, may also prove to be obstacles to biodiversity. Of course, they are not specific to gardens, and this problem of biological balance applies to all environments. In a way, even if a large part of the vegetables grown in gardens are imported and/or genetically modified at one time or another, gardeners by their work are likely to contribute to contain or control their proliferation in a manner that, again, the effects of these imports are not clearly negative or positive on biodiversity.

A second set of anthropic origin features is likely to constrain more or less strongly the biodiversity of gardens: pollutions of various types. First, not only pollution of the environment (water, soil, air), but also pollutions related to the human presence: the intensity of attendance can play a role in the biological richness, thus matching the dimensions of management intensity on the one hand with the urbanity gradient on the other. We also think of other pollutions, more "sneaky" such as light (Knop et al. 2017) or sound pollution, also strongly linked to dimensions mentioned above like fragmentation or urban density. It may be necessary in the future to think about magnetic pollution, linked to the massive use of electromagnetic waves in cities. Despite all these pollutions, the gardens are better

places to form habitat or connection spaces for biodiversity, facing the "mineral" urban matrix. The more environmentally friendly management and management policies in all urban agglomerations and described above are, in this respect, "sustainable" measures that usefulness cannot be denied for preserving global biodiversity.

10.4   Conclusion

Observing the city at various scales shows that the gardens are an interesting element to build a consistent ecological mesh and foster biodiversity even in the a priori hostile and highly mineralized environments that are urban agglomerations. They are willingly integrated into the overarching analysis that leads to the mapping of green infrastructures. Political discourses take over this morphological approach by publicizing the gardens themselves, as well as the biodiversity-friendly measures that can be staged in a pedagogical and participatory way for urban gardeners. Awareness of the great biodiversity cause is thus efficiently broadcasted through the urban gardens.

Even if "objectively" there is still a lack of observational data that would fully justify the integration of gardens into green frames insofar as they contain important and/or interesting biodiversity, their participation in ecological continuities is essential in spatial, ecosystemic and symbolic terms. This explains why politicians favour their taking into account when designing the "natural" framework of cities in Europe. Awareness and policy documents (plans, contracts of objectives, etc.) and the scientific literature show that urban gardens, either allotment, collective or community, official or informal gardens, enter into the narrative that promotes a new "order" in the towns, in the Western world. Therefore, the gardens fit well with a double imperative linked to sustainable development: participation in the fight against global threats (erosion of biodiversity, fight against climate change—urban heat island) on the one hand; participation in ecosystem functions and the multi-functionality of green spaces in the city through biological, "ideological" (environmental awareness), social (link), food (ecological transition) and landscape (quality of life) issues on the other hand.

The question of how gardens can participate in the urban green infrastructure, according to their form, size and functions (food gardens, amenity, public parks, etc.), in order to preserve biodiversity, is not insignificant as it makes it possible to bring arguments and elements of decision-making for the planners: Should a vegetal form in the cities be preferred? Of course, as we have seen when examining the multifunctionality of nature and culture spaces and in the city, other drivers will enter in the choices, and biodiversity is only one feature out of a set of parameters to take into consideration.

References

Angold PG, Sadler JP, Hill MO, Pullin A, Rushton S, Austin K, Small E, Wood B, Wadsworth R, Sanderson R, Thompson K (2006) Biodiversity in urban habitat patches. Sci Total Environ 360 (1–3):196–204

Bell S, Fox-Kämper R, Keshavarz N, Benson M, Caputo S, Noori S, Voigt A (eds) (2016) Urban allotment gardens in Europe. Routledge, London

Borysiak J, Mizgajski A, Speak A (2016) Floral biodiversity of allotment gardens and its contribution to urban green infrastructure. Urban Ecosyst. https://doi.org/10.1007/s11252-016-0595-4

Boyce J, Shelley B (eds) (2003) Natural assets. Washington, Island Press, Democratizing Environmental Ownership

Breuste Niemalä J, Snep RPH (2008) Applying landscape ecological principles in urban environments. Landscape Ecol 23:1139–1142

Cabral I, Keim J, Engelmann R, Kraemer R, Siebert J, Bonn A (2017) Encosystem services of allotment and community gardens: a Leipzig, Germany case study. Urban For Urban Greening 23:44–53

Cameron RWS, Blanusa T, Taylor JE, Salisbury A, Halstead AJ, Henrico B, Thompson K (2012) The domestic garden—Its contribution to urban green infrastructure. Urban For Urban Greening 11:129–137

CAUE56 (2012) La trame verte et bleue, une opportunité pour les collectivités de parfaire leur projet de territoire, 12 p. http://www.caue56.fr/wp-content/uploads/2014/12/Trame_Verte_Bleue_Mai2012.pdf

Chamberlain DE, Cannon AR, Toms MP, Leech DI, Hatchwell BJ, Gaston KJ (2009) Avian productivity in urban landscapes: a review and meta-analysis. Ibis 151:1–18

Clayton S (2007) Domesticated nature: motivations for gardening and perceptions of environmental impact. J Environ Psychol 27:215–224

Clergeau P, Jokimäki J, Savard JP (2001) Are urban bird communities influenced by the bird diversity of adjacent landscapes? J Appl Ecol 38:1122–1134

Colding J et al (2006) Incorporating green-area user groups in urban ecosystem management. Ambio 35:237–244

Consalès JN, Goiffon M, Barthélémy C (2012) Entre aménagement du paysage et ménagement de la nature à Marseille: la trame verte à l'épreuve du local, DD&T, special issue Trames vertes urbaines 3(2) http://developpementdurable.revues.org/9268

Consalès JN, Joimel S, Cordier F, Jareno C, Chenot E-D, Schwartz C (2016) De l'argument à l'action: la biodiversité au service des jardins familiaux/ From the Argument to action: biodiveristy at the service of allotment gardens, Projets de paysage, special issue 13 "Biodiversité et paysage", 19 p. http://www.projetsdepaysage.fr/de_l_argument_l_action_la_biodiversit_au_service_des_jardins_familiaux

Cox DTC, Shananhan DF, Hudson H, Fuller R, Anderson K, Hancock S, Gaston K (2017) Doses of nearby nature simultaneously associated with multiple health benefits. Int J Environ Res Public Health 14(2):172–185

Davies ZG, Fuller RA, Loram A, Irvin KN, Sims V, Gaston K (2009) A national scale inventory of resource provision for biodiversity within domestic gardens. Biol Cons 142(4):761–771

DEPART (Syndicat d'Etude, de Programmation et d'Aménagement de la Région Troyenne (2015) Trame verte et bleue urbaine. Espaces de nature et continuités écologiques dans la ville, 2 p. http://www.syndicatdepart.fr/images/pdf/syndicat_depart/comite_syndical/Fiche_etude_TVB_urbaine_syndicat_depart.pdf

Fahrig L (2003) Effects of habitat fragmentation on biodiversity. Annu Rev Ecol Evol Syst 34:487–515

Fuller RA, Warren PH, Armsworth PR, Barbosa O, Gaston KJ (2008) Garden bird feeding predicts the structure of urban avian assemblages. Divers Distrib 14:131–137

Gaston KJ, Smith R, Thompson K, Warren PH (2005) Urban domestic gardens (II): experimental tests of methods for increasing biodiversity. Biodivers Conserv 14:395–413

Gaston KJ, Fuller RA, Loram A, MacDonald C, Power S, Dempsey N (2005) Urban domestic gardens (XI): variation in urban wildlife gardening in the United Kingdom. Biodivers Conserv 16:3227–3238 (https://link.springer.com/article/10.1007/s10531-007-9174-6)

Genter C, Roberts A, Richardson J, Sheaff M (2015) The contribution of allotment gardening to health and wellbeing: a systematic review of the literature. Br J Occup Ther 78(10):593–605

Gobster PH, Westphal LM (2004) The human dimensions of urban greenways: planning for recreation and related experiences. Landscape Urban Plann 68:147–165

Goddard MA, Dougill AJ, Benton TG (2010) Scaling up from gardens: biodiversity conservation in urban environnements. Trends Ecol Evol 25(2):90–98

Hansen R, Pauleit S (2014) From multifunctionality to multiple ecosystem services? A conceptual framework for multifunctionality in green infrastructure planning for urban area. Ambio 43 (4):516–519

Joimel S (2015) Biodiversité et caractéristiques physico-chimiques des sols de jardins associatifs urbains français, Ph.D. dissertation, Lorraine University

Knop E, Zoller L, Ryser R, Gerpe C, Hörler M, Fontaine C (2017) Artificial light at night as a new threat to pollination. Nat Res Lett, 16 p

Loram A, Tratalos J, Warren P, Gaston K (2007) Urban domestic gardens (X): the extent & structure of the resource in five major cities. Landscape Ecol 22:601–615

Lovell ST, Taylor JR (2013) Supplying urban ecosystem services through multifunctional green infrastruture. Landscape Ecoloy 28(8):1447–1463

Mathieu R, Freeman C, Aryal J (2007) Mapping private gardens in urban areas using object-oriented techniques and very high-resolution satellite imagery. Landscape Urban Plann 81:179–192

Matteson KC, Langellotto GA (2010) Determinates of inner city butterfly and bee species richness. Urban Ecosyst 13:333–347

Mehdi L (2010) Structure verte, Structure verte et biodiversité urbaine. L'espace vert: analyse d'un écosystème anthropisé. Thèse de doctorat, Aménagement, Université de Tours, 476 p

Micoud A (2005) La biodiversité est-elle encore naturelle? Ecologie et politique 30(1):17–25

Paris city Council (2011) Plan biodiversité de Paris, Paris

Potere D, Schneider A (2007) A critical look at representations of urban areas in global maps. GeoJournal 69:55–80

Riboulot-Chetrit M (2015) Les jardins privés: de nouveaux espaces clés pour la gestion de la biodiversité dans les agglomérations? Articulo—J Urban Res [Online], Special issue 6| 2015, Online since 15 May 2015, connexion on 07 May 2017. URL: http://articulo.revues.org/2696; https://doi.org/10.4000/articulo.2696

Robbins P, Polderman A, Birkenholtz T (2001) Lawns and toxins—an ecology of the city. Cities 18:369–380

Rougier S (2016) *Apport des images satellites à Très Haute Résolution Spatiale couplées à des données géographiques multi-sources pour l'analyse des espaces urbains*, Thèse de doctorat en géographie, Université de Strasbourg, sous la direction de S. Glatron et A, Puissant, p 361

Rougier S (2017) Quels indicateurs et quelles unités d'analyse pour le suivi de la végétation en ville? Application à l'Eurométropole de Strasbourg, InSitu, n°1, janvier 2017, 4 p. https://zaeu-strasbourg.eu/wp-content/uploads/2017/02/InSitu1_IndicateursVegetation_2.pdf

Seto KC, Güneralp B, Hutyra R (2012) Global forecasts of urban expansion to 2030 and direct impacts on biodiversity and carbon pools. Proc Natl Acad Sci 40(109):16083–16089

Seto KC, Fragkias M, Güneralp B, Reilly M (2011) A meta-analysis of global urban land expansion. PlOSONE 6(8):e23777, 9 p. http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0023777

Soga M, Cox DTC, Yamaura Y, Gaston K, Kuriso K, Hanaky K (2017) Health benefits of urban allotment gardening: improved physical and psychological well-being and social integration. Int J Environ Res Public Health 14(71):13 p. www.mdpi.com/1660-4601/14/1/71/pdf

Speak A, Mizgajski A, Borysiak J (2015) Allotment gardens and parks: provision of ecosystems services with an emphasis on biodiversity. Urban For Urban Greening 14:772–781

Sperling CD, Lortie CJ (2010) The importance of urban backgardens on plant and invertebrate recruitment: a field microcosm experiment. Urban Ecosyst 1:223–235

Strasbourg (2017) La trame verte et bleue de l'Eurométropole de Strasbourg, une réponse à l'érosion de la biodiversité. Eurométropole Strasbourg, 12 p. http://www.strasbourgcapousse.eu/app/uploads/2017/03/BD_TRAME-VERTE.pdf

Author Biography

Sandrine Glatron works as a research scientist at the French National Center for Scientific Research. She is the leader of a French long-term social-ecological research network in the Strasbourg metropolis, the Zone atelier environnementale urbaine (ZAEU) and the deputy director of the DynamE Laboratory. In March 2016, she organized, with Laurence Granchamp, an international colloquium entitled "orders and disorders in gardens: ecological and social stakes" (Ordres et désordres au jardin, enjeux écologiques et sociaux). She has been studying the representations that city dwellers have of their living environment and the nuisances attached to it (various pollutions and hazards) since the 2000s, in the French context (Strasbourg, Paris), in relation with the political and city planning context.

Chapter 11
The Kitchen Garden of Virtues or The Garden of Values: The Community Garden as Landscaping Project

Jean-Noël Consalès and Brice Dacheux-Auzière

Abstract On the basis of a survey carried out in Marseille involving 42 people, the aim of the present article is to show that community gardens are today real landscaping projects, that is projects aimed at the 'landscaping' of a site. After describing the dynamic that they trigger in the low-income neighbourhoods of the city, it decrypts the project process which these cultivated areas give rise to. This highlights the various participants among the planning body (local authority agencies, housing associations), the support teams for the planning body and for community organisation contractors, the project c, who increasingly are landscape architects, and the user groups which have been slow to make their mark in a systematic way. A further aim of this article is to distinguish the different logical bases governing the management of community garden landscaping projects. On the one hand, it describes a logic based on the 'virtues' (*vertus*) of the kitchen garden, in which community gardens are conceived as multifunctional tools destined to do good. On the other hand, it analyses a logic based on the 'values' (*valeurs*) of the garden, in which the community garden embodies good, given physical form in a place. It then examines the impact of these differences of conception on the realisation of projects and in particular on the degree of involvement

J.-N. Consalès (✉)
TELEMME UMR 7363, Aix-Marseille University, Aix-en-Provence, France
e-mail: jean-noel.consales@univ-amu.fr

B. Dacheux-Auzière
Laboratoire de recherche en paysage (Larep), École nationale supérieure
de Paysage (ENSP—site de Marseille), 31 Boulevard d'Athènes,
13001 Marseille, France
e-mail: b.dacheux@ecole-paysage.fr

of the local residents at the community garden worksite. It concludes with the relative failure resulting from these distinct visions by considering that the process of 'landscaping' which gives rise to community gardens continues beyond the potential cessation of cultivation.

Keywords Kitchen garden · Community garden · Landscaping project Marseille

11.1   Introduction

Like the rest of Europe (Bell et al. 2016), France has seen a rapid spread of community gardens. Embedded at the core of a broader reflection regarding urban agriculture (Aubry 2014), this dynamic has mainly been studied through the conceptual filter of multifunctionality (Fleury and Donadieu 1997; Consalès 2000; Scheromm 2015). As if to echo the abundant literature on the subject from the English-speaking countries, and in particular North America, (Duchemin et al. 2010; Wegmuller and Duchemin 2010; Lovell 2010), it has involved analysing the full range of functions that are performed by the community gardens within cities seeking sustainability. In this regard, it is their social functions that are the best documented (Guyon 2008). Numerous studies show the vast range of perceptions and uses that these small cultivated areas have generated in highly diverse urban contexts: Paris (Dubost 2000; Weber 2000; Demailly 2014), Marseille (Consalès 2000), Montpellier (Scheromm 2015), Bordeaux (D'Andrea and Tozzi 2014), etc. Now, the subject of quantified approaches (Pourias 2014) and their productive and nutritive functions are becoming better known (Pourias et al. 2012). The same is true of their environmental functions, which are the focus of an increasing corpus of research (Chenot et al. 2012), investigating in particular their effect on the biodiversity (Joimel et al. 2016). In contrast, it must be noted that community gardens are still rarely studied by scientists specialising in the landscape sciences (Donadieu 2012), urbanism and urban and landscape planning. Apart from a few rare studies which have analysed their legal framework (Monédiaire 1999) and their inclusion in planning schemes at metropolitan (Terrin 2013), municipal (Consalès 2004) or eco-district (D'Andrea and Tozzi 2014) level, the project dimension is still rarely investigated, unless it is on the basis of their network-forming tendencies (Vandenbroucke, in progress). No doubt this situation is in large part due to the ambivalent status of the community gardens once they are considered as the subject of research. As kitchen gardens, they are considered as places of production and are studied with reference to an analytical framework mainly dominated by the concept of multifunctionality, which leaves little room for spatial approaches. As gardens, they are considered as leisure amenities and as such are studied mainly with reference to a dense literature of a philosophical order (Nys 1999), which takes little account of their specificities and in particular the productive character of their cultivation. On the basis of this theoretical distinction between kitchen gardens and gardens, the aim of the present article is to investigate the project

dimension of community gardens. It thus aims to examine the various participants involved in the project, their perceptions and their motivation, as well as the way they act and undertake the design, the realisation and the management of this type of cultivated space. In attempting to deal with this issue, the present article thus offers the hypothesis that community gardens are real landscaping projects, that is they result entirely from a landscaping process defined as the 'process of transformation of a material space on the basis of a landscaping or garden project. The landscaping of a square, the floral decoration of a village, the plantation of roadside borders or the creation of a garden are based on ordinary landscape planning landscaping processes' (Donadieu and Mazas 2002). As landscaping projects, community gardens should therefore constitute 'a spatial response provided for a range of data that are more or less conceptualised, more or less objective and often contradictory' (Corajoud 2010). They should furthermore bring together at the site dedicated to them various participants allocated clearly defined roles: the planning body, the support teams for the planning body and the contractor, the contractor and the user groups. As landscaping projects, community garden projects should be organised around a key professional: the landscape architect. To confirm or invalidate this hypothesis, the present article is based on a study carried out in Marseille in 2014, as part of the *Agence Nationale de la Recherche* programme JASSUR (ANR-12-VBDU-0011, *Jardins Associatifs Urbains*). The choice of this city is justified by the exponential number of community gardens to be found within its territory. This investigation comes within the theoretical and practical framework of the landscape sciences (Donadieu 2012) and is based on a three-phase methodology, consisting of:

– an exploratory study examining all the community gardens in Marseille, on the basis of the comparison of data from the Marseille *Service des Espaces Verts* (Green Spaces Department), local community organisations and systematic Internet research;
– a field landscape analysis of 13 Marseille community gardens representative of the diversity of the city. In situ, graphic representation tools were used (sketches, cross sections, etc.), to record the characteristic features related mainly to the composition (layout of natural elements in space), the atmosphere ('ambiance') (interaction between physical space, feeling and action) and the context (the garden within its physical environment). *In visu*, the graphic (plans, sketches, etc.) and textual (specifications, reports, etc.) documents of the community garden projects investigated were analysed;
– Forty-two semi-directive interviews, carried out on the basis of a common grid, with participants involved in the project (Fig. 11.1).

The principal results of this investigation are reported here on the basis of a schema in two main parts. In the first part, the focus is on describing the dynamic that community gardens have generated within the territory of Marseille. It highlights in particular the structural organisation of the participants involved, determined by increasingly closely managed landscaping projects, and the major role played by the landscape architects in the project process. In the second part, the

Planning body	Project contractor	Support teams for planning body and contractor	User groups
-Housing associations (n=2) -Urban planning authorities (n=1) -Managers of *Contrats Urbains de Cohésion Sociale* (urban social cohesion contracts) (n=1) -Managers of the *Service Espace Vert Environnement et Nature* (green spaces, environment and nature agency)(n=2)	-Landscape architects (n=3)	-Managers and staff of specialised community organisations (n=6) -Managers and staff of social services centres (n=3) -Managers and staff of other associations (n=3)	-Gardeners (n=21)

Fig. 11.1 Project participants interviewed (n = 42)

focus is on the expectations, the vision and the perceptions of the various stake-holders with regard to community gardens. It attempts to distinguish the 'virtues' (*vertus*) of the kitchen garden from the 'values' (*valeurs*) of the garden in the design, realisation and management of this kind of cultivated space. It also high-lights the impact of this distinction on the more or less direct involvement of the local residents in the landscaping project.

11.2 The Spread of Community Gardens in Marseille: Towards a Structured Organisation of the Participants in the Landscaping Project

11.2.1 A Territory-Based Social Demand

In 2016, the *Union Nationale des Entreprises du Paysage* (UNEP—national landscape enterprises union) and Hortis (the association of urban natural spaces

managers) ranked Marseille in second place among the French cities with the most community gardens.[1] Although difficult to verify,[2] this claim highlights the strong development dynamic that has characterised the city since 2010. This may be explained primarily by the increasing number of projects (Vandenbroucke et al., in press), reflecting a constantly renewed social demand with regard to urban garden spaces. In the city centre, for example, the spread of unplanned floral decoration of the streets and the public spaces by certain residents' organisations is evidence of this. It should be noted in this context that the particular requirements of a population characterised by huge socio-economic disparities and inequality, by an unemployment rate of 18.5% (compared to an average of 10.4% in other French cities) and by a poverty rate of 25.5% (as against the overall French average of 14.3%)[3], confirm the needs expressed at local scale. But the community gardens dynamic may also be explained by the geographical potential of the territory. Flanked by entirely natural massifs, the very extensive municipality of Marseille (240.6 km^2) presents considerable real estate opportunities, in particular in the outer suburbs. Formerly agricultural land, now occupied by a sparse urban tissue (often fewer than 100 inhabitants per hectare, with barely 20.6 dwellings per hectare on average), these outlying areas possess numerous abandoned and derelict plots with high potential for community uses.

Caught between pressing social needs and obvious real estate potential, the constant spread of community gardens within the territory of Marseille is still subject to a specific logic regarding their location. The spatial distribution of the 50 or so sites shown in Fig. 11.2 thus determines a geographical pattern governed by two strongly correlated factors: the poverty and the lifestyle of the population. The community gardens in Marseille have a definite social role, which results in certain sites being chosen in priority. In the low-income neighbourhoods in the centre and inner peri-center (2ème and 3ème *arrondissements* of Marseille), they are inserted in small gaps within a dense urban tissue characterised by an old, severely degraded habitat, occupied by very poor residents (the poverty rate ranges from 44 to 55%). On the periphery, in the northern (*quartiers nords*) (14ème and 15ème *arrondissements*) and south-eastern (along the industrial valley of the coastal river Huveaune) neighbourhoods, they are generally located around the apartment buildings of the large housing estates (Fig. 11.3), inhabited by poor populations (here, the poverty rate ranges from 20 to 44%). Although they are community gardens, they are

---

[1]http://www.lesentreprisesdupaysage.fr/actualites/2016-r%C3%A9sultats-de-lenqu%C3%AAte-de-lobservatoire-des-villes-vertes-jardin-2-0.

[2]This ranking attributes 57 community gardens to the city of Marseille, whereas our survey only counted 50. In addition, it should be noted that in many French cities, the community gardens are not accurately inventoried in any way. In the absence of a generalised inventory system, we feel it would be very difficult to draw up a reliable ranking.

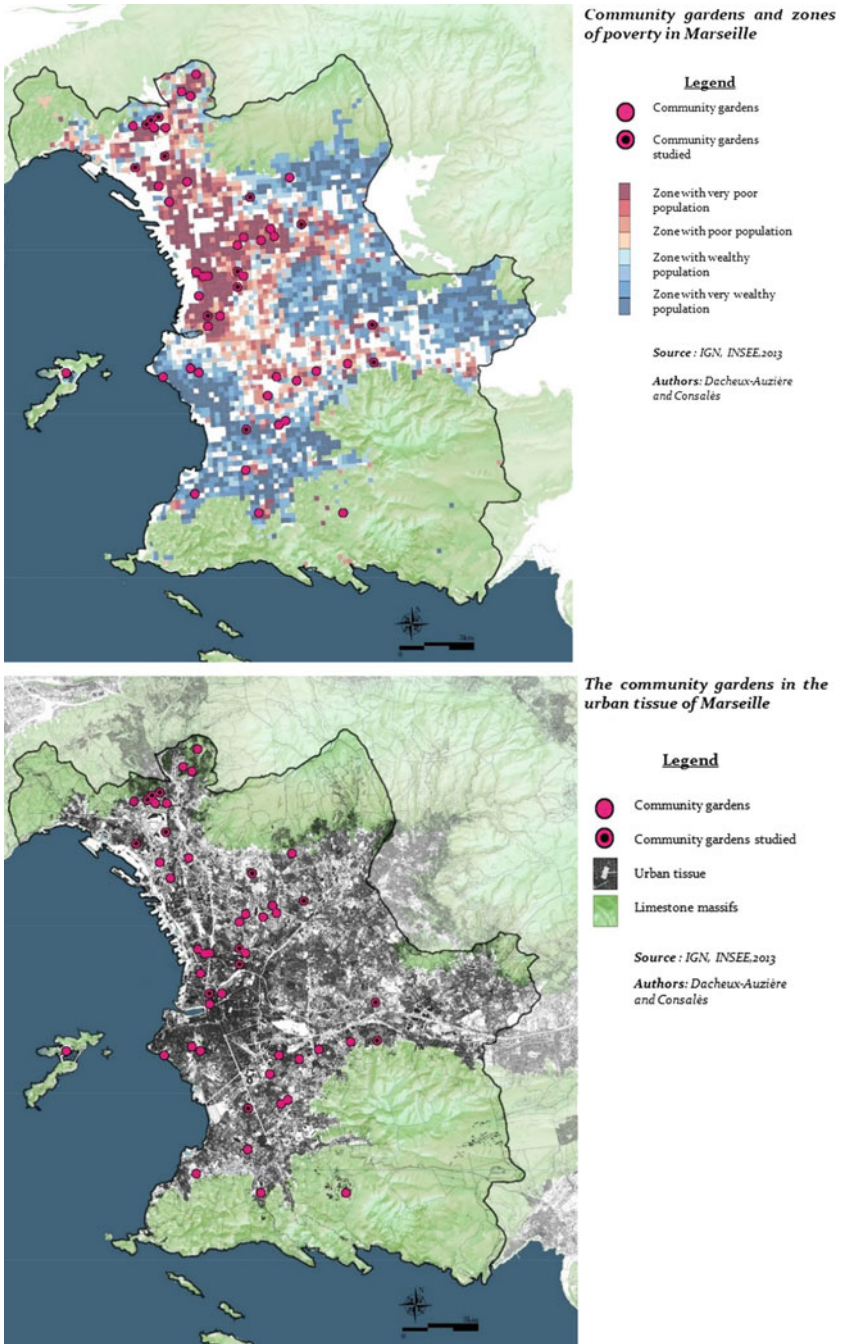[3]All the socio-economic data in this section were established by INSEE for the year 2013.

Fig. 11.2 Between periphery and poverty, community gardens in Marseille

Fig. 11.3 The *Jardin des Tuileries*, in front of the apartment blocks (Séon-St André), drawn by Brice Dacheux-Auzière-July 2014

Fig. 11.4 The *Jardin d'Hanoï*, a community garden divided into allotments (La Viste), drawn by Brice Dacheux-Auzière-July 2014

nonetheless divided into allotments. The allotments (Fig. 11.4) are generally small (from 10 to 25 m^2 on average), but numerous (from 20 to 90 allotments per garden), which is evidence of the local residents' keen interest in individual gardening and growing their own food.

11.2.2 Projects Organised Around Key Stakeholders

In the face of increasingly insistent social demand, some of the stakeholders within the territory are reorganising and are coming up with increasingly well-defined responses. Community gardens no longer depend solely on initiatives taken by the residents, but are becoming real urban planning and design projects, calling for specific competences in the planning stages and in the follow-up to the realisation of the project. The project set-up that they give rise to involves a limited number of key participants, in addition to the apparently complex network of those indirectly involved who seem to gravitate around every community garden. On the basis of the exploratory study undertaken, it is possible to identify these key participants and to classify them according to the functions they perform in the project. A typical project process thus emerges, characterised by the more or less prominent role of a planning body, a support team for the planning body or for the contractor, a project contractor and user groups at different stages of the operation. The increasingly important role attributed to the landscape architect in the process of creation tends to confer on the community garden the status of a real landscaping project.

11.2.2.1   The Diversity of Planning Bodies

As regards the planning body, two types of organisation can be distinguished: public sector and private sector planning bodies. At the top of the list of public sector planning bodies is the *Service des Espaces Verts et de la Nature* (SEVN) of the borough council. In 2010, this authority was responsible for publishing the 'Charte des jardins partagés de Marseille' (Marseille community gardens charter), which defines the general orientation and values upon which the municipality wishes to base the development of these spaces. According to this document, 'all community gardens, of whatever kind, should be in phase with a sustainable development approach, since they have a social function, a landscaping and environmental function and, in certain cases, an economic function' (*Charte des jardins partagés de Marseille* 2010). In reality, the SEVN provides support for the planners of projects developed on municipal land by offering methodological assistance provided, if necessary, by an organisation with expertise in this field. In this case, the SEVN plays the normal role of a planning body by drawing up the specifications for commissioning the project and monitoring its implementation. On the basis of contracts, the SEVN can also allocate municipal land, free of charge, to 'residents' organisations responsible for ensuring the dynamic of the garden and

eco-responsible gardening practices' (*Charte des jardins partagés de Marseille* 2010). It can in addition intervene in the creation of a community garden by undertaking or commissioning certain work that would be too costly for the residents' association (supplying soil, installing fences). The SVEN can finally play a role in the management of the site by directly undertaking certain services (collection of green waste, upkeep of common areas, heavy work). To date, on the basis of the charter, 14 community gardens are signatory to a convention with the city of Marseille. Half of these 14 community gardens are located in the neighbourhoods that have priority status under the *Politique de la Ville* (urban management policy) and have the benefit of support from the *Contrat de Ville* (municipal contract) teams, which thus also figure among the public sector planning bodies.

In France, the term *Politique de la Ville* designates the full spectrum of schemes introduced by the public authority to revalorise urban zones in difficulty. It is implemented by the territorial authorities through the intermediary of *Contrats de Ville*, the operational management of which is under the responsibility of the borough councils. In Marseille, the *Politique de la Ville* is managed by a *Groupement d'Intérêt Public* (GIP) (public interest group) which, over time, has become one of the main providers of funding for community gardens. Its interest is entirely social: '… the creation of a garden in a neighbourhood or a housing estate provides the means not only to improve the quality of the community's "togetherness" (*Vivre ensemble)*, but also the maintenance and the upkeep of the spaces taken over by the residents, and changes sustainably the landscape of a housing estate and its immediate environment'.[4] The GIP thus provides the means to support thirty or so projects with operational or investment funding. In the latter case, it intervenes in advance of the commissioning, which it helps to specify and to formulate in tandem with the project planners. In this role, the GIP is often called on to work with housing associations, which are progressively becoming established as major private sector planning bodies for community gardens.

The housing associations manage rented social housing. As part of the valorisation of their estates, and in particular the derelict plots, they play an active role in the development of community gardens. Some of them (Logirem, HMP, Erilia) have extensive experience in this field. As private sector planning bodies, the housing associations initiate projects, intervening in advance of the commissioning. For this, they obtain appropriate funding from the 'urban renovation schemes' (*'programmes de rénovation urbaine'*). They are not experts in the design and construction of community gardens, but they are competent to take on the overall management of an urban planning operation. They seek suitable partners to implement the schemes that they have outlined. Generally, they begin by defining missions of support for the project planners and the project contractors by specialised community organisations to assess the feasibility of the scheme and, in some cases, to accompany it to completion. They then specify the project contractor

---

[4]http://www.polvillemarseille.fr/fr/page.htm?_ref=819.

roles for the designers, often landscape architects, to enable the project to take shape.

Like the housing associations, private urban developers have contributed to the boom in community gardens in Marseille. They increasingly tend to include them in their urban planning operations. For this purpose, they too draw up the specifications for the schemes and organise teams of partners to put them into operation. These generally consist of an organisation specialising in partnering community garden projects to carry out the role of providing support for the planning body and the project contractor, and of a landscape designer to carry out the role of project contractor. In the course of our interviews, an urban development project manager commented: 'This organisation is in a way our project planning assistant. It is associated with a landscape designer who is our project contractor. It was he who made us an initial proposal. Then, we all got together for a short meeting. It was very specific: here, we need so many water outlets; there, three sheds, with these measurements and so many water recovery tanks. They are there to give us advice on these gardens' (urban development project manager, 01/08/2014).

11.2.2.2 Specialised Community Organisations for Project Planning and Project Contractor Support

In Marseille, many community garden organisations are affiliated in the *Réseau des Jardins Solidaires Méditerranéen* (RJSM) (Mediterranean community gardens network). Based on a horizontal management model, the network federates and promotes some fifty associations and twenty or so resource organisations or people related to this field. In consequence, it operates as a hub for initiatives and for participants for promoting community gardens in Marseille. In addition, it should be noted that most of these organisations focus their activity on running the sites. Two community organisations, however, differ from the others and are specialised in the management and follow-up of projects. The first is the *Programme Autoproduction et Développement Social* (PADES) (self-production and social development programme), which has for twenty years been providing support for self-production among disadvantaged populations. It does this by using 'family gardens for social development', which it characterises by an enhanced participative approach, the systematic pursuit of social mixing, properly qualified management, food self-production and a more open relation with the territory. The second is the *Atelier Marseillais d'Initiatives en Ecologie Urbaine* (AMIEU) (Marseille urban ecology initiatives workshop) which, in phase with its environmental awareness-raising aims, makes use of 'community gardens as a tool to involve the residents in the life of their neighbourhood, their housing estate, and therefore to improve their immediate environment and thus their everyday lifestyle'.[5] By

---

[5]http://jardinspourtous.amieu.over-blog.com/pages/PRESENTATION_DE_LASSOCIATION-7251270.html.

undertaking numerous consultancy and expert advisory missions for the benefit of public and private sector project planning bodies and project contractors, these two organisations fulfil the function of support for the project planners and project contractors for community garden projects in Marseille. A PADES project consultant commented: '[…] gradually, the community project has taken on the objective of acquiring an operational dimension: providing support, aid for decision making, methodological assistance for very specific operations at territory scale. So I think that today, we play a role in the creation of gardens, we provide support for the project, we are sometimes even involved in the planning' (PADES project consultant, 21/07/2017). Usually, these community organisations help the project planners to assess the real demand from the residents and to determine the feasibility and viability of the project. They also participate in defining the scheme and the commission. They also organise the recruitment of the future gardeners and consultations on the planning and design priorities and on the rules and regulations for the site. They recommend to project contractors, usually landscape architects, specific solutions to take into account the requirements of the residents with regard to the design and to overcome the technical stumbling blocks that sometimes result from the inclusion of kitchen gardens in an urban planning programme. Finally, it should be noted that once the community garden is completed, these community organisations are often transformed into supervisory and management organisations for the site. Through the intermediary of salaried managers, they take care of the monitoring of the project and the gardeners with the aim of developing participatory management by the residents and, on occasion, real user group involvement.

11.2.2.3 Landscape Architects as Project Contractors

In Marseille, the development of community gardens has given rise to increasingly complex projects. As the requirements of the residents (user groups), the response capacity of the planning body and the expertise of the planning support teams develop, and the projects and their realisation call for real professional competencies in the design and planning of public spaces and gardens. In this context, landscape architects are often solicited and engaged for their know-how in garden design. They have now become the preferred project contractors for community garden projects in Marseille. But this increasing demand has nevertheless raised certain pressing questions of a conceptual, project-related, methodological or technical nature among the urban planners and architects. They appear to find the rather unusual nature of this type of project disturbing. In contrast to ordinary urban planning projects, here it is not a matter of delivering an 'end product', but rather of offering a kind of garden superstructure designed to provide a framework for the gardens of the future users. Despite all the effort devoted to forward planning and consultation, this exercise appears both to restrict the scope of the design and to involve too great an unknown dimension. In addition, it is not here a matter of dealing with nature in a way that provides indirect benefits, but of enabling the cultivation of a natural space with direct benefits by planning the harvesting and

above all the consumption of the products of the kitchen gardens. This state of affairs confronts the designers with new professional challenges, in particular in terms of their understanding of the resulting agricultural practices (surface areas required, irrigation, etc.) or the analysis of the soil quality (pollution, alteration, etc.). Two project situations might thus be distinguished. In the majority of cases, the scheme defined by the planning authority will engage the landscape architect in a classic project contractor mission. Given the responsibility for the landscape design and development of the site, the landscape architect fulfils the requirements of the commission in terms of the form and layout of the space, while having the benefit of assistance for the social aspects (taking into account the residents and future users) and agricultural aspects (taking into account the cultivation parameters) from the specialised community organisations (AMIEU or PADES). In the course of the interviews in the field, a landscape architect commented on his relations with the PADES: 'I soon understood that their role (PADES) was to take care of the technical and social realisation of the gardens, and thus to carry out a kind of pre-diagnostic of the local associations which might be capable of taking over, of seeing the wishes, the potential too in terms of know-how. It's true that I don't have that kind of experience. It is quite a special thing to know what surface area of garden you need for how many people […]. And our intervention as landscape architect, I think it is nonetheless complementary, since it enables the housing association to create a place of good quality' (landscape architect, 21/07/2014). In fewer cases, the commission from the planning authority is sufficiently light and flexible to give the landscape architect a great deal of latitude in the realisation of the project. With a much longer time frame for the execution, he imagines the project and determines the best way to achieve it, in close collaboration with the client, the residents and the future users. The project process thus engaged is much less focused on the formal and technical realisation of the redevelopment of the site than on the mediation and running of the space created. The landscape architect here plays more the role of mediator and gardener (Donadieu 2009) than designer in the traditional sense.

11.2.2.4 The Residents: Towards the Emergence of User Group Involvement?

Paradoxically, the network of participants which is formed to meet the social requirements for community gardens has relationship with the residents that is more or less direct. The residents intervene in a highly variable way, depending on the project. Three possible situations may be distinguished.

The first situation assumes a firm commitment by the residents, or rather a small group of residents. This may be seen when this involvement develops spontaneously in advance of the project on the basis of a real desire for a community garden. In this case, the residents concerned present the idea of the garden and preside over its development through the intermediary of an association. They often appeal to a representative of the planning body or the community organisations

running the project to assist them throughout the project process, which is thus characterised by a 'bottom-up' dynamic. At no stage do these residents give up keeping track of the outcome their initiative. Making use of their detailed knowledge of the neighbourhood, seeking if needs be the information necessary for the successful management of the project, they affirm their right of oversight and of action at all stages of the design and realisation, up to final delivery. They set themselves up, in fact, as real user groups, acting as a bridge between the main landscaping project participants and the local residents.

The second situation involves the mobilisation of the residents in the pre-planning stages of a project decided on and conceived by the planning body. In this case, the project planner (a municipal department, the *Politique de la Ville* GIP or most often a housing association) sees the interest of developing a community garden in a given portion of the territory without this being based on an actual expressed need. In consequence, before planning his project, it seeks not only to assess the interest of its proposal with regard to the residents, but also to identify and recruit the keenest among them to play a role in running the project. For this, it makes use of the appropriate consultative and coordinating competencies of a specialised community organisation. Generally, this organisation begins by going door-to-door in the neighbourhood to sound out the potential wishes of the residents as concerns community gardens. When this approach meets with a favourable response, the organisation continues to consolidate the commitment of the persons interested by organising a public meeting to provide information and then consultative meetings to explain the ins and outs of the project. This method of approach may sometimes be rather complex. A community organisation employee commented: 'The results of the door-to-door survey: 400 homes visited, 147 doors opened, 60% of the people who opened the door found the project interesting, 30% said "I would like an allotment". First public meeting: 5 people. That's the result of the door-to-door survey, except that no one can say "I wasn't told about it"' (community organisation employee, 29/07/2014). After these meetings, the planning body and the specialised community organisation judge the viability of the project and decide whether or not to go ahead. It must be admitted that the participation of the residents would appear in this case to have been particularly volatile. This approach, based on consultation and coordination, is restricted in fact by the limited involvement of the residents, including after delivery of the project. Very often, the original project leaders become managers of the site by default, in the absence of any real commitment from a user group.

The third situation also derives from a 'top-down' initiative wished for and conceived by the planning body independently of the opinions of the residents. This is the case when the community garden is considered as one site among others, included as part of a large-scale real estate project. In this case, the residents are not at all involved in the project process. They are only involved at the delivery stage. At that point, the community garden is entrusted by the planning authority to a specialised community organisation. The community organisation first recruits users by means of tried and tested methods to generate interest. It then undertakes the management and running of the site by endeavouring in particular to get the

planting of the garden started with the gardeners. Despite the landscape architect's attempts to anticipate their social and spatial aspirations, there is no guarantee that the residents will make the site their own. The risk of this type of project is therefore of creating gardens that are not so much shared by a community as parcelled out among a disparate group of gardeners.

11.3 The 'Kitchen Garden of Virtues'/The 'Garden of Values': Ways of Designing and Realising a Landscaping Project

The stakeholders in this increasingly structured project process are nevertheless still driven by different expectations, vision and perceptions with regard to community gardens. On the basis of material collected in the field, it is possible to distinguish two main logical perceptions associated with specific parties. They tend to make a distinction between the 'virtues' of the kitchen garden and the 'values' of the garden. Within a single project, principles and bases of action may be detected which, rather than being in conflict, coexist and function in parallel.

11.3.1 The 'Kitchen Garden of Virtues'

11.3.1.1 Multifunctional Tools

Virtue (*vertu*) has been defined in French as 'a firm and constant disposition to do good' ('*disposition ferme et constante à faire le bien*') (Encyclopédie Larousse 1979). For the vast majority of planning bodies (agencies of territorial authorities, housing associations, urban developers) and the managers of specialised community organisations, community gardens involve virtue, since they do good by offering real and positive responses to diverse and complex urban problems. For these organisations intervening in the planning stages of projects, they may indeed be seen as multifunctional tools, the scope of which is as much social and cultural as economic, environmental or political. Essentially reduced to their productive and nutritive dimensions, they are thus considered much more as kitchen gardens than as real gardens. They thus represent above all a variety of means of action which may play a role in a certain empowerment of the most disadvantaged users and residents. A manager of a specialised community organisation commented thus on the virtues of these kitchen gardens transformed into multifunctional tools: '[…] the utility of assisted self-production, the utility of the garden in relation to certain policy priorities: health, nutrition, living environment, social, whatever you like… and there isn't enough political support to manage this tool for assisted

self-production, and in particular this garden tool, as a public policy tool to make a facility and a social project happen' (specialised community organisation project manager, 21/07/2014). These utilitarian conceptions are the basis of the logic of the preferred localisations of community gardens. For the promoters of 'Kitchen Gardens of Virtues', their ability to do good should take form in places where social needs are the most strongly felt, that is in the poorest neighbourhoods of Marseille.

11.3.1.2   'Kitchen Gardens of Virtues' as Projects: Functionalist Approaches Based on Reproducible Methodologies

'Kitchen Gardens of Virtues' give rise to particular approaches to project planning which involve a kind of garden design functionalism. These approaches are based on the search for reproducible methodologies within which the content (the functions) takes priority over the form. They thus require development concepts that are less based on creativity and the construction of unique places than on the utilisation of tried and tested techniques, intended to generate the required effects: the 'virtuous' functions of the kitchen garden (Consalès et al. 2016). Like a kind of protocol devised jointly by the planning body and the planning body support teams, the methods employed intervene essentially in the planning stages of projects. Most of the time, they involve mobilising the future gardeners, the co-construction of the operating rules of the sites and the assessment of the feasibility of community gardens, giving rise to technical and environmental solutions. A specialised community organisation project manager commented: 'At the beginning, we arrive, we have our method. First of all it's everything that happens before the launch of the garden. We have a few meetings with the residents: what's a community garden? We show them pictures, and start working out the regulations for the garden. […] Then we see according to the site, whether the land is usable for a garden: is there any water? Sometimes it's simple, sometimes it's more complicated' (specialised community organisation project manager, 28/07/2014). In this kind of approach, the content of the project takes precedence over the form (Consalès et al. 2016). The sites where the community gardens are implanted are often seen as simply a base. This is not without impact on the way the project contractors conceive and design 'Kitchen Gardens of Virtues'.

11.3.1.3   Conception and Design of 'Kitchen Gardens of Virtues'

The underlying aims behind 'Kitchen Gardens of Virtues' have direct consequences for the project designs they generate. Here, the stakeholders define in advance the form and the outline of the community garden according to the references or the experience of the planning body and the planning body support teams. They make them technically defined and complete, well before the actual realisation, on the

basis of a conception and a design which might well be qualified as fixed. This is done according to a conventional process: a commission is drawn up by the planning body intent on controlling a project on the basis of a precise methodology; a contractor, usually a landscape architect, responds. The framework of the commission defines a certain number of criteria which the designer must meet: access for persons of reduced mobility, access for the rescue services, choice of plants, etc. To meet these requirements, the designer is under an obligation to present documents (plan, cross section, elevation) corresponding to the technical requirements of the project. The plan is thus of primary importance. It generates the general language necessary for communication between the participants and for the management and realisation for the project. For this purpose, it is conceived on the basis of specific data on the site and its context (measurements), integrates the development priorities chosen and should, *in fine*, provide a basis for realising on the ground the elements of the design (Fig. 11.5). Even if this procedure involves numerous consultation sessions, it leaves little room for the future users of the site to fully make it their own. In fact, the contribution the residents may make to the project diminishes as the designer, in agreement with the planning body, progressively finalises the technical documents. The superstructure and the functioning of the community garden (links with the territory, rules and regulations, etc.) are determined even before it really comes into existence: the different areas are attributed, the volumes of soil required are specified, the pathways are marked out, and the equipment and other common areas are designated (sheds, open spaces, water outlets, fences, etc.). Everything is calculated and calculable in such a way that there is no detail not covered by the planning budget and the designer's estimate. Although constrained by a project designed to bring out the virtuous functions of the community garden, the designer is the sole guarantor of the form. In this respect, he should not only anticipate the plans of the future gardeners within their allotments, but also guarantee the acceptance of the development project by the residents. A landscape architect commented: 'You have to create a space of quality in the gaps between the garden allotments and the apartment building. This is a good thing for those who are not gardeners. In these homes, it's good to have a view of the earth and of the gardens or of the earth in the gardens with a collective space, with hedges which have after all been properly designed. The idea is to provide a base which is of good quality, suited to the site, which enables everyone to have a satisfactory outdoor space in front of their homes. […]'. He added: 'As regards having designed a completed space right from the start, I tried, right from the start, to imagine a facility, a really communal space, a base where […] any resident can go. And then around that, there are allotments which may vary' (landscape architect, 29/07/2014). Although pre-delimited, the kitchen garden allotments remain, with this kind of approach, the only spaces allowing full rein for the creativity of the future gardeners.
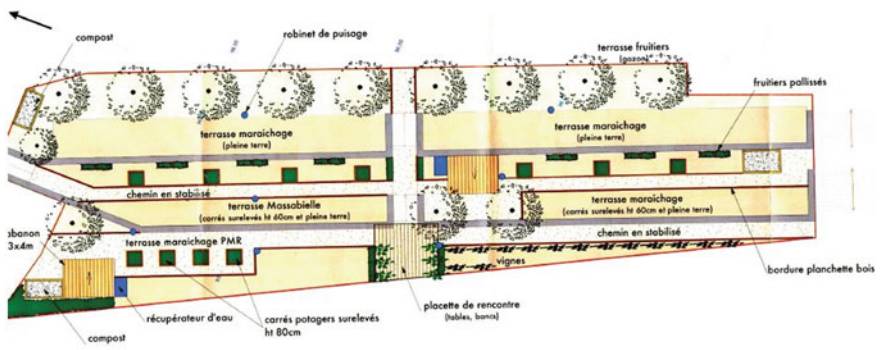
Fig. 11.5 Examples of designs associated with 'Kitchen Gardens of Virtues'

11.3.2   'Gardens of Values'

11.3.2.1   Unique Places

'Value' designates 'importance recognised by a moral or aesthetic judgement' (Encyclopédie Larousse 1979). In other words, it is Good as evaluated by a subjective opinion. For many managers of specialised community organisations, for certain landscape architect contractors and for most users, community gardens involve value in that they provide the means to really embody what they define as 'Good'. For these stakeholders operating in the follow-up of projects, gardens are seen as unique places where ethical and aesthetic convictions are expressed. Spaces expressing the desired privacy, sociability or even the perception of the inner self (Dubost 2000), they give material form to the emotional and affective relations everyone has with the territory, nature and the planet. They are elements of expression and demonstration of 'being in the world' (Heidegger 1995). In this context, the virtuous functions of the kitchen garden count for little; here, community gardens are envisaged in the full sense, that is as 'the smallest patch of the world and then as the totality of the world' (Foucault 1967). They refer back, in fact, to the binomial concept of the microcosm and the macrocosm (Brunon and Mosser 2006), by establishing a link between these two scales of perception (Consalès and El Faïz 2016). Henceforth, that can no longer be reduced to the effects they generate or to the various means of action that they assume; they are not tools but constitute an end in itself of which the scope is no doubt more immaterial, affective and symbolic than material, functional and tangible. A gardener commented: 'What motivates me? The pleasure of seeing things grow. In fact, it's my little corner of paradise. I personally don't like wearing gloves for gardening, I like the contact with the soil. Yes, I can't work with gloves on. The garden gives me a sense of fulfilment. And then it's fascinating when you see that you put that in the earth and gradually it grows and grows. It's beautiful! And then you imagine it. How you want it to be, how you don't want it to be. Little by little, there are things that happen, like there I've put some bits of wood with the rose bush I bought and I want it to go the other side. You see, it's a corner of paradise. Everyone should have a little corner of paradise' (a gardener, La Rouguière community garden, 26/05/14). From these conceptions arises an affirmation of places of positive intensity within the low-income neighbourhoods of Marseille. For the promoters of 'Gardens of Values', their capacity to embody Good at a specific point in the territory makes them part of a fine and delicate geographical pattern which is not alterable, interchangeable or transposable. Thus, the question of their perennity is a constantly recurring issue.

11.3.2.2   'Gardens of Values' in a Project: Context-Specific and Non-reproducible Approaches

'Gardens of Values' encourage processes, the aim of which is to reveal places that are unique in space and time. A landscape architect commented: 'The aim is to

move forward, to find our way of redesigning the site, which will not be the same as what you find in many gardens or in many projects which have to be launched very quickly, and where the objective of sustainability is not necessarily the main priority […]' (landscape architect, 15/07/2014). 'Gardens of Values' are based on approaches that are constantly renewed and reconfigured, according to the sites and the urban contexts in which they are constructed. Here, it is a question not so much of using tried and tested and reproducible methodologies, as of launching a unique landscaping project based on the *genius loci* (Martella 2010). This type of approach gives priority to the 'landscape design of the space (its organisation, composition in terms of garden architecture)' (Donadieu 2009). This 'aims to elicit among a public assumed to be sensitive to its surroundings selected affects, feelings, emotions […]. From the garden model, the notion of a "feel-good" space often takes on an idyllic and euphoric vision of the world and tends to transpose it to the real world. This paradigm places human sensibility, but also that of non-human living beings (animals and plants), at the centre of the act of redeveloping a space' (Donadieu 2009). The project is thus based on an intuitive and creative process in which the meaning attributed to the community garden goes beyond the framework of its functions alone. It is preferentially based on the synergy generated by the participants who are closest to the terrain: the employees of specialised community organisations, the gardeners and also the landscape architects who have the benefit of a commission that is open and flexible, as well as more long-term objectives. In collaboration with the commissioning body, the residents and the future users, these mediating landscape architects (Donadieu 2009) endeavour to inculcate a 'landscaping' process (Donadieu and Mazas 2002) for the site based on its spatial forces (geography, history) and its social forces (support of the planning body, requirements of the residents, users' desire for a garden), transcribing them onto the design of the redevelopment. A landscape architect commented: 'It's rather the job of the landscape architect to provide the residents with a "reading" of the site. We try to orient them in the way they come to terms with their immediate environment and the landscape where they will install their garden' (landscape architect, 15/07/2014). This take on the community garden gives rise to particular ways of conceiving and designing the projects.

11.3.2.3   Conceiving and Designing 'Gardens of Values'

'Gardens of Values' are based on landscaping projects where the form (the place) is more important than the content (the functions). Thus, the designs that they elicit seek, above all, to reveal the spatial and social forces which develop in a given selected part of the territory, in order to make the garden flourish and to fix it in time. In this respect, they break free of their purely technical dimension and their traditional codes. Here, it is less a matter of tracing a line on a standardised document destined to be transcribed onto a reality intended to be fixed once and for all, than to provide the spark for a project at a site which will evolve under the impetus
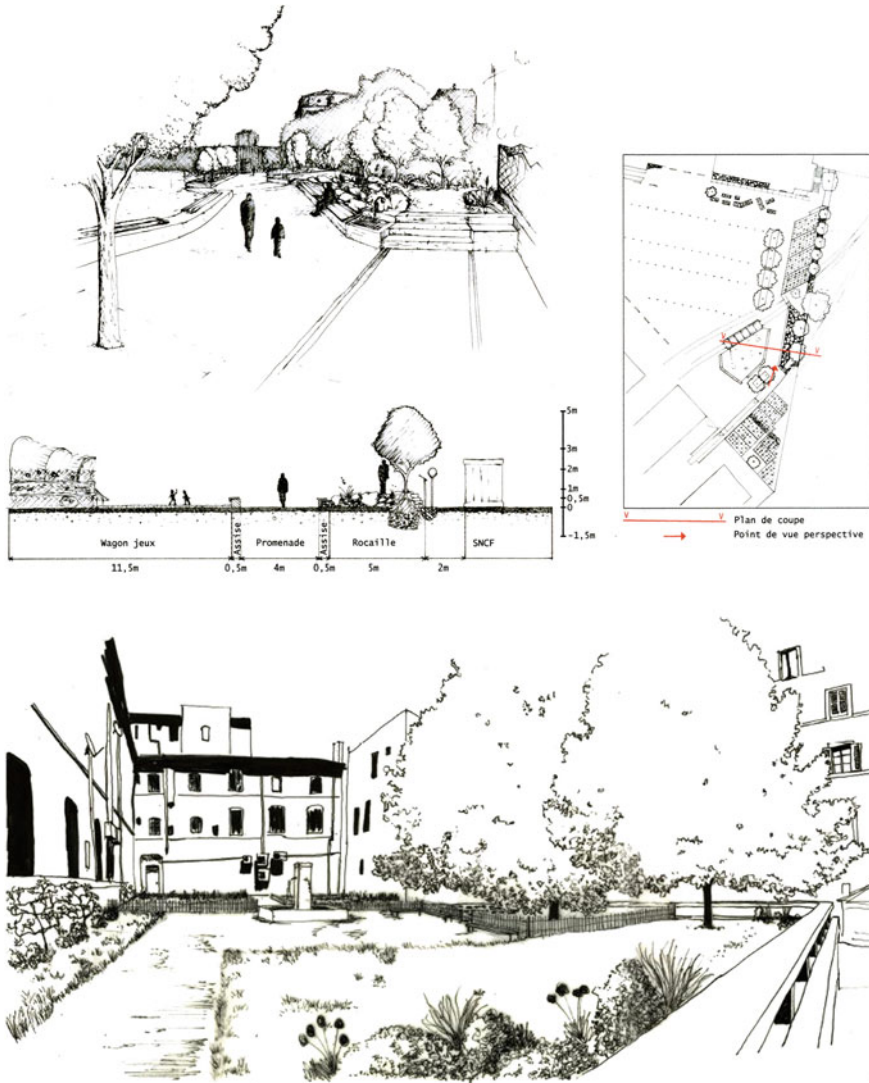
Fig. 11.6 Examples of partial drawings associated with 'Gardens of Values'

of various social purposes. There are two types of drawing produced by designer: the partial drawing to be completed by the users (Fig. 11.6) and the in situ drawing.

The partial drawing is similar to a landscape project sketch. On the basis of a detailed analysis of the spatial and social data of the site, the landscape designer outlines his initial intentions, defines the main priorities and sketches the first representations of the community garden. He takes care however to limit his work to showing the broad outline of the project. He does not go into the details of the

design. He usually opts for a 3D mode of representation, preferring to produce rough sketches rather than 2D plans. This method enables him to give form to the ideas of the stakeholders, and in particular the future users, without making the realisation of the garden dependent on technical considerations alone, nor fixing a definitive site design on the basis of purely temporary factors. For the landscape architect, it is a matter of giving life to the desires of the future gardeners by driving the dynamic of the project, without jeopardising the garden's potential for adaptation, or even mutation. Furthermore, this way of proceeding makes it easier to involve the residents in the design process. In contrast to the plan, which calls for a certain spatialisation ability for its interpretation, the universal language of a drawing can reach and mobilise more people. He proposes rather than imposes, gives people their say, specifies the choices without giving the landscape architect's recommendations a definitive character. Above all, the drawing facilitates the projection of the future users into the core of the place to be created and finally may be considered as an affective expression of the consensus. In consequence, it is the preferred tool of a landscaping approach which is based on wide-ranging mediation. A landscape architect commented: 'We have presented the sketch of the project, we have talked to them a little about the plan, with pictures, the photographs of before, the drawings of what we envisaged. Explaining roughly what we do in all projects. I stop at the plan and the rough sketches. I don't go as far as the very detailed drawing of the whole project. And afterwards, these are the things I talk about and which I continue to orient, depending on the project' (landscape architect, 15/07/2014).

The in situ design is the most spontaneous expression of the community garden project. It may be defined as a landscaping idea which does not use media (plan or sketch) and is carried out directly on the ground, at a scale of 1/1. It is a mode of design in its own right, used by specialised community organisations when the allocated budget is insufficient to associate a landscape architect contractor. In this case, the community organisation managers are responsible for planning the community garden, after consultation and mobilisation of the residents. On the basis of their garden design knowledge and know-how, they manage a process of creation which does not stop at a short construction operation but is part of a progressive urban planning scheme invented and defined in the course of the management process. This landscape gardener approach (Donadieu 2009), this mode of operation, gives full rein to the sensitivity to nature of the people involved, solicits their aesthetic and practical intelligence, in particular with regard to the redevelopment of communal spaces, and learns above all to take into account the values of each gardener. For behind the apparent everyday aspects of the kitchen garden, there is the unique form of the community garden, rich in convergence and also divergence of the perceptions of each landscape-designer resident (Lassus 1977). An organiser commented on this way of working: 'We started very discretely. It was something, we had to be careful not to upset peoples' habits, we had to convince people outside or the regulars, make them work with people from outside. The young people, we helped them to make the fencing, to plant, water, fix

things. It wasn't much but in any case we did it, for us, for the children and gradually, it became something which was done' (organiser, 15/07/2014).

11.3.3 The Role of the Resident in the Realisation of a Landscaping Project

The logical bases behind the distinction between 'Kitchen Gardens of Virtues' and 'Gardens of Values' are also reflected in the way the realisation of the landscaping unfolds. Depending on the positioning adopted, the involvement of the residents, and more especially the users, in the construction of community gardens differs. Three situations may be distinguished.

11.3.3.1 Realisation by the Residents

The first situation is derived from the direct involvement of the residents in the practical realisation of the project. It depends on the emergence of a user group capable of either managing or carrying out the construction operations. That pre-supposes that the users have previously organised themselves into a user group with a certain degree of practical or financial autonomy. In one case, the properly organised user group, after managing the design stages, takes on the responsibility for the construction of the garden superstructure (pathways, irrigation, communal spaces and equipment) and leaves to the user group members the responsibility for organising each allotment. In the other case, the user group raises a budget for the project by means of subscriptions or funding obtained and has the work done by green space development companies. These modes of operation do not preclude the more or less direct assistance of other participants, such as the local authority agencies or the housing associations. They may agree to cover part of the realisation (providing earth for planting, paths, irrigation). But the residents never lose the initiative or the control of the project. Realisation by the residents thus seems the most appropriate way to successfully achieve the garden of values. It offers the means to give form to the aesthetic and ethical conceptions of the users, in a well-organised way. It makes possible the construction of fully exploited and unique places which are testimony, even in the worksites they give rise to, of the convictions of their occupants.

11.3.3.2 Realisation with the Residents

The second situation involves the residents in a process of realisation involving other groups in a spirit of partnership. In this case, the creation of a community garden becomes the framework for a participatory worksite. This is at the initiative

of the planning bodies, the supporting community organisations and the contractors, but federates around the competencies of the residents a range of participants to allow the co-construction of the redevelopment. The contractors and user groups have the support, for example, of people involved in social reinsertion programmes, students on project management courses (young architects, landscape designers, town planners) or even artists. So depending on the participants, the participatory project takes on either the characteristics of a 'garden of values' or a 'kitchen garden of virtues'. Thus, for the organisers, landscape architects and gardeners, this is a means to formalise, through a collective action and on a specific portion of the territory, the synthesis of the project based on the collective perception of the residents and landscape designers. Regarding this aspect, a designer commented: 'Through the project worksite, we wanted to maintain, encourage and work. It's a kind of neighbourhood relationship between all kinds of people who have completely different visions of the garden' (landscape architect, 15/07/2014). For the planning body and the community organisation managers, the participatory project offers the means to highlight the Good even in the way the work is managed. The project site should thus herald the functions of the garden by channelling the energies of the territory, by mobilising the goodwill of the participants and by demonstrating the social merits and good citizenship of working together. A community organisation manager commented with regard to a project: 'The aim was to combine the community garden project run by the residents with the people from the social insertion project. It's worked very well. It meant we could transform a strip of earth into a garden, for the residents. Originally about ten people from the residents' association and fairly quickly about thirty people. After five months, there was the garden' (community organisation manager, 28/07/2014).

11.3.3.3 Realisation Without the Residents

The third situation occurs when the realisation is carried out without any involvement of the residents or future users. In this case, the planning body and their support teams set up the production of a series of community gardens in the framework of a large-scale property development scheme. It manages the landscaping project up to delivery of what is considered as a neighbourhood amenity. In fact, this urban redevelopment is carried out by a green space development company, often after the construction of the buildings. Under the impetus of the planning body, the recruiting of gardeners now starts and then assistance with the planting provided by a specialist organisation. This way of operating is based on absolute confidence in the strong capacity of kitchen gardens to reveal their virtues to a public that is assumed to be receptive. The project thus consists in an urban design proposal assumed to respond to a range of social needs. In fact, this type of process often fails to generate a rapid taking of possession of the site. The exclusion of the residents from the planning and design results generally in the prolongation of the mobilisation and partnering phase after the realisation. With these approaches focused on the virtues of the kitchen garden, the management of the community

organisations is thus primordial for the success of these community gardens, which is dependent on the affirmation of the required functions and thus the accomplishment of a range of activities.

11.4   Conclusion

Among the gratuitous controversies and rather farcical debates that the boom in urban agriculture has given rise to in France, community gardens are sometimes derided as a 'bobo' trend, testifying to the gentrification of certain neighbourhoods. Following the tradition of long-term scientific research (Demailly 2014), the present article aims to demonstrate that in reality, things are generally more complex, more relative and more contextualised. In Marseille, the community gardens have developed in response to social needs expressed within neighbourhoods that are disadvantaged, not to say extremely poor. But are they the territorial expression of reactions by the residents driven by an increasing dynamic of empowerment of these populations formed into real user groups? Certainly not, since it must be noted that behind every community garden there lurks a complicated set-up involving a dense network of participants which goes beyond the simple framework of interpersonal relations within the neighbourhood. These cultivated spaces are only very rarely the work of residents' user groups which have spontaneously taken over the redevelopment of a portion of their territory. They seem rather to be real projects (Vandenbroucke et al., in press), involving highly diverse stakeholders driven by the same goal: the landscaping (Donadieu and Mazas 2002) of a site. To meet the needs of the residents, a project process is set up, running from the design to the realisation of an urban redevelopment scheme. The project process involves planning bodies, planning and project contractor support teams and contractors, which increasingly include landscape architects. The initial hypothesis according to which community gardens are considered as real landscaping projects would thus appear to be confirmed in the Marseille context. Nevertheless, there remains the question of the differences in the visions that drive this kind of landscaping project. On the one hand, the planning bodies and the managers of specialised community organisations represent the idea of kitchen gardens that are productive of virtues, multifunctional tools for the redevelopment of low-income neighbourhoods. On the other hand, the landscape architects, organisers and users perceive the gardens as unique places that reveal the aesthetic and ethical values of the landscape-designer residents (Lassus 1977), who shape them in their image. No doubt it is this difference in perception that explains the lack of involvement of the residents in certain actions undertaken in neighbourhoods where the demand has nonetheless been identified as high. Where the residents hope to see the appearance of a place that offers them the means to escape from reality, a 'garden of liberty' as it were, the planners intend to realise a ready-to-use kitchen garden, organised on the basis of precise rules and designed to respond to needs that are firmly anchored in reality. It is up to the landscape architects to get over their reticence with regard to

community gardens and to invest more in the design and realisation of this kind of project in order to reconcile the content and the form (Consalès et al. 2016), the virtues and the values. Nevertheless, the question of the management remains in abeyance. This is more uncertain and determines to a large extent the future development or the change in status of the community garden. Sometimes, a user group very quickly becomes autonomous and gives the site a long-term dimension. Sometimes, the management by a specialised community organisation takes over the whole running of the site and maintains it in activity. Finally, the community garden sometimes goes into decline or only continues to function in a summary way, because of the progressive lack of interest of the users. In the latter case, the process is considered by all the stakeholders as a failure. But in reality, if the human project stops, the site itself, 'humanised' even if neglected, continues to live on as an identified and revealed place. It conserves the material (walls, pathways, etc.) and living (particular floral compositions) record of its occupation by gardeners. From this base, a future opportunity might arise. Meanwhile, the place, given new potential as a site, may regain its status of 'third landscape' (*tiers-paysage*), that is a space where man has handed over the evolution of the landscape to nature alone (Clément 2004). Thus, to some extent, the landscaping process (Donadieu and Mazas 2002) is perpetuated.

Bibliography

Aubry C (2014) Les agricultures urbaines et les questionnements de la recherche. POUR Agricultures Urbaines 224:35–49

Bell S, Fox-Kämper R, Keshavarz N, Benson M, Caputo S, Noori S, Voigt A (ed) (2016) Urban allotment gardens in Europe. Earthscan from Routledge, London

Brunon H, Mosser M (2006) Le jardin contemporain. Renouveau, expériences et enjeux. Scala, Paris

Charte des jardins partagés de Marseille (2010) http://environnement.marseille.fr/sites/default/files/contenu/environnement/charte_jardins_partages.pdf

Chenot ED, Douay F, Dumat C, Pernin C, Pourrut B, Schwartz C (2012) Jardins potagers : terres inconnues ?. EDP Sciences, Les Ulis

Clément G (2004) Manifeste pour un tiers paysage. Editions Sujet-Objet, Montreuil

Consalès JN (2000) Les jardins familiaux marseillais: laboratoires territoriaux d'une agriculture urbaine en Méditerranée. Méditerranée 95(3–4):81–88

Consalès JN (2004) Les jardins familiaux à Marseille, Gênes et Barcelone: laboratoires territoriaux de l'agriculture urbaine dans l'Arc Méditerranéen. Thèse de doctorat de Géographie et d'Aménagement du Territoire, University of Provence, UMR Telemme

Consalès JN (2008) Jardins familiaux et développement durable: entre discours théoriques et actes concrets. In: Da Lage A, Amat JP, Frérot AM, Guichard-Anguis S, Julien-Laferrière B, Wicherek SP (dir.) L'après développement durable, Ellipses, Paris, pp 203–211

Consalès JN, El Faïz M (2016) Jardin. In Dionigi A, Crivello M, Tozy M (dir.) Dictionnaire de la Méditerranée, Editions Actes Sud, Arles

Consalès JN, Joimel S, Cordier F, Jareno C, Chenot E et al (2016) De l'argument à l'action: la biodiversité au service des jardins familiaux. Projet de paysage 13: Biodiversité et Paysage

Corajoud M (2010) Le paysage c'est l'endroit où le ciel et la terre se touchent. Editions Actes Sud, Arles

D'Andrea N, Tozzi P (2014) Jardins collectifs et écoquartiers bordelais: De l'espace cultivé à un habiter durable?. Norois 231:61–74

Demailly KE (2014) Jardiner les vacants. Fabrique, gouvernance et dynamiques sociales des vacants urbains jardinés du nord-est de l'Île-de-France. Thèse de doctorat réalisée à l'Université Paris 1 Sorbonne-Ladyss

Donadieu P (2009) Les Paysagistes ou les métamorphoses du jardinier. Editions Actes Sud, Arles-Versailles

Donadieu P (2012) Sciences du paysage, entre théories et pratiques. Editions TEC et DOC, Paris

Donadieu P, Mazas E (2002) Des mots de paysage et de jardin. Editions Educagri, Dijon

Dubost F (2000) Jardins ordinaires. Editions L'Harmattan, Paris

Duchemin E, Wegmuller F, Legault M (2010) Agriculture urbaine: un outil multidimensionnel pour le développement des quartiers. VertigO, la revue électronique en sciences de l'environnement 10(2), Montréal. http://vertigo.revues.org/10436

Encyclopédie Larousse (1979) Edition larousse, Paris

Fleury A, Donadieu P (1997) De l'agriculture péri-urbaine à l'agriculture urbaine. Courrier de l'Environnement de l'INRA, Paris 31:45–61

Foucault M (1967) Des espaces autres, Hétérotopies. Conférence au Cercle d'études architecturales, 14 mars 1967. In: Architecture, Mouvement, Continuité (1984) 5:46–49

Guyon F (2008) Les jardins familiaux aujourd'hui: des espaces socialement modulés. In: Espaces et sociétés, Editions Erès, Paris, 134:131–147

Heidegger M (1995) La dévastation et l'attente. Entretien sur le chemin de campagne. Editions Gallimard, Paris

Joimel S, Cortet J, Jolivet CC, Saby NPA, Chenot ED, Branchu P, Consalès JN, Lefort C, Morel JL, Schwartz C (2016) Physico-chemical characteristics of topsoil forcontrasted forest, agricultural, urban and industrial land uses. Sci Total Environ 545–546:40–47. http://dx.doi.org/10.1016/j.scitotenv.2015.12.035

Lassus B (1977) Les jardins imaginaires. Presses de la connaissance, Paris

Lovell ST (2010) Multifunctional urban agriculture for sustainable land use planning. Sustainability 2:2499–2522

Martella M (dir.) (2010) Jardins, le génie du lieu. Editions du Sandre, Paris

Millennium Ecosystem Assessment (2005) Ecosystems and human well-being. Island Press, Washington, DC

Monédiaire G (1999) Agricultures urbaines et ville durable européenne. Droits et politiques du jardinage familial urbain en Europe. Presses Universitaires de Limoges, Limoges

Mougenot C (2003) Prendre soin de la nature ordinaire. Quae éditions, Paris

Nys P (1999) Le jardin exploré, une herméneutique du lieu, I. Editions de l'Imprimeur, Besançon

Pourias, J (2014) Production alimentaire et pratiques culturales en agriculture urbaine. Analyse agronomique de la fonction alimentaire des jardins associatifs urbains à Paris et Montréal. Thèse de doctorat en Sciences Agronomiques, AgroParisTech-Université du Québec, Paris et Montréal

Pourias J, Daniel AC, Aubry C (2012) La fonction alimentaire des jardins associatifs urbains en question. POUR 215–216:333–347

Scheromm P (2013) Les jardins collectifs, entre nature et agriculture. Métropolitiques. http://www.metropolitiques.eu/Les-jardins-collectifs-entre.html

Scheromm P (2015) L'expérience agricole des citadins dans les jardins collectifs urbains: le cas de Montpellier. Développement durable et territories 6(1). http://developpementdurable.revues.org/10726

Terrin JJ (ed) (2013) Jardins en ville, villes en jardin. Editions Parenthèses, Marseille

Vandenbroucke P, Canavese M, Dacheux-Auzière B, Pouvesle C, Consalès JN (à paraître) Derrière l'utopie du jardin collectif, la complexité d'un projet social, technique et politique. Géographie et cultures, numéro spécial «Cultiver la ville: outils et territoires d'une (re)conquête citoyenne?»

Weber F (2000) L'honneur des jardiniers. Les potagers dans la France du XXe siècle. Belin, Paris

Wegmuller F, Duchemin E (2010) Multifonctionnalité de l'agriculture urbaine à Montréal: étude des discours au sein du programme des jardins communautaires. VertigO, la revue électronique en sciences de l'environnement 10(2), Montréal. http://vertigo.revues.org/10445

Author Biographies

Jean-Noël Consalès is assistant professor in urban and landscape planning, urbanism and geography (Aix-Marseille Université/UMR Telemme). His research focuses on city–nature relations and the mobilisation of nature in land-use, urban planning and landscape projects at different territorial levels. In this respect, they are based on three conceptual and operative fields in strong interrelations: landscape planning and urbanism, urban agriculture and garden theories.

Brice Dacheux-Auzière is a landscape architect and a graduate of the Ecole Nationale Supérieure de Paysage (ENSP) in Versailles-Marseille. He passed the Master 2 Urban Planning and Development of the Institute of Town Planning and Regional Development (IUAR) of Aix-Marseille university. He is currently a Ph.D. student at the ENSP of Versailles-Marseille in the research laboratory in landscape (LAREP). His subject focuses on the ecologisation of the practice of landscape architects.

Chapter 12
Urban Gardens in Greece: A New Way of Living in the City

Helene Haniotou and Eleni Dalipi

Abstract Urban agriculture and community gardening had not gained any significant attention until the last decade in Greece where urban food has traditionally been related to the agricultural sector and to the Greeks' strong attachment to their rural place of origin and home. In addition, environmental politics were not well developed, and the main urban strategies have been mostly concerned with the general pattern of land use, infrastructures (especially the development of transportation systems), public buildings, and facilities necessary to the promotion of public comfort. The recent economic crisis, mainly since 2010, has shifted policymakers' awareness regarding the 'urbanization of poverty' in Greek cities and particularly in the metropolitan areas. Drawing inspiration from abroad, initiatives to handle the social consequences of the crisis have been taken. The program of '*Municipal vegetable gardens*' appeared as an innovative measure for immediate action against urban food deprivation for the most vulnerable social groups (unemployed, low-earners, low-pensioners, single parents, etc.) affected by the impact of the crisis. Meantime, imposed austerity policies have contributed to a rising discontent with the government and its policy, giving birth to new forms of social movements concerned also with providing community access to 'green spaces'. Therefore, this chapter serves as an introduction to and a general overview of urban agriculture and community gardening in Greece, addressing the role of involved parties, policy formulation, and legislation.

Keywords Greece · Municipal vegetable gardens · Urban agriculture
Urban gardens · Community gardening · Social urban movement

H. Haniotou (✉)
Department of Urban and Regional Planning, School of Architecture,
National Technical University of Athens, Athens, Greece
e-mail: hhaniotou@arch.ntua.gr

E. Dalipi
Laboratory of Urban Design, National Technical University of Athens,
Athens, Greece
e-mail: elenidalipi@hotmail.com

245

12.1   Introduction

Greek cities, so far, present a morphologically, socially, and functionally mixed landscape brought about mainly by private initiatives due to the lack or partial application of urban planning. In fact, the country's urban and regional administrative planning system has traditionally been characterized by centralization and a rather weak local government structure, with central governments being overall responsible for the design of urban and regional planning strategies (Giannakourou and Balla 2013; Delladetsimas and Leontidou 2003).

   The Greek sovereign debt crisis of 2010 in the aftermath of the global financial crisis of 2008 has had as a result for Greece to enter a long period of recession with various effects on citizens lives, including loss of household's income, barriers to land ownership, and affordable housing and growing inequalities between rich and poor (HSA[1] 2011). The effects of the economic crisis have highlighted the deficits of the planning strategies of the last decades as well as the importance of agriculture and of the primary sector in Greek economy and society as a means of ensuring food security particularly in urban areas where lack of money is more likely to be translated into the lack of food since the number of people tackling with material deprivation has doubled during the years following the crisis.

   As to that, current inequalities, food security, and lack of 'green spaces', especially in metropolitan areas, have become a controversial issue. Consequently, urban agriculture and community gardening appeared as a new era of reflection, research, policy formulation, and political action both for addressing food security for the most deprived and for developing sustainable solutions for the socioeconomic and environmental challenges faced by Greece and its citizens.

   This chapter presents the historical and political background under which urban agriculture and community gardening were introduced to the Greek cities. First, it discusses some of the historic and social features of urban and rural development in Greece that transformed the physiognomy of the country. It then considers the way these transformations combined with the effects of the crisis have led to the introduction of urban agriculture, strongly linked to the global growing interest among policymakers, institutional organizations, scholars, and urban planners. In this regard, it considers perspectives on urban agriculture and community gardening that have influenced and partly shaped the features of Greek urban gardens that are then approached according to the role and scope of the involved parties responsible for their creation: Greek urban gardens have been created either through institutional support such as the *Municipal vegetable gardens* (Photos 12.1 and 12.2) as a response to growing urban poverty or through grassroots activism as a response to the lack of available green areas in city centers, particularly in metropolitan areas. Lastly, this chapter serves mainly as an introduction to the Greek urban gardens and not as a thorough analysis either of the concept of urban agriculture or the historic and socioeconomic factors that have shaped Greek economy and society.

---

[1]Hellenic Statistical Authority (HSA) also known under the acronym of ELSTAT (ΕΛΣΤΑΤ).

Photos 12.1 and 12.2 Municipal vegetable garden in Agios Dimitrios, Athens

12.2   Historical and Social Features of Greek Urban and Rural Development and the Introduction of Urban Agriculture in Greek Cities

Throughout Greece's modern history, agriculture was traditionally one of the most important export sectors[2] shaping the Greek rural landscape and its cultural identity. In the nineteenth century, due to the War of independence (1821) and because of the lack of capital and working hands, Greek agriculture was very elementary. After the establishment of the Greek modern state (1832)[3] emerged the problem of the distribution of former Ottoman public lands. Right from the beginning, the Greek state aimed to distribute these lands both as a source of revenue and as an exercise of socioeconomic policy that would build social cohesion in the society, that is, by creating a class of small landowners thus preventing the form of large-sized private properties (Clogg 1999; Κωστής 2010). This distribution of 'National lands' carried out in 1871 was a process that lasted nearly forty years, until 1911 (Κωστής 2010). Land ownership prevailed since in the form of small- and medium-sized properties shaping the physiognomy of the country. Consequently, Greek agricultural production, predominately based on small-sized, family-owned dispersed units, was vastly expanded in the first half of the twentieth century.

The migration of the rural residents into urban areas or abroad affected the viability of the agricultural sector and the prosperity of the countryside. In fact, the process of Greek urbanization was determined by two major migratory waves: the arrival of refugees from Asia Minor in the 1920s after the end of World War I

---

[2]Not to mention that 80% of land in Greece is mountainous and approximately 70% cannot be cultivated because of poor soil or because it is covered by forests (Hellenic Ministry of Foreign Affairs 2016).

[3]The autonomy of Greece was first recognized by the Great Powers (Britain, France, and Russia) in early 1828; full independence was recognized in 1830. With the Treaty of London in 1832, Greece became a monarchy (Clogg 1999).

and the rural depopulation in the first post-World War II decades (Kandylis 2006). Employment in the agricultural sector has slipped throughout the second half of the twentieth century, and people have moved from the countryside to the more prosperous cities.[4]

The rapid urbanization in the later part of the twentieth century has had as a result the reduction of orchards and vegetable gardens, previously part of the urban periphery. During the 1950s and particularly in Athens, typically found one- or two-floor houses with gardens were demolished, and in their place five- and six-floor apartment buildings have been erected. Between 1950 and 1980, approximately 35,000 five- and six-floor apartment buildings have been constructed while prior to this period the total number did not exceed 1,000 (Maloutas and Spyrellis 2015). Before the 1950s, many central Athenian neighborhoods that are currently densely populated (such as Kypseli) were characterized by small ground-floor houses, orchards, and vegetable gardens that were part of the city's environment and served as a source of fresh food.

The rather recent rural depopulation (twentieth century) has certainly overpopulated Greece's biggest cities without, however, the complete abandonment of the rural or provincial family properties most probably due to the place and importance of family in the Greek society: For a typical Greek family—at least until the 2000s —their holiday destination was often their place of origin and a family land and house that could be used as a holiday-, temporary-, and cost-free shelter. As to that, Greeks have been energetically engaged and connected with the food system, either by cultivating or renting their agricultural land (olive, orange, lemon, fig trees, and vineyards), or by having access to agricultural products straight from the source (gardening, small-sized family business, family relatives who tend by custom to give or send their products to family members leaving in urban areas, etc.). In this sense, rural areas and agriculture have played a significant role in Greek society both from a socioeconomic perspective and environmental perspective. Therefore, urban populations have always been strongly 'rooted' in the Greek country (continental or insular) familiar with the non-urban ways of life and nature in general.

With the recent developments, many land- and house owners have ceded their country properties in favor of their owned or rented urban houses or apartments.[5]

---

[4]Agricultural occupation has been dramatically reducing, especially since the 1980s when it corresponded to a 35% of total occupation, whereas in 2000 it only reached 17% and in 2004 it was even further decreased to 12.6% of total occupation rates. See Greece's National Reporting to the Seventeenth Session of the Commission for Sustainable development of the United Nations (UNCSD 17) (Papaioannou et al. 2008).

[5]According to the HSA (2011) statistics on population and housing census in 2011, the total number of dwellings in Greece was estimated at 6,384,353 out of which 2,249,813 are empty, 729,964 are for seasonal use, 621,881 are for secondary use, and 88,996 are for sale. According to RE/MAX, 'European Housing Report', the total number of Greeks owning a secondary residence is estimated at 32.8% being unexpectedly high for European standards. Besides Greece, high rates for secondary residence are observed in Poland (25.1%) and Turkey (24.8%). On the contrary, low percentages as regards the second residence are recorded in Germany (5.4%). However, 53.7% of the total number of Greeks owning a second home report that their secondary residence is situated

As the crisis got deeper, it became difficult for rural farmers to support their families, while the costs of transportation (vehicle costs (toll, oil), ticket fares, etc.) from urban to rural areas and vice versa became unaffordable for those who continued to maintain a land property and a house property in a rural settlement[6]. With no possibility to escape to the countryside and benefit from the temporary relief that it offers to the alleviation of urban living stress and anxiety, lack of green spaces in the urban areas became a very important issue, especially for those inhabiting the metropolitan areas, giving birth to new forms of social movements concerned with providing community access to green open spaces.

At the same time, austerity measurements and steep tax increases have also affected the agricultural sector that continues to maintain a key position in the Greek economy. Before the crisis and between the years 2000 and 2007, organic farming increased by 885%, being the highest change percentage in the European Union (EU) (Hellenic Ministry of Foreign Affairs 2016). In addition, agricultural occupation represented in 2005 approximately 13% of the active population compared to 3.8% in the EU15 (Papaioannou et al. 2008). Yet, despite the appearances, the country itself is not 'truly' agricultural as it does not have large modern farms and agriculture contributes roughly by 4% to the GDP. Greek farming activities are in fact weak in an interrelated world, even though the country is the number one supplier of 35 farm products exported to 14 countries according to the Hellenic Ministry of Foreign Affairs (2016). World agricultural prices are lower than the cost for Greek producers, and one of the factors that still keep Greek farming in existence is the support of EU in the form of duties on foreign food and subsidies provided to the Greek producers.

Apparently, the effects of the crisis have strongly affected vulnerable social groups, such as low-pensioners, low-earners, single parents, and families with many children, who even before the crisis were hardly covering their living expenses. The effects of the economic crisis gave way to a national humanitarian crisis since an increased rate in the number of people and families tackling with material and food deprivation was witnessed. Population at risk of poverty or social exclusion was estimated at 36% in 2014 (being the highest among Eurozone countries), whereas the average rate in EU28 was 24.5%. The percentage of Greek population with material deprivation has more than doubled between 2010 and 2015 (from 24.1 to 39.9%) applying to people who cannot pay for utility bills such as electricity, water,

---

in a rural settlement, while they permanently reside in an urban area, either in an owner-occupied home (with or without loan or mortgage) or as tenants with a market price rent [*RE/MAX, 'European Housing Report*' in Ρουσανόγλου (2016)].

[6]Throughout the years 2010–2016 that the effects of the economic crisis persist, a decline in number of second house owners has been reported. In 2010, the percentage of second house owners was estimated at 18.2%, whereas in 2014 the percentage was 16.6% (ΕΛΣΤΑΤ, Ιούλιος-Σεπτέμβριος 2016a). The annual Single Property Tax (ΕΝΦΙΑ), that the Greek government imposed in 2011 on natural and legal entities that possess Greek property, has led many land- and house owners to undersell their properties since it became too expensive and unaffordable to maintain them.

gas, rent, loans, good heating, diet that includes chicken, meat, fish, or vegetables equal nutritional value, or even the necessary occasional expenditures such as telephone (including mobile phone) (ΕΛΣΤΑΤ, Απρίλιος-Ιούνιος 2016b).

The socioeconomic effects on household consumption are more apparent in the most important Greek cities, especially in the two metropolitan areas of Athens and Thessaloniki where nearly half of Greece's population lives.[7] Imposed austerity policies have contributed to the development of urban impoverishment, unemployment[8], and cuts in public benefits (social and welfare). Household consumption and home amenities have shrunk dramatically. More and more households are unable to meet their everyday needs (food, clothing, housing (rent or loan), energy, transports, health costs, education, leisure activities). Most of the household expenditures concern food supplies, and even for middle-class households, a balanced diet has become a difficult target, while fish, vegetables, and fruits are less frequently consumed.

The ongoing economic crisis has raised policymakers' awareness regarding the urbanization of poverty. In order to confront the problem, the Greek government takes initiatives getting its inspiration from EU policies and from practices abroad. The first steps toward the urban poverty alleviation were made in accordance with the structural and cohesion funds of the National Strategic Reference Framework for 2007–2013 (NSRF 2007–2013)[9] which laid the foundations for the promotion of policies against poverty, after and due to the crisis.

The National Greek program 'Social Structures for (Immediate) Response against Poverty' was first launched in the beginning of 2012 in order to tackle the phenomenon of social exclusion in urban areas that were more affected by the crisis; by that time, the social consequences of the crisis were conspicuously obvious in society all over the country. The program included the further support of soup kitchen services and the development of social and commodity supply structures, that is municipal 'social groceries' and 'social pharmacies', as well as food, clothing, and home appliance banks. Quite early, it expanded to include the planning of urban vegetable gardens for low-income families and individuals so

---

[7]According to the Hellenic Statistical Authority (ΕΛΣΤΑΤ 2016a), Greece's population is estimated at 10,816,286. The population in the Attica region is 3,828,434 and in Central Macedonia 1,882,108.

[8]The average annual unemployment rate in Greece from 2011 to 2015 has been the highest among the Eurozone Member States (24.9%) (ΕΛΣΤΑΤ 2016b).

[9]The NSRF 2007–2013 constitutes the reference document for the programming of European Union Funds at the national level for the 2007–2013 period. It was elaborated within the framework of the new strategic approach to the Cohesion Policy of the European Union, according to which NSRF '…ensures that the assistance from the Funds is consistent with the Community strategic guidelines on cohesion and identifies the link between Community priorities, on the one hand, and the national reform program, on the other'. During the elaboration of the 2007–2013 NSRF as a programming document, a significant number of proposals submitted to the Hellenic Ministry of Economy and Finance, guidelines—political choices at a national and European level, quantitative data and studies were used as input. For further information, see http://2007-2013. espa.gr/en/Pages/staticWhatIsESPA.aspx.

that they could produce their own biogarden products, ensuring fresh vegetables and fruits are part of their diet.

As to that, the program of '*Municipal vegetable gardens*' in Greek cities was first launched in the middle of 2012 by several Municipal authorities. It was also introduced at a time in which local authorities had been given more power and planning responsibilities after the 2010 administrative reform ('Kallikratis Programme', Law No. 3852/2010). Apparently, the reform was carried out in an attempt to adapt the Greek regional and local system to the EU's multi-level governance, with the advantage for the municipalities to benefit from its funding. Although the program draws attention to poverty alleviation and social exclusion, it is also regarded as a strategy for 'greening' the urban areas and for reconnecting urban life with Greek rural customs and traditions.

12.3   Urban Agriculture and Community Gardening Perspectives. Connecting Greek Urban Gardens with the General Context

Within the last two decades, a growing interest in urban agriculture[10] is witnessed among scholars, urban planners, and policymakers. Recent changes such as the gradual global increase in urban population and the decline in rural population (UN-Habitat 2010), economic crises and austerity, migration, urban refugees,[11] and climate change have made policymakers more willing to integrate urban agriculture in urban planning law and policy since the rapid growth of cities goes hand in hand with the growing demand on food supplies (a food security issue) and the degradation of the environment (an ecology and health issue).

Urban agriculture if integrated in city planning law and policy may become an integral part of the urban system, given its potential to respond to ecological, economic, social, and health issues that are challenging today the quality of life in cities. As Mougeot (2000) stresses out, 'it is not the location that makes urban agriculture to predominate in urban systems but the fact that urban agriculture uses urban resources (land, labor, urban organic wastes, water), produces for urban citizens, is strongly influenced by urban conditions (policies, competition for land, urban markets and prices) and impacts the urban system (effects on urban food security and poverty, ecological and health impact)'.

---

[10]Urban agriculture is defined by Mougeot (1999) as 'an industry located within (intra-urban) or on the fringe (peri-urban) of a town, a city or a metropolis, which grows or raises, processes and distributes a diversity of food and non-food products, (re-)uses largely human and material resources, products and services found in and around that urban area, and in turn supplies human and material resources, products and services largely to that urban area'.

[11]Over 60% of the world's 19.5 million refugees and 80% of 34 million internally displaced persons (IDPs) live in urban environments seeking economic independence. See UNHCR—The UN Refugee Agency. http://www.unhcr.org/urban-refugees.html. Accessed 15 May 2017.

So far, research, especially in the least developed countries (LDCs) where urban poor growers cultivate agricultural land (abandoned, vacant, or underdeveloped in and around cities), has identified and highlighted some of the most important assets of introducing agriculture in urban areas: its contribution to the maintenance of a healthy and balanced diet and the prevention of malnutrition (Potutan et al. 2000; Maxwell et al. 1998), but also the generation of a small income to urban poor growers along with the security of food access (Simatele and Binns 2008).

Nevertheless, some of the important factors preventing the expansion of urban agriculture in LDCs are unsupportive official policies and the lack of regulations regarding the access to the grant use of land for this purpose. In such cases, scholars have highlighted the temporary status of farming activities, the vulnerability of farmers to eviction and to land access that calls into question the future of farming activities along with food access and the generation of a small income for the urban poor (Schmidt 2012; McLees 2011).

In this regard, policymakers in international agencies such as in the United Nations Development Programme (UNDP) and in the Food and Agricultural Organization (FAO) have adopted the term 'urban agriculture' in the introduction of advisory policies for poverty alleviation and access to food for the most deprived, especially in LDCs, as well as a sustainable feature for adapting to climate change and promoting sustainability. Yet, international organizations have mostly an advisory role, while governments have the primary role and responsibility of addressing nutrition and food security issues and taking steps in formulating urban agriculture in legislation and urban planning policy. Apparently, introducing urban agriculture in the framework of planning policy is a challenging task since governments tend to view land in or around the city mostly as a reserve area for future city residential construction taking also into consideration the gradual increase of urban population.

Besides LDCs, urban agriculture is also gaining significant ground in developed countries. Until two decades ago, little attention has been given to it. Among the reasons was the lack of information and the fact that laws and regulations were rather restrictive (or at best 'permissive') in introducing urban agriculture to the forefront of planning policies since agriculture has long been seen as a scope of rural policy and agricultural land within cities as an area for future residential construction (Zeeuw et al. 2008). However, initiatives for urban farming have been introduced to countries such as the USA, Canada, and the UK, especially since the 1970s when the 'community garden movement' bloomed in US cities.

Community gardens as a 'portion' of urban land fall under the umbrella of urban agriculture, first and foremost because they use urban resources, participate into and impact the urban system. One important issue regarding community gardens is the fact that a variety of definitions is witnessed among scholars, particularly in the USA. Generally, the term 'community gardens' refers to 'open spaces which are managed and operated by members of the local community in which food and flowers are cultivated' (Guitart et al. 2012).

Community gardens have a long tradition in US cities. They gained significant importance and spread especially through grassroots activism (e.g. Green Guerilla Group, Adam Purple's Garden of Eden) during the 1970s at a time when social

progressive values (civil rights, environmental awareness, and protection, etc.) that began in the 1960s continued to grow.[12] The initial 'community garden movement' was to create 'communal' gardens, where everyone shares everything (work, harvest, etc.). As to that, individuals began to build gardens together on vacant or unused land. Meantime, municipal authorities, federal programs, and nonprofit organizations emerged to encourage and support 'community garden movement' often in neighborhoods experiencing social conflict and in places such as Detroit, Boston, Philadelphia, and New York (Lawson and Miller 2013).

Yet, the 1980s recession affected the establishment of community gardens across US cities due to the loss of the grant use of land to a public agency or a private developer. The typical scenario has been for gardens to be established on land of low market value and by the time land property values increased, governments generally withdraw their support and focus instead on profitable real estate development (Schmelzkopf 1995). As to that, gardens were often 'contested places' because gardeners represented a threat to government projects to maximize exchange value and in reverse governments represented a threat for the gardens (Schmelzkopf 2000). In this sense, public bodies (governments, municipal authorities, etc.) and real estate market dynamics have played a major role in the expansion and/or decline of community gardens across US cities.

Besides USA, the 'community garden movement' served also as an inspiration for the creation of urban gardens in other places. For instance, in Canada, the city of Montreal had created (since 1975) 76 community gardens with 6,400 allotments and until 2002 there were, within Montreal, 97 community gardens and 8,195 allotments (Montreal's Community Garden Program 2006).

In the UK, community gardens were created partly inspired by the 'community garden movement' in the USA and expanded especially after the 1980s when the Federation of City Farms and Community Gardens (FCFCG) was established (FCFCG 2017; Godfrey Asley Associates 2010). Along with allotments they represent valuable green spaces.

Currently, the latest global economic crisis of 2008–2009 and austerity that results in the generation of more urban poverty has revitalized local governments and citizens' interest in community gardens, as well as in the introduction of urban agriculture in cities both from a food security and a sustainable development perspective. Local authorities are more willing to include initiatives for 'greening' existing open spaces and addressing food security. As to that, vegetable gardens in public spaces have gained significant ground and local municipalities usually provide plots for gardening fruits and vegetables either in the form of allotments, where gardeners are charged to rent a plot and the gardening is done individually,

---

[12]Before the 1970s and the 'community garden movement', urban gardens have been a common practice since the late nineteenth century, where have been used predominately for mitigation and as a response to extreme crises (e.g., victory gardens in USA and UK during WW1 and WW2). See 'The History of Community Gardening' (University of Missouri Extension center (2015) online at http://extension.missouri.edu/explorepdf/miscpubs/mp0906.pdf). Accessed 4 March 2017.

or in the form of community gardens that involve a group effort in the decision-making process regarding the establishment and operation of gardens.

For example, in 2010, in Andernach (Germany), the municipality ripped out its municipal plantings of berberis, mahonia, and cotoneaster in the central green space and replaced them with fruit trees and vegetables, tended with the help of long-unemployed people (Guinness 2014). In 2015, the Municipality of Rome approved the first regulation for allotments and community gardens (Coletti 2016), while in Israel (Tel Aviv, Jerusalem) community gardening gained ground since 2005 and particularly, the Municipality in Tel Aviv now supports 27 gardens requiring that plots are not in areas designed for residential construction (Avivi 2015).

In this general context, urban gardens gained also significant spread in Greek cities and can be divided into two main categories: a) The *Municipal vegetable gardens* introduced as an initiative for the mitigation of the economic crisis (a food security issue) in accordance with the EU and Greece co-financing programs and b) the community gardens that were built from individuals working together partly inspired by the 'community garden movement' and 'Guerilla gardeners'. In this case, gardeners do not have the legal right to the land (control, permission or utilization) and are dependent on the reluctance and/or tolerance of the Municipal authorities.

12.3.1 *The Establishment of* Municipal Vegetable Gardens *in Greek Cities*

The program of *Municipal vegetable gardens* started in the middle of 2012 financed by the funds of the NSRF 2007–2013, at a time when the social consequences of the economic crisis had already become apparent. By that time, the Greek government passed Law No 4061/2012[13] creating the legal basis for the utilization of the public property owned by the Ministry of Agriculture and Food in rural and urban areas. This resulted in generating public income from rural investments at a time when revenues were declining due to the crisis, given that it included provisions such as the granting of land use for a low compensation to young farmers and breeders; furthermore, it included provisions for the granting of land use for public benefit purposes.

According to that law, the granting of land use for free is provided to public bodies, to local government organizations, to nonprofit legal entities (of Public or Private Law) in order to be used strictly for public benefit purposes [Art. 4 (2b)]. The free use of the land is granted to the entity in respect, after it submits an application to the Directorate of Land Policy of the Ministry of Agriculture and Food mentioning the duration period and the utilization purpose and submitting a

---

[13]Published in the 'Official Government Gazette (OGG), Issue A', No 66/22-3-2012.

topographic plan illustrating any existing buildings on this piece of land [Law No 4061/2012, Art. 4 (2b)]. In this sense, the law permits the utilization of the agricultural public land in urban and rural areas for public benefit purposes. Even though this law did not refer specifically to the granting of land use for the creation of *Municipal vegetable gardens* the time it was adopted, in 2014 there was subsequent law that enriched the abovementioned Art. 4 (2b), Law No 4061/2012 including specific regulations for the creation of *Municipal vegetable gardens* since a significant response for participating and supporting the program had been witnessed. With the introduction of the program in 2012, several municipalities across the country responded to include the creation of vegetable gardens into the framework of their social policy.

In February 2012, the Municipality of Larissa (Thessaly) made the first step by distributing an area of 22,000 m² to the most vulnerable social groups. The area was divided into 277 gardens out of which 156 were given to unemployed citizens, 60 to low-pensioners, and the rest to the University of Thessaly and to primary schools (Αυτοδιοίκηση 2012).

By April 2012, Maroussi (Amaroussion), a municipality in the Attica region, turned an area of 1,500 m², previously used as a litter space, into a plot that could be used for agricultural production (Photos 12.3 and 12.4).

In Alexandroupoli (Evros), a total area of 28,000 m² was distributed and divided to 270 gardens, while in Thermi (near Thessaloniki) an area of 15,000 m² was divided into parcels of 50 m² and was distributed to low-income families free of charge and to single parents and large families under a small compensation (membership fee of 25 euro per year), income to be used for the management of the gardens (Αυτοδιοίκηση 2012).

A field research in Alexandroupoli and Thermi-Raidestos's *Municipal vegetable gardens* (Ανθοπούλου et al. 2013) showed that the main motivation for urban growers participating in a *Municipal vegetable garden* is the need for fresh, organic, healthy food, and for saving money on household expenditures. According to this research, among other responses are the way to reconnect with the earth, the nostalgia for the place of origin (village) and experiences of childhood, the joy of

Photos 12.3 and 12.4 Municipal vegetable garden in Amaroussion integrated in the urban fabric

creativity, time spent to a meaningful purpose, and the interaction and mutual understanding with people that face the same challenges as they do (unemployment, lack of purchasing power, etc.). The motivations were not found to be indifferent among age groups: Primarily pensioners but also young generations found a creative environment and a network of mutual social support that helped them to alleviate their psychological distress and to escape the detrimental consequences. It appears that economic recessions and crises do have a context-deep negative impact on mental health disorders, especially for low-income individuals.

As the social consequences of the crisis persisted, the Greek government decided to extend the duration of the programs tackling poverty and social exclusion under the umbrella of the NSRF and its Operational Programs for 2014–2020 including the extension of the duration of the program of *Municipal vegetable gardens* because of the significant interest both by the local authorities and participants. The government also decided to further support the program by introducing a specific provision for the granting of land use for the creation of *Municipal vegetable gardens* under the provisions of the abovementioned Law No 4061/2012. It thereby provided the granting of land use for public benefit purposes up to 70,000 m^2 to the first-degree local authorities (i.e. municipalities) for the planning of vegetable gardens in case Municipal authorities do not themselves own land [Art. 37, Law No 4235/2014: Introduction of paragraph 2(c) in Art. 4, Law No 4061/2012]. Furthermore, it is stated that by common decision of the Ministers of Interior and of Rural Development and Food will be regulated the obligations undertaken by the Hellenic agricultural organization 'ELGO Dimitra' (Ελληνικός Γεωργικός Οργανισμός 'Δήμητρα') for the operation of the vegetable gardens (such as the supply of raw materials, counseling, and training), the duration period, the beneficiaries, etc.

So far, in most cases, municipalities have provided property they owned themselves for the creation of urban vegetable gardens. Beneficiaries are exclusively vulnerable social groups (unemployed, low-pensioners, low-earners, single parents, and families with many children, etc.) that are residents of the municipality living in a close distance to the vegetable garden. The distribution of the plots is based on demand and socioeconomic criteria. Gardens are mainly divided into parcels of 25 or 50 m^2 (but can reach up to 100 m^2) and are used for annual or biennial farming of organic products.[14] Only organic farming is allowed, and the beneficiaries are obligated to attain courses or seminars that are provided by the

---

[14]For the information provided about both the size of the gardens and their operation, we have advised the regulations for the operation of Municipal vegetable gardens adopted by the Municipal Authorities implementing the program in Greece, which are published online on the official Web sites of the municipalities. For example, see the regulation for the operation of Municipal vegetable garden of the Municipality of Alexandroupoli, available at: http://www.otapractices.gr/wp-content/uploads/Practices/78/GP%2078_KANONISMOS%20LEITOYRGIAS.pdf, or the regulation for operation of Municipal vegetable garden of the Municipality of Kalamata, available at: http://www.kalamata.gr/images/arthra/selides/katoikoi/1601-laxanokhpoi/kanonismos-leitourgias-dhmotikon-laxanokhpon.pdf, (in Greek). Last accessed 16 June 2017.

municipality in order to gain specialized knowledge in organic farming. The granting of the land use is often free of charge (no membership, rent, or fee) but the beneficiaries are not allowed to sell their products and have to provide from 10 up to 15% of their annual production for the strengthening of the municipality's soup kitchen services and 'social grocery'. The costs of soil remediation and treatment, the supply of seeds or seedlings and tools are usually borne by the selected beneficiaries. The municipality is generally responsible for management, for bringing new soil or enriching the existing one, providing water supply and basic infrastructure (fences, water tanks, etc.). For the operational responsibility of the gardens, committees have been established (*Municipal Committee of Vegetable Garden*) in which beneficiaries can address improvement or modification suggestions or even complaints and disputes that may arise between growers. An annual vegetable garden award is usually given to the best vegetable garden.

By 2016, *Municipal vegetable gardens* were founded across the country, from the north (Alexandroupoli, Edessa, Veria, Kavala, Komotini, Serres, Thermi) to the south (Trikala, Tripoli, Kalamata) of continental Greece and even on some of the Islands (Lesvos, Rhodes, Crete). The program seems to have helped beneficiaries to save money on household expenditures and improve their diet by offering access to a healthy source of nutrients (eat more organic vegetables than other families in the same income category and even more than middle-class consumers) and by confronting psychological distress, anxiety, and early symptoms of depression. Meantime, growers have contributed to the sustainability of the environment by cultivating organic products (not using chemical growth regulators), reusing land that was previously underdeveloped and adding 'green spaces' to cities (Athens, Thessaloniki, Larissa, Volos, Kalamata, etc.).

Besides Municipal authorities, other stakeholders such as nonprofit organizations have emerged to encourage and support the idea of vegetable gardens. For example, ARSIS-Association for the Social Support of Youth, a major NGO in Greece specializing in the social support of youth that are in difficulty or danger and in the advocacy of their rights, has cooperated with the Municipality of Thessaloniki for the support of vegetable gardens for vulnerable groups, including youth and families with children (Αυτοδιοίκηση 2013). On the Island of Lesvos, a small nonprofit organization named Humanitarian Support Agency (HSA), an operational partner of UNHCR-UN Refugee Agency in Greece, created an Afghan garden in 'Kara Tepe' Refugee Camp (Mitilini), where asylum seekers and refugees grow green beans, tomatoes, eggplants (aubergines), green peppers, watermelons, and onions (Karas 2016). The production goes directly to families in need and to refugees and asylum seekers. As the NGO points out, the small community garden has become a sanctuary for refugees, keeping hands busy and giving a sense of purpose in their waiting, while if the project is scaled up further, it could even allow self-sustaining for Kara Tepe residents.

This can also be a future potential for *Municipal vegetable gardens* since they may be a step toward expanding urban agriculture in Greek cities. For the time being, the program can be viewed as a sustainable solution for the environment and

for adaptation to climate change. The way it started, as a 'short-term crisis management' solution, it does not provide employment, income, or even preparation for reincorporation to the labor market, factors that may prove essential both for the expansion of urban agriculture in Greece and for the continuity of participants' interest. It provides to beneficiaries only basic access in matters of food safety, as well as time spending to a meaningful purpose and social interaction with other individuals that face the same problems, especially in metropolitan areas where social alienation and poverty are excluding low-income individuals from the city life.

What is missing, so far, is the cooperation and interaction between administrative units (first-degree local authorities, administrative regions, ministries, etc.) for recording underdeveloped, vacant, and abandoned land in order for the municipalities to take advantage of urban land that belongs to other public entities for the creation of more vegetable gardens. This could be an essential step since municipalities that are currently implementing the program in most cases have provided small-size plots, meaning that beneficiaries are even less in numbers. Gardens could be established not only for vulnerable groups but also for residents that would be interested in participating in farming activities both for producing their own vegetables and spending their time in a leisure and meaningful activity. This could be done even by charging a small membership fee that could be used for the operation and the management of the gardens.

This may be also an important aspect for the continuity of vegetable gardens as the program of *Municipal vegetable gardens* is mostly funded by EU budget, while municipalities are financially weak, plus over-indebted due the crisis. In this sense, if EU funding cuts off, the maintenance costs (cost of land use, municipal staff, employees, etc.) for the vegetable gardens would fall to the municipalities' budgets and finances, and without proper planning and management, there is a considerable risk of abandonment or for taking advantage of the grant of land use for profitable investments.

Currently, the 'National Reform Programme' that was submitted to the European Commission in April 2016 by the Greek government continues to support *Municipal vegetable gardens* as a structure for '*Immediate Action against Poverty*' and by funding from EU. The idea of urban vegetable gardens continues to grow, particularly in cities where people do not have access to nature. Vegetable gardens in primary schools are also gaining ground and in the meantime the Municipality of Maroussi inaugurated a 'Model Municipal vegetable garden of sustainable farming' where citizens can learn planting and farming techniques. Yet, the future of urban vegetable gardens will depend on citizens' interest, but mostly on the socioeconomic and political factors that apply to the maintenance of the granting of land use for this purpose and the proper management of the gardens.

12.3.2   Urban Agriculture by Social 'Garden Movement' in Greek Cities

Until the beginning of the twenty-first century, there was no tradition in ecological and urban experiments or practices such as community gardening or guerilla gardening in Greece. The rapid urbanization of the capital city of Athens, the gradual degradation of the urban environment, and the exasperation of the society against political parties for failures in economy and society had had as a consequence the rise of new forms of social movements fighting to reclaim public space for citizens.

Following the riots of December 2008,[15] social movements experienced a rapid spread. Initiatives and practices such as community gardening and guerilla gardening became active in Greece, especially in Athens, when gardeners focused on planting many forms of vegetation in plots, mainly publicly held within urban areas and without permission, that they were either underdeveloped or vacant or they were not properly cared about. It was also the same time that the effects of the aftermath of the global financial crisis (2008–2009) had started affecting the fragile economy of the country. These initiatives have drawn inspiration from practices abroad and Internet resources.

First, in Exarchia,[16] residents together with anarchist groups intervened in March 2009 and occupied a former parking lot turning it into a green area ('Navarinou Park')

---

[15]On 6 November 2008, a fifteen-year-old boy, Alexandros Grigoropoulos, was shot dead by a police officer in Exarchia. The riots that followed the event saw hundreds of business, cars, and banks become a target in Athens and Thessaloniki. Exarchia neighborhood is well-known for the frequent clashes with the police. Besides that, the central Athens neighborhood is famous among university students, artists, writers, bohemians, left and anarchist groups. The area features many cafes and rock/alternative bars, bookstores, concert venues, and music stores. The National Archeological Museum and the School of Architecture are also in the area; one of the oldest summer open air cinemas in Athens, 'Vox' (1917), and a renowned example of the modern architecture in Greece, the 'Antonopoulos apartment building', referred as the 'blue building' (1932–1933), are located in Exarchia square.

[16]In 1990, the Technical Chamber of Greece (TEE) offered the land (approximately 1,500 m^2) to the Municipality of Athens for the construction of a public square and asked as a compensation the transfer of the title of the built surface ratio of that plot in one of its properties in another district (Maroussi). The exchange did not carry out due to delays in negotiations and changes in the urban planning laws. In the meantime, TEE rent the plot as a parking area. In 2008, the rent leasing ended and the Exarchia residents' Committee (Επιτροπή Πρωτοβουλίας Κατοίκων Εξαρχείων) immediately started informing the residents to mobilize and support their movement for the transformation of the parking lot to a green area. On March 2009, the locals finally intervened and occupied the plot as spreading rumors about building constructions to begin soon threatened their right of access to green open spaces. With the collectivity 'We, Here and Now and for all of us', residents with drills and cutters broke the concrete, brought soil, and started immediately planting flowers and trees and constructing a playground. Every first and third Wednesday of the month, open meetings take place at 8:30 p.m. and every Sunday teams gather to clean the property and nurture its plants. Organized events and a variety of activities do take place in Navarinou Park (cinema, music events, etc.) (http://parkingparko.espivblogs.net/englishfrench/about-the-park/. Last accessed 13 Nov. 2016).

Photo 12.5 Navarinou Park in Exarchia, Athens. Playground for kids

by planting flowers, trees, and constructing a playground (Photo 12.5). A few months later, in October 2009, residents occupied the 'Botanical garden' in Petroupoli (a municipality in the northwestern part of the Athens greater area) since the garden was not properly cared about as the maintenance costs were enormous and unprofitable for the authorities. Similar actions appeared across the country reclaiming open access to public spaces by reusing abandoned urban or peri-urban land for adding green to the cities and by using urban resources for agriculture (e.g. PER.KA Thessaloniki in 2011, an ex-military camp currently used for farming).

These gardens are self-organized, collectively managed, as well as politically and culturally active organizing seminars, debates, festivals, theatrical performances, and movies (Photos 12.6, 12.7 and 12.8). Gardeners are developing their action by using the Web to announce cultural and participatory events.[17] Even though these movements have been presented by the media and political parties as a form of political action representing left and anarchist groups, in fact they have often been supported by residents not belonging to either parties and who have faced the reluctance and even the disregard of the public bodies to consider their problems.

---

[17]For Navarinou Park see http://parkingparko.espivblogs.net/englishfrench/about-the-park/, for PE. RKA see http://www.perka.org/ and for Petroupolis' Botanical garden see http://votanikoskipos. blogspot.gr/ and https://el-gr.facebook.com/votanikoskipos2009/.

Photos 12.6 and 12.7   Navarinou Park. Organization and Regulations

As the crisis deepened, so did the social turmoil in Greece. Demonstrations against the government and the country's lenders (EU, IMF) became frequent, sometimes ending peacefully and others violently. The disappointment from the political parties, the ongoing instability of the Greek economy, the gradual cuts in public benefits, and the shrinking of the welfare state have had as a result for Greeks to turn to each other for mutual support. Self-help groups and loose social networks emerged at the local level and started to provide help to vulnerable individuals and families, including the provision of food, clothes, free medical services, medicines, and vaccines, as well as educational support (Arampatzi 2015). Meantime, various forms of 'civil-disobedience' movements and anti-austerity revolts emerged against higher taxation: citizens refusing to pay road tolls and ticket fares in public transportation (the 'We won't pay' movement); citizens intervening in real estate auctions taking place throughout courts and canceling house auctions (the 'Against auctions network') or even by reconnecting power to houses that were left without electricity.

It appears that the crisis provoked political activism and a revitalization of the Greek civil society as a rise in solidarity networks is witnessed along with a proliferation of autonomous political and economic spaces (Simiti 2016; Sotiropoulos 2014). This revitalization seems to have increased the autonomy of the Greek civil society vis-à-vis the political parties and the state. According to Simiti (2016), Sotiropoulos (2014), Μακρυδημήτρης (2006), Greek civil society in the post-dictatorial period (after 1974) has been traditionally defined as a weak civil society, characterized by the dominant control of political parties over the

Photo 12.8 Navarinou Park in Exarchia, Athens. Beyond the limits of the garden

associational sphere, the presence of powerful clientelist networks and the existence of few non-governmental organizations (NGOs) with low rates of participation of Greek citizens. Moreover, Sotiropoulos (2014) points out that the underdevelopment of the civil society was also due to 'the strong bonds and trust shown among members of Greek families, which dampened chances of trusting non-relatives'.

Yet, the current increase of participation does not necessarily signal the strength of the Greek civil society. As Simiti (2016) argues 'the density of civil society may be a misleading indicator of its strength if abstracted from the broader political and economic context'. In this regard, Greeks have turned to self-organized groups and social networks that promote solidarity in hard times against and because of the shrinking of the welfare state, increased taxation in primary goods (coffee, bread, rice, vegetables, etc.), privatization of health care and the reductions on households' income. Meantime, the disappointment from the political parties, the government, and the EU has led to the proliferation of autonomous political/economic spaces that stress the need to organize social and economic activities in community-based networks that promote social justice and are distinguished from the conventional economy and for-profit endeavors.

Apparently, there is a strong connection between social solidarity and solidarity economy and at least in Greece one example of this connection is strongly linked to the urban agriculture since it addresses issues such as the costs of food production in rural areas, the need for good-quality products in low prices and food security. It concerns the so-called by the media 'potato movement' that appeared in the same year that the first *Municipal vegetable gardens* were established (2012).

The 'potato movement' started as a form of protest against the government austerity measures when farmers began blockading roads with tractors and trucks distributing products, kept on stock supply, either free of charge or at a very low price during demonstrations in Athens and other major cities in Greece. Since the government did not satisfy their demands, farmers in Northern Greece (Aikaterini, Drama, Thessaloniki), unhappy with the government measures and its policy, as well as with the profits that wholesalers were making at their own expense, began selling straight to the consumers, offering sacks of potatoes from the back of their trucks. This initiative was spread from Northern Greece to other parts of Greece (Crete, Attica region, etc.). Their aim was first and foremost to complain about the low prices on which they were selling their products, address the role of whole-salers, and ask for permission to sell their products directly to the consumers of their municipality with own expenses (transfer, distribution, etc.).

The 'potato movement' was welcomed by the media in Greece and abroad (Henley 2012a, b) and the citizens as an inventive way to link consumers and farmers ('buy food directly from the producers') and feed the poor. The result was bigger profits for the farmers and lower prices for the consumers; consumers got good-quality products for almost one-third of the price they would normally pay in a supermarket, and the producers got their money straightaway. In the next two years, this initiative gained significant ground in cities across the country and started being referred as the movement 'without middlemen' (wholesalers or any type of intermediaries). Along with potatoes, products such as honey, eggs, pasta, olives, and vegetables were found among self-managed open markets.

This initiative and practice defied the official governmental policy. Political parties addressed the impacts that may arise on rural and urban economy employment. Thus, the government with Law No 4264/2014 prohibited the exercise of itinerary trade in municipalities of more than 3,000 inhabitants [Art. 25 (b)].

In Greece, approximately 35 out of 325 municipalities have less than 3,000 inhabitants with the majority of them being on small islands or in isolated areas. Trying to amend the spatial limitation, the government with the ratification of Law No 4282/2014 amended the abovementioned paragraph by replacing the word 'Municipalities' with 'Local communities'. But this change does not solve the problem, that is, the production and distribution costs of food supplies, the generation of sufficient income for farmers, and the food safety for consumers inhabiting the metropolitan areas.

Despite the prohibition of itinerary trade, many farmers and producers continue this practice. Every two weeks or once in a month, producers are directly distributing their products to consumers in more than 380 locations across the country. In Piraeus, it is estimated that approximately 1,000 consumers buy directly their products from the producers each time the open market 'without middlemen' takes place (Φωτιάδη 2016). Even in central Athens, in the neighborhood of Exarchia, from 2015 on and every Sunday since, a self-organized market takes place, where traditional agricultural products are sold in low prices.

Municipal authorities, in turn, have tolerated these practices and in some cases they even participate in the organization of the markets along with the producers (e.g. the Municipality of Agios Dimitrios and the Municipality of Ilioupoli in Athens). Apparently, local authorities have tolerated practices such as itinerary trade, community gardening, and even occupation of vacant public buildings by various groups of people (anarchists, migrants, refugees and homeless) as a remedy to the exasperation and social anger against the government and its policy.

In this sense, collective action in Greece has a potential for further development as it could serve as a form of pressure to the government to change things for better. On the one hand, initiatives of social and solidarity economy, though they do have emerged as an 'antidote' to increased poverty and food security, have helped citizens to comfort the impacts of the crisis and have strengthened mutual support. On the other hand, urban gardening came at a time when the quality of life in Greek cities, particularly in metropolitan areas had been seriously undermined. Gardeners, in turn, are working hard to keep environment on the agenda, address the quality of life to the cities by exploiting and reusing underdeveloped or vacant land and by turning it into a lively part of their neighborhood. From an optimistic perspective, these initiatives and practices could lead to gradual progress in new forms of urban development.

12.4   Conclusion

In Greece, the economic crisis gave way to the introduction of urban agriculture through the establishment of *Municipal vegetable gardens* in order for vulnerable groups to have access to food and to a healthy source of nutrients. In addition, it gave birth to new forms of social movements and to grassroots activism. Groups of people partly inspired by the 'community garden movement' have raised the

demand for more 'green spaces' in Greek metropolitan areas and even shaped some of the features of urban agriculture (PER.KA, Thessaloniki). However, urban agriculture and community gardening were introduced in Greece at a time when the state and official governmental policies could not respond to the demands of citizens for economic security, social and welfare provision, and assurance for their well-being in cities.

Apparently, the concept of urban agriculture has potential, even though urban agriculture is still unfamiliar to the majority of Greek citizens. For a long time now, agricultural policies in Greece have been related to rural areas, and it was hardly given any attention to urban food growing and distribution. Currently, urban agriculture, precisely because it happens in cities, can contribute to the boost of the local economy and society, and furthermore, improve the quality of urban environment. For instance, urban agriculture can contribute to the production of fresh, safe products that are consumed locally therefore reducing food miles (food distribution from rural to urban areas). It can also be a resource for recreation and well-being, including green spaces for leisure activities, spiritual, and psychological comfort. Moreover, it can reduce the urban heat island effect, especially in overcrowded 'concrete jungles', such as the city of Athens or even increase the area of a permeable surface for rainwater management.

The first step for expanding urban agriculture is securing land for this purpose. No matter how crowded cities may appear at first glance, there is always space (vacant, abandoned, and underdeveloped) that can be used for urban agriculture. A great number of vacant plots (currently used for as parking lots in Athens) could be covered with green or even rows of vegetables such as cabbages or carrots—a practice found in Tokyo (Japan). However, land in cities is often expensive and urban soil can be loaded with toxic heavy metals thus requiring remediation often an expensive procedure. Moreover, time is needed for the land and its plants to flourish, and the cost of time can be as high as the cost of land when politicians search for solutions in the short run. While for the further expansion of urban agriculture, it is also important to consider the rural economics, including assurances for a sustainable income to farmers, address the role of wholesalers and intermediaries, market concentration, and rural development.

In Greece, for the time being, lack of information, but particularly lack of funding for research and also political priorities (economy and employment first, management of the economic crisis and of refugee inflows), has left no latitude for further development of urban agriculture. Yet the concept is promising, and if the right combinations of political will, economic measures, new technologies, and community support align, it may be possible to help alleviate problems (lack of green areas, air pollution, food security, etc.) that persist in urban areas and often surpass the political solutions adopted for their alleviation.

Recording vacant, underdeveloped, or unused land of public (and why not private) ownership and taking steps for reusing it, either for cultivation or for adding 'green' and beautifying neighborhoods, investing in scientific research (i.e., soil remediation and organic farming), on youngster's education and on campaigns encouraging citizens to participate in the creation of urban gardens are some of the

actions that have the potential to bring different cultures and generations together for gathering, meditation and interaction, serving as a 'bridge' between ethnic and socioeconomic groups, combat alienation, and improve the quality of life.

References

Arampatzi A (2015) Contesting the crisis: cooperative/social economy and solidarity or charity? Athens Social Atlas. http://www.athenssocialatlas.gr/en/article/solidarity-or-philanthropy/. Accessed 15 May 2017

Ανθοπούλου Θ, Πρταλίδου Μ, Νικολαΐδου Σ, Κολοκούρης Ο. και Μωυσίδης Α (2013) *Αστική Γεωργία. Κοινωνική ένταξη και βιώσιμη πόλη. Μελέτη δύο αστικών δημοτικών αγροκηπίων (Δ. Θέρμης και Αλεξανδρούπολης)*. Αθήνα: Πάντειο Πανεπιστήμιο-ΚΕΚΜΟΚΟΡ

Avivi Y (2015) Israel's community gardens bloom. Al monitor. The pulse of the Middle East (trans: Manor H). http://www.al-monitor.com/pulse/originals/2015/07/israel-tel-aviv-urban-farming-organic-vegetables-community.html. Accessed 10 Apr 2017

Αυτοδιοίκηση (2012) Δημοτικοί Λαχανόκηποι κόντρα στην κρίση. http://www.aftodioikisi.gr/ota/dimoi/dimotikoi-laxanokipoi-kontra-stin-krisi/. Πρόσβαση 13 Νοεμβρίου 2016

Αυτοδιοίκηση (2013) Δ. Θεσσαλονίκης: Νέες αιτήσεις συμμετοχής για το δημοτικό λαχανόκηπο. http://www.aftodioikisi.gr/ota/dimoi/d-thessalonikis/. Πρόσβαση 30 Μαΐου 2017

Clogg R (1999) Σύντομη Ιστορία της Νεώτερης Ελλάδας. Καρδαμίτσα, Αθήνα

Coletti R (2016) Urban gardening in Rome. TESS: Research for low carbon initiatives. http://www.tess-transition.eu/urban-gardening-in-rome/. Accessed 6 Mar. 2017

Delladetsimas P, Leontidou L (2003) Athens. In: Berry JN, McGreal WS (eds) European cities, planning systems and property markets. E&FN Spon, London

Ελληνική Δημοκρατία (2016) *Εθνικό Πρόγραμμα Μεταρρυθμίσεων 2016*. https://ec.europa.eu/info/sites/info/files/european-semester-national-plan_greece_2016_el.pdf Πρόσβαση 20 Μαΐου 2017

ΕΛΣΤΑΤ (2016a) ΕΛΛΑΣ με αριθμούς. Ειδική Έκδοση Ιούλιος-Σεπτέμβριος 2016

ΕΛΣΤΑΤ (2016b) ΕΛΛΑΣ με αριθμούς. Ειδική Έκδοση Απρίλιος-Ιούνιος 2016

FCFCG (2017) A potted history of community farming and gardening. https://www.farmgarden.org.uk/bit-history. Accessed 30 May 2017

Giannakourou G, Balla E (2013) Privatization of planning powers and planning processes in Greece: current trends, future prospect*s*. Paper presented at the 6th conference of the platform of experts in planning law, privatization of planning powers and urban infrastructure, Lisbon, 12/13 Oct 2012. http://internationalplanninglaw.com/files/2013/10/Greece_Privatization-of-planning-powers-and-processes.pdf. Accessed 30 Mar 2017

Godfrey Asley Associates (2010) Review of allotments provision. A final report prepared for the Cambridge city council. http://www.whitehill.info/docs/CambridgeReviewofAllotmentProvisionFinalDraft26Jan.pdf. Accessed 15 May 2017

Guinness B (2014) Welcome to Andernach, Germany's edible city. Forget flowers—carrots and herbs grow in the parks of Andernach in Germany. Telegraph, 8 Jul 2014

Guitard A, Pickering C, Byrne JA (2012) Past results and future directions in urban community gardens research. Urban For Urban Greening 11(4):364–373

UN Habitat (2010) State of the world's cities report 2010–2011. Cities for all: bringing the urban divide. United Nations Human Settlements Programme, Nairobi, Kenya

Hellenic Ministry of Foreign Affairs (2016) Facts and figures. About Greece—Food and Gastronomy. http://www.mfa.gr/uk/en/about-greece/food-and-gastronomy/facts-and-figures.html. Accessed 13 Nov 2016

Hellenic Statistical Authority (2011) 2011 Population and housing census: characteristics and amenities of dwellings. http://www.statistics.gr/documents/20181/1215267/A1602_SAM05_DT_DC_00_2011_01_F_EN.pdf/9b9aeab0-eeda-4818-8196-b6ff988081c1 Accessed 11 Nov 2015

Henley J (2012a) Greece's cut-price potato movement shows Greeks chipping in. The Guardian 27 Mar 2012

Henley J (2012b) Greece on the breadline: 'potato movement' links shoppers and farmers. The Guardian 18 Mar 2012

Kandylis G (2006) From assimilation to national hierarchy. Changing dominant representations in the formation of the Greek city. The Greek Rev Soc Res 121:157–174

Karas T (2016) Afghan garden keeps idle hands busy, produces food for hosts, UNHCR Greece. http://www.unhcr.org/news/stories/2016/10/5809b9af4/afghan-garden-keeps-idle-hands-busy-produces-food-hosts.html. Accessed 13 Nov 2016

Κωστής Κ (2010) Σωτήριος Σωτηρόπουλος, Η διανομή των Εθνικών Γαιών (1871), Εισαγωγή- Ιστορικός Σχολιασμός. Στο Μπότσιου ΚΕ (Επιμ) *Τετράδια Κοινοβουλευτικού Λόγου ΙΙ*. σ. 27–91

Lawson L, Miller A (2013) Community gardens and urban agriculture as antithesis to abandonment: exploring a citizenship-land model. In: Dewar M, Thomas J (eds) The city after abandonment, University of Pennsylvania Press, Pennsylvania, pp 17–40. Retrieved from http://www.jstor.org/stable/j.ctt3fh93k.4. Accessed 3 Nov 2016

Maloutas T, Spyrellis S (2015) Vertical social segregation in Athenian apartment building. Athens Social Atlas. http://www.athenssocialatlas.gr/en/article/vertical-segregation/. Accessed 21 May 2017

Maxwell D, Levin C, Csete J (1998) Does urban agriculture help to prevent malnutrition? evidence from Kampala. FCND Discussion, paper 43, IFPRI, Washington DC

McLees L (2011) Access to land for urban farming in Dar es Salaam, Tanzania: histories, benefits, and insecure tenure. J Mod Afr Stud 49(4):601–624

Montreal's Community Garden Program (2006) World urban forum 2006 Vancouver Canada. http://ville.montreal.qc.ca/pls/portal/docs/page/librairie_en/documents/Montreal_Community_Gardening_Program.pdf. Accessed 28 Apr 2017

Mougeot LJA (1999) Urban agriculture: definition, presence, potentials and risks and policy challenges. IDRC, Ottawa. https://idl-bnc.idrc.ca/dspace/bitstream/10625/26429/12/117785.pdf. Accessed 5 Oct 2016

Mougeot LJA (2000) Urban agriculture: definition, presence, potentials and risks. http://www.ruaf.org/sites/default/files/Theme1_1_1.PDF. Accessed 5 Oct 2016

Μακρυδημήτρης Α (2006) Κράτος και Κοινωνία των Πολιτών. Μεταμεσονύχτιες εκδόσεις, Αθήνα

Papaioannou M, Mavroidis I, Economopoulou A (2008) Agriculture—rural development chapter. In: Papaioannou M, Mavroidis I, Economopoulou A (eds) (compilation) Country profile Greece: national reporting to the seventeenth session of the commission for sustainable development of the united nations (UNCSD 17. Hellenic Republic-Ministry for the Environment, Physical Planning and Public Works, Athens

Φωτιάδη Ι (2016) Το κίνημα της πατάτας παραμένει ζωντανό και γιγαντώνεται. *Καθημερινή* 5 Μαρτίου 2016

Potutan GE, Schnitzler WH, Amado JM, Janubas LG, Holmer RJ (2000) Urban agriculture in Cagayan de Oro: a favourable response of city government and NGOs. https://www.researchgate.net/publication/242241139_Urban_agriculture_in_Cagayan_de_Oro_a_favourable_response_of_City_Government_and_NGOs. Accessed 22 Sep 2016

Ρουσάνογλου Ν (2016) Σταθερή αξία το ακίνητο για τους Έλληνες. Καθημερινή 3 Φεβρουαρίου 2016

Schmelzkofp K (1995) Urban community gardens as contested space. Geogr Rev 85(3):364–381

Schmelzkofp K (2000) Incommensurability, land use and the right to space: community gardens in New York City. Urban Geogr 23(4):323–343

Schmidt S (2012) Getting the policy right: urban agriculture in Dar es Salaam, Tanzania. Int Dev Plann Rev 34(2):129–146

Simatele D, Binns T (2008) Motivation and marginalization in African urban agriculture: the case of Lusaka. Zambia, Urban Forum 19(1):1–21

Simiti M (2016) Civil society and the economy: Greek civil society during the economic crisis, ECRP General Conference, Charles University in Prague, 7–10 Sep 2016. https://ecpr.eu/Filestore/PaperProposal/b2757124-04bc-488c-92f8-7d2a16e2bd77.pdf. Accessed 15 May 2017

Sotiropoulos DA (2014) Civil society in Greece in the wake of the economic crisis, report submitted to the Konrad Adenauer Stiftung (KAS) Office in Athens and written with research assistance by the Hellenic Foundation for European and Foreign Policy (ELIAMEP) http://www.eliamep.gr/wp-content/uploads/2014/05/kas.pdf. Accessed 15 May 2017

University of Missouri Extension center (2015) Community gardening toolkit. Online at http://extension.missouri.edu. Accessed 4 Mar 2017

Zeeuw DH, Veenhuizen RV, Dubbeling M (2008) The role of urban agriculture in building resilient cities. Paper for the UK foresight project on global food and farming, RUAF foundation. http://www.ruaf.org/sites/default/files/Paperpercent20forpercent20UKpercent20Foresightpercent20Foodpercent20andpercent20Farmingpercent20Futures.pdf. Accessed 11 Oct 2016

Author Biographies

Helene Haniotou is an Associate Professor at the Department of Urban and Regional Planning, School of Architecture, NTUA. She has worked as an architect and urban designer in Athens and won several prizes in national competitions, also as a consultant at the European Commission in Brussels (DG Environment). She obtained her Doctorate in Geography at the University of Strasbourg and started working as a researcher then Maître-assistant associé at the School of Architecture (Ecole Nationale Supérieure d'Architecture de Strasbourg) and the Faculty of Geography and Regional Planning in Strasbourg. Since 2009, she is teaching and doing research at the National Technical University of Athens (NTUA) where she has the direction of the Laboratory of Urban Design.

Eleni Dalipi is a Ph.D. candidate in Urban and Regional Planning at the School of Architecture of the National Technical University of Athens (NTUA). She has a diploma in Political Sciences and Public Administration—International and European Studies, School of Law, Economics and Political Sciences, Department of Political Science and Public Administration of the National Kapodistrian University of Athens (UOA). She holds a MSc of the Department of Sciences, Division Social Sciences of the Technical University of Crete and a MSc in Urban and Regional Planning from the School of Architecture, NTUA. Her interdisciplinary research interests include landscape theory and politics, as well as the correlations between power, politics, and the built environment.

Part IV
Gardening Collectively: What Potential Places and Space?

Chapter 13
Urban Agriculture: From a Creative Disorder to New Arrangements in Rome

Beatrice Del Monte and Victoria Sachsé

Abstract As Rome has always been characterised by a strong presence of agricultural activities, we investigate how the most recent forms, on which we focused, are questioning the making of the city. For this purpose, we apply the lens of order and disorder dialectic processes. The aim of this chapter is to address how Roman urban agriculture experiences represent possible creative initiatives in public space. Therefore, we chose to base our reflection on a various set of urban agriculture initiatives: urban hortus (orto urbano), guerrilla gardening, fruit harvest, that is various forms of collective citizen urban agriculture initiatives. The collection of data has been carried out mainly between 2014 and 2015. We carried out sixteen in-depth individual and collective interviews with members or actors linked to the initiatives, and also with municipality personnel. We explore the way these experiences are organised, how they fit in the territory, how they question the city (municipality, neighbourhood, citizens) and its order highlighting new ways of thinking, living and creating the city.

Keywords Urban agriculture · Informal planning · Public space
Collective action

13.1 Introduction

Contemporary cities are highly characterised by the mingling of opposing vitalities, which transform and reproduce urban spaces through continuous motions. Order and disorder seem to be two dialectical movements through which these transformations

B. Del Monte
University of Milan, Milan, Italy
e-mail: beatricedlm@libero.it

B. Del Monte
University of Turin, Turin, Italy

V. Sachsé (✉)
Dyname UMR 7367 and AMUP EA 7309, University of Strasbourg, Strasbourg, France
e-mail: victoria.sachse@yahoo.fr

intervene. They are notions which are usually more normative than descriptive which make them problematic to use as analytical tools. The vision we are going to foster here is the vision of a contingent order, an order which does not constitute itself against or despite disorder but through it. Indeed, an order emerges and evolves in a contingent way inside determined constraints, and this is contingency game inside the rules of the game that make the beauty of the organisation of a dynamic system (Piettre 1997). We are going to explore how order and disorder contribute to the making of the city of Rome through the emergence of grassroots urban agriculture experiments.

Regarding cities, on the one hand, there is a supposed order that should characterise the planned city. On the other hand, there is the disorder generated by informal actions undertaken by those who daily live the city. As pointed out by Indovina (2016), these two movements are continuous and not linear, constantly opposed and complementary (Barberi 2010). The urban space comes to life as a heterogeneous place of incessant conflicts and negotiations between social segments with their divergent needs, desires, characteristics and projects, "that also manifests as an expression of power (economic, social, cultural, political, institutional), able to leave a footprint on urban organisation" (Indovina 2016: 2). Urban space is thus constantly produced and reproduced by social interactions led by unequal power relations. According to the social class to which one belongs, the borders of private and public spaces are not the same. In fact, the different ways in which it is experienced by ruling classes and citizens are inscribed in the urban fabric, through a process that disciplines urban architectures, tending more and more to limit the spaces for exchanges and interaction. In this context, untidy forces operate practices aimed at disturbing the established order, questioning the assumed existing balances by introducing social and spatial transformations. These transformations can emerge through the instances of social groups or citizens, who claim changes in the pre-existing urban orders. The origins of disorders are a constitutive element of the urban context, inherently unstable and constantly changing. Crucial is the reflection expressed in the collective volume "Unruled cities" (Pile et al. 1999: 2), which shows as "one person's order might be another's disorder. (…) Urban spaces are (dis)ordered and differentiated particularly through the practices of planners, builders, urban social movements and so on". In fact, the order applied to urban context can also take coercive and oppressive connotations. On the other hand, the disorder can instead be seen as the flow of transformative actions that challenge a repressive order, creating over time new forms of spatial orders, even potentially improved (Indovina 2016). Both concepts (order and disorder) can assume different interpretations of the city, according to the perspective of the involved actors. That is, "ideas of order and disorder are embedded in particular world views and as such they both reflect, and reproduce, relations of inequality and power" (Mooney 1999: 55).

As explained by Amalia Signorelli, "human space is not an undifferentiated container (1999). In a concrete sense, not only metaphorically, to have space means having freedom: freedom to act, to be, to relate; and vice versa, punctually, in every society the space deprivation is correlated to a subordinate position in the social system" (Signorelli 1999: 57). In the cities, it is the public space that can allow the emergence of new forms of association, of hybridisation, of projects that call into

question the established order creating unprecedented ontologies. The public space, as a place of encounter and exchanges, builds the urban context as a common world (Rudolf and Taverne 2012: 203), potentially open to citizenship and to otherness in all its possible configurations.

Placing our reflections in this context, we will investigate the role of some urban agriculture experiences carried out in the city of Rome. The aim of this paper is to address how Roman urban agriculture experiences represent possible creative initiatives in public space. For this purpose, we apply the lens of order and disorder dialectic processes, referring to the different actors (gardeners, members of the institutions) involved in these dynamics. In the following paragraph, we briefly describe the transformations of Roman urban agriculture, highlighting similarities and differences throughout history. In fact, as we shall see, it is a set of practices that has characterised the urban fabric since the foundation of the city. However, the contemporary period has seen the emergence of many new configurations that have unprecedented characteristics, and that have come up beside the previous consolidated practices.

In order to highlight these changes, we dedicate a specific section to describe the current forms assumed by these emerging Roman urban agriculture experiences. We will particularly focus on these new ways of carrying out urban agriculture that are realised on shared areas and self-managed by associations and groups of citizens. The second part of the paper will be concentrated on the impacts that these new forms of urban agriculture are having in reshaping public spaces and social interactions. We will try to analyse if they could be seen as possible disordering challenges for a previous urban order, and which kind of "new" orders they are implementing.

13.2   Urban Agriculture in Rome

In the following section, we will expose the history of the presence of urban agriculture in the city of Rome. We have decided to briefly evoke it, as it is a set of practices that characterise the shaping of the urban pattern since ancient times. In fact, this is a peculiarity of the Roman urban fabric, which has been characterised over the time by a high presence of green spaces and edible plants. Still, as we shall see, the current urban agriculture experiments which are discussed in this paper are essentially different from those operated in previous historical phases. In fact, besides individual officially assigned or occupied plots, cultivated by individuals or family groups for personal consumption purposes, new practices of urban agriculture are currently spreading. These new practices, which constitute the core theme of investigation of this paper, are carried out by groups of citizens and associations which, inspired by common purposes, manage shared surfaces of land cultivated collectively. Our analysis will be concentrated on these new practices as they could assume an important social and spatial value, while changing the management of urban space. The second section of this paragraph will therefore be

devoted at giving an overview of the current expansion of sharing urban agriculture experiences inside the Roman territory.

13.2.1 The Historical Roots of Urban Agriculture in Rome[1]

In the Roman cityscape, gardens are an element that historically appears to be well established. In the late Republican period, they often take an important role in the *domus* of great Roman families in the centre of the *urbe* (Purcell 2007; von Stackelberg 2009). However, from the middle of the first century BC, the residences of aristocrats tend to be on the fringes of the city, meeting characteristics that make them similar to country houses, with vast parks and gardens surrounding the luxurious homes. In the first century AD, these houses reach to constitute an opulent green belt situated around the urban core (Stambaugh 1988). Many of these *horti*, born as residences of wealthy patrician families, in imperial times moved under the domain of the Empire (Claridge et al. 2010). This is the case of *horti Sallustiani*, located at the Quirinal Hill, left by the grandson of the historian Sallust to the Emperor Tiberius (Barrett et al. 2016), and the Esquiline Hill *horti*, those *Tauriani* and *Lamiani* (Purcell 2007). These forms of *horti* remained in effect until late antiquity, and a trace of their presence will be recorded in the properties passed to the Church (Ensoli and La Rocca 2000) and in the parks of the seventh and eighth centuries. In early Middle Age, along the consular streets appeared concentrated sets of spontaneous gardens, where groups of people gathered and cultivated (Wickham 2015). With the arrival of flows of people from Northern Europe, which caused the fall of the Western Roman Empire, the idea of the flowers garden, typical of the northern countries, enriched the edible *horti*. It is in this type of flower gardens that love chivalric novels unfold. From the thirteenth century, the city got filled up by cloisters with vegetable and edible gardens attached to ecclesiastical structures. In the nineteenth century, the urban area was still largely characterised by the presence of spontaneous vegetable gardens. From San Giovanni to Porta Maggiore, the area was crossed by cultivated areas, as in the Parioli neighbourhood, in Trastevere, Prati, Esquiline Hill. Much of the city was divided between vineyards, orchards and gardens. With the arrival of the Piedmonts, to build the capital, numerous cultivated areas were eliminated, justifying this decision with ornamental and safety reasons. Prati and Esquilino became the residential areas of state elites (Cerasoli 2008), and the gardens were pushed far away, in suburban areas beyond the city perimeter. From the 1880s, the area beyond the street Palmiro Togliatti till Porta Maggiore was for the fruit and vegetable market and filled with vegetable plots, because of the richness of moats. In the 1920s and 1930s, populations of

---

[1]The information contained in this paragraph comes from an interview to Doctor Maialetti (who works for the Roman Municipality) we made in November 2014, and they are the result of an historical reconstruction realised by him, not yet published. We have also included in the paragraph some additional bibliographical references.

southern and central Italy began to converge in the city (Dan and Fornasin 2013). The districts of Centocelle, La Rustica and Alessandrino reflect the typical estate model of the time, filling with small buildings with two floors, inhabited by people of peasant origins and surrounded by gardens. It is possible to find there wisteria, palm trees and roses combined with beans and peas. The presence of these constructions proves to be, even at the present, the highest identity characteristic of the area. In the 1920s, fascist institutional rhetoric promoted the idea of a return to ruralisation of the city (Dunnage 2002), by teaching agriculture in elementary schools. In reality, this time was characterised by a greater centralisation of populations in towns, with a higher density of housing than in the past. Within Church structures, the presence of vegetable and edible gardens maintained, especially on the side of the city around the Gianicolo. In the 1960s and 1970s, there was still a strong presence of spontaneous urban gardens, which, however, suffered a sharp reduction and simplification of cultivations. From the 1980s, the abandonment of cultivated areas increased, although the presence of land devoted to vegetable gardens scattered throughout the city persisted.

The short historical description just exposed was intended to show the long-standing presence of city farming practices towards the construction of the Roman urban fabric. As expressed above, it is still possible to recall the existence of spontaneous plots cultivated by single individuals for edible ends, a practice that, as we have seen, is strongly rooted in the history of the city. Indeed, it is important to underline here that the self-managed collective agricultural practices examined by our fieldwork are a new phenomenon, which has exploded in the contemporary age. As we will see, collective agriculture practices are led by groups of citizens who, in addition of being sensible to the role of environmental and land protection, are also motivated by the desire to strengthen neighbourhood ties by working together. Many experiments are born on abandoned land, occupied by groups of citizens acting in informal ways and claiming the right to reclaim land or green urban areas.

Below, we expose the current configurations reached by Roman urban farming practices, which have known a new phase of spreading at the beginning of 2000s, proliferating then in the recent years. The role played by those activities in managing urban public spaces will be underlined, as well as their social and political dimensions, that make them different from the horticultural practices described above.

13.2.2   Current Extent of Urban Agriculture in Rome

Contemporary Rome is a very particular city as far as the green spaces are concerned. In fact, the city is a tangle of urban and green[2] areas. A large part of these

---

[2]We choose to use the term green because it covers many kinds of spaces: parks, nature reserve, urban farms, urban gardens, abandoned areas.

green spaces is composed of "residual portions of the *Agro Romano*, Roman countryside and covers around 68% of the urban surface" (Certomà 2016). If we consider the great ring road limit, this number is 33% (Giarè et al. 2015) which is still an important number.[3] Therefore, the urban gardens represent a small surface area of the whole but they are very diversified, whether regarding their location (some are interstitial, others in parks or abandoned green areas) or regarding their distinctive features (abusive gardens, municipal gardens, "community gardens"). As the responsible of the Roman urban gardens' office explains,[4] these spontaneous experiences exist in many "hidden" parts of the city along canals, rivers and railways. There is a great diversity of experiences, some of them are individual initiatives and some are collective. According to a study commissioned by the Roman municipality in 2008 (Lupia and Pulighe 2014), there were, at that time, 67 green areas informally cultivated in Rome intramural (within the GRA—great ring road) that are divided into 2301 vegetable gardens. The site *Zappata Romana*[5] presents a map of the city, on which are marked participatory management experiences green areas involved in the process. At the end of 2016, the map indicates 155 green areas which of 58 are dedicated to communal gardens, 30 are "spot" gardens and 66 are shared gardens. Zappata Romana is a project of the studio UAP (Urbanism, Architecture and Landscape), and being an ongoing project, the data provided have to be taken with caution but it still illustrates the vitality and the interest that urban agriculture arouses.

In a report made by the Council for research in agriculture and analysis of agrarian economy (CREA—Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria), a typology of urban hortus is made underlining five types of gardens: residential gardens, farms, shared gardens, institutional gardens and informal gardens (2015). We can see that various researches have been realised in the last years to give a global vision of the situation regarding urban agriculture in Rome. According to the criteria and methodologies applied, the results can vary but, at least, they show the diversity and the expansion of the phenomenon (Fig. 1).

In this work, we focus on a particular type of urban agriculture which is the urban hortus (orto urbano) as it is called in Italy (Mudu and Marini 2016) and in particular on the shared urban hortus (orto urbano condiviso). With this last category, we intend that the garden is managed by a group of people, more or less formal, who claim this collective dimension of the garden's organisation. The most widespread pattern is as follow: a part of the garden surface is dedicated to individual or small groups' lots, and the rest is dedicated to common areas which can be composed of various kinds of spaces (e.g. didactic garden, common crops, leisure areas for gathering moments, greenhouse, compost bin).

---

[3]For example, Paris' green areas cover 20% of the total city surface.

[4]Interview with the responsible of Urban gardens' office of the Municipality of Rome (Ufficio Orti Urbani), 6 November 2014.

[5]Which is an initiative from an architect studio, and participatory tool which has many limits about the accuracy of the data collected and the updates. English version of the website: http://www.zappataromana.net/en.

Fig. 13.1 Location of the four gardens studied in the city of Rome (area delimitated to the Great Ring Road). *Source* Elaboration from the authors using both Google street map and QGIS, and the figure: "Distribuzione spaziale dei siti di AU nella città di Roma (area delimitata dal Grande Raccordo Anulare)" from Flavio Lupia, Giuseppe Pulighe, Francesca Giarè, realised using database from CREA Centro per la Ricerca in Agricoltura e per l'analisi dell'economia agraria (Lupia et al. 2016)

Regarding the institutional aspect of the issue, the urban gardens' office was created in 2002, established by the department for protection of the environment–civil Protection. This office has only one board member[6] who is working to

---

[6]We had two interviews with this person one in November 2014, the other one in October 2016.

strengthen and facilitate communication and links between urban gardens and the rest of the public institutions. In 2009, a regulation was launched that applies to crop areas within the city of Rome.[7] This regulation was requested from the Environment Committee to the urban gardens' office. The responsible office chose to draft the regulation together with some experiences of urban gardening already in place because as she has repeatedly emphasised the power of urban farming phenomenon lies in its way of being self-directed. Regarding the drafting of the regulation, a core group was formed, composed mainly of members of association that created shared gardens, working with the urban gardens' office. After the end of our fieldwork, the regulation was approved and the Mayor issued a formal document that defines the conditions for carrying vegetable gardens and shared gardens in Rome. The communication was published on 20 July 2015. This regulation is the result of two years of work and collective development. However, it does not always correspond to the expectations of the initiatives involved in the process, as it is for the issue of access to water for example. This matter has not been yet addressed, even if the urban gardens initiatives asked the municipality to take charge of it. The point here is to show that the contacts with the administration are particularly complex and to underline that the experiences, even if they obtained some attention, move forward with or without the support of public actors.

13.2.3 Miscellaneous Experiences of Urban Experiences

In this section, we will develop the fieldwork, the locations of the urban hortus selected and the methodology applied.

We chose to follow four urban hortus with different characteristics, the guerrilla gardening group of Rome and a fruit harvesting collective, the Frutta Urbana Collective, with the aim of catching the dynamics of varied grassroots experiences in the field of urban agriculture.

The didactic garden of Caffarella has the particularity of being located in one of the largest parks of Rome. It was at the time we realised our fieldwork,[8] in a very hidden place which made it a quiet place in the middle of one of the city's lungs which is Caffarella's Park.

The three other experiences are characterised by their geographical proximity as they found themselves in the same municipality of Rome[9] in the south-east of Rome. The Caffarella's experience is in another municipality still in the south-east of Rome, but we decided to include it, as it represents another kind of experience and it revealed other aspects of what urban gardening can be. Indeed, this

---

[7]All the information gathered about the «regulation» comes from interviews with the responsible of the Urban Gardens' office, founder members of the gardens and Municipality of Rome website.

[8]Now they changed the location, and the garden is at the entrance of the park.

[9]Rome is divided into 15 municipalities.

Fig. 13.2 Orti Urbani Tre Fontane. *Source* Victoria Sachsé

experience has been conceived as a didactic garden[10] from the beginning, unlike the others which developed a educational part in the project in successive phases.

The Orti Urbani Tre Fontane are located in Montagnola district, in the south of Rome. The garden is located in the heart of a metropolitan fabric highly urbanised. The area cured by the gardeners reaches 6000 m^2 in a green area surrounded by edifices and coasted by the Tre Fontane Park (Fig. 2).

The Orti Urbani Garbatella are located in a particular place, as they are located under the building of the Lazio Region. They form a kind of "barrier between Garbatella district and the Cristoforo Colombo",[11] and it is a strategical place, located between the historical centre and the EUR.[12] They are composed of around 15 lots of 40 m^2 each. They are considered as the first experience of collective urban gardens inside the great ring road. Their history dates back from the 1990s and is the fruit of a long opposition process against real estate speculation (Fig. 3).

---

[10]In the two gardens—Tre Fontane and Garbatella—there is an educational area that the members described as a place dedicated to knowledge transmission. The aim is to grow a variety of species, and to be able to show and explain to people who participate in various activities. The audience is mainly composed of children and schools, but not only.

[11]Interview from a founder member, 12 November 2014. The Cristoforo Colombo is a large high-speed road, made of six lanes. It is one of the longest streets of the city, which connects the centre to the sea.

[12]The EUR is a residential and service providers' neighbourhood. It has been built during the fascist era, and it is therefore characterised by a typical fascist architectural style.

Fig. 13.3 Orti Urbani Garbatella. *Source* Victoria Sachsé

La Città dell'Utopia is located in the San Paolo district; it is a project from Service Civil International, hosted in a rustic Casale, which appears in the cadastre in the early nineteenth century.

Regarding methodology, we used tools that anthropology has developed along time. We spent 5 months meeting and analysing these experiences following a qualitative approach. The collection of data has been carried out mainly between 2014 and 2015 for the interviews, participation and observation and was completed by punctual encounters, research on written materials, websites and various online social networks. Sixteen in-depth individual and collective interviews were carried out with various actors active in the experiences or in contact with them. Eight were carried out with founder members of the initiatives, three with gardeners, two with associations working with the gardens, one with a member of an association working with the Frutta Urbana Collective and two with the responsible of the Roman urban gardens office.

Additionally, we spent time in the gardens and participated in actions led by the Frutta Urbana Collective and the Giardinieri Sovversivi. During the period of our ethnography, we took part to public events realised by the groups in exam and we also spent time in the *orti* observing the development of the members' daily life.

13.3 Analysis

This section will be dedicated to the analysis of the use of space in the contemporary Rome, and particularly to the impact of some sociopolitical dynamics that currently distinguish many global cities. As exposed in the introduction, we will

analyse these elements through the lens of order and disorder, two aspects of a unique dynamic. In a first part, we explore the way the experiences studied contest the prevailing situation through what we call a creative disorder. A second moment is dedicated to the investigation of the propositional dimensions of these initiatives either regarding the conception of the city or the organisation model they implement, both studied as possible new orders.

13.3.1   Contesting Urban Order Through a Collective Creative Disorder

In neoliberal cities, urban spaces are always more becoming areas of loneliness and isolation, characterised by the lack of social interactions. They are becoming the opposite of the public space, which was previously conceived as a place of collaboration, exchange and reciprocal reliance. In the past decades, urban planning started to change the shape of the city, making it always more uniform and trying to restrict spaces of interaction to marginal dimension of the urban fabric. As underlined by the historian Bevilacqua (2007), in Rome there are entire neighbourhoods that have been experiencing a physical expropriation of urban public spaces. He argues that through this process the city is loosing places of meeting and social exchange, which have been spaces where the city was used to create its forms of social organisation. Moreover, it has been underlined how the city is nowadays experiencing a double process of resignification and management of the urban space (Cervelli 2016). In fact, the city has seen the application of top-down politics intended to contrast the so-called "degradation" of the public space of the historical centre of the city, which is now thought as entirely destined to a global upper class, the only one who has the means to live in the centre, which has been always more reduced to a space for tourism and commerce. On the other side, many Roman peripheries have seen the implementation of politics of securisation and privatisation, which are typical of the neoliberal cities. In this way, as properly explained by Cervelli (2016: 103) the other city, the one which is inhabited by the working classes, by new precarious workers, by immigrants "has not received any attention, and on the contrary has been negated and humiliated once again". These processes are constituted of two complementary movements of recentralisation and periferization. In order to contrast these developments, which are perceived as violent and oppressing, many groups of citizens are organising grassroots activities and initiatives in their territories. These groups are trying to experiment new pathways of collective creation of the urban through processes of re-appropriation, opening to the possibility of conflict and collective transformation from below. Urban agriculture experiences that are the topic of this paper place themselves in this context with commitment and creativity. These realities rise up against authoritarian dynamics of privatisation, securisation and speculation applied to the urban space, dynamics that limit the freedom of movement and thinking. In this way,

as explained by Harvey (2008: 23): "The right to the city is not limited to the individual freedom to have access to urban resources: it is the right to change ourselves while changing the city. Moreover, it is a common right more that individual because the transformation inevitably relies to the exercise of a collective power that should reshape the urbanisation processes".

The diffusion of contemporary urban gardens and urban plots in the city of Rome has been characterised by grassroots and self-managed practices. Many of these experiences are born on abandoned or degraded lands, which have been occupied by local citizens through an informal frame. These citizens are claiming for the right to the city through the re-appropriation of cultivable lands or green urban areas and against the imposition of an urban order that is perceived as imposed from above. In general, these experiences are constituted of open spaces where people can have access and take part of the movements that make these places alive, building these spaces as new open squares that break the daily life and powerfully enter into the public sphere, to creatively influence the urban fabric, making explicit that the shape assumed by the city is not only the one decided and imposed from the top. The main observation that has emerged from the fieldwork carried out in the city is that the experiences we studied are all born from the willing to take back fragments of urban space. The social and political critique that arises from these experiments takes different forms. At the basis, it is always possible to find the desire of refusing the degradation and abandonment to which some areas of the city (notably the ones placed in the peripheries) have been subordinated. Many of these places are currently located in areas which were previously used as dumps or parking.

For example, some of the historical members of the Orti Urbani Garbatella explained that the garden location was previously an abandoned area, a dump, and for a certain time even a car park. This is the reason why the project that they are currently carrying out started from the decision of cleaning the space and involving people of the neighbourhood to take it back and instead, make it a space of collective creativity and social interaction. In the same line, a group of inhabitants of the Tre Fontane neighbourhood (South area of Rome) has also decided to tear off from degradation the area that they are currently cultivating. This issue is one main reason which puts in motion these kinds of grassroots social and ecological movements.

On the other side, a primary objective is not just to take back spaces which have been abandoned by the local institution, but also to prevent from other potential private interests, and particularly against real estate speculation. The Orti Urbani Garbatella have put this dimension on the core of their claims, as their initiative is located on an area which is of high interest for real estate and at risk of speculation. But this is also true for the Orti Urbani Tre Fontane, for the garden of La Città dell'Utopia and for many other collective gardens in the city. The activists we met underlined that for them it is central to propose a different vision of the management and organisation of the city. Indeed, they claim that an alternative use of the urban space could be made, which should answer the real needs of the people who live the neighbourhoods and the city.

These motivations are always present in the activities carried out by the experiments we studied. In fact, once these groups have consolidated the preservation of their territories, they start to imagine new uses of the areas they have reconquered. Therefore, they interpret urban lands as a common that should be collectively used, preserved and managed. They try to create new imaginaries in order to make arise collective experiments, where groups of citizens can experience together new spaces of sharing and encounters.

13.3.2 Forging "New" Orders

In this section, we explore the new imaginaries that are proposed by this various experiments. As we have seen, the "settlement" of urban gardens in the city of Rome comes from grassroots dynamics, whether individual or collective, officially assigned or occupied. Most of them arise as an unregulated process including the actions of guerrilla gardeners and fruit collectors.

We are going to question this "new" order in two phases. The first one regards how the experiences fit into the city, how these practices can offer an alternative order in the organisation of the city, how they question the bureaucratic heaviness and how they put to test the urban planning in Rome. The second phase is the organisation model they experience, their structure, the modality of decision taking they adopt.

13.3.2.1 Urban Gardens as Citizens' Planning the City from Below

If we speak about the urbanistic changes of the last decades and their impact on Italian cities, we can observe that the historical centres have become standardised by the signs and technical structures of communication (shop signs, traffic lights, road signs) but also that "the squares, with their historical and artistic personality, are disfigured and made uniform by the metallic cloak of the parked cars" (Bevilacqua 2007: 87). If we consider that the reality described by Bevilacqua[13] represents the dominant contemporary order, the cases studied express a critique to this vision as well as a will to create a new order in the city. As we have seen above, the initiatives represent a form of resistance but they also constitute a creative force. In fact, they embody a different way of defining the city, a model in which the citizens, the inhabitants act directly in their territories.

The gardens experiences studied, offer new open spaces with a collective imaginary. This imaginary could be defined as a "vision that seems to surface among the contemporary reflections about the production conditions of a liveable

---

[13]And also by Bauman (1998) about contemporary cities in general and by Berdini (2008) about Rome in particular.

and sustainable city for its inhabitants based on the reappropriation of collective environment of life" (Costes 2010: 188). This is what the people who are part of these experiences, urban gardens as well as guerrilla gardening claim. There is a strong imaginary of the right to the city, in particular linked to environmental issues (curing a green space through vegetable gardens, giving colour to the streets). In these cases, citizens act in fields and areas formerly under the municipality or city authority. This is the phenomenon Certomà describes as informal planning (2016) meaning a conscious process realised by the grassroots experiments. Another element highlighted is that this informal planning is not necessarily in opposition to institutions but can also constitute "a new collaborative mode of planning". In this paper, we focus on the actions led by the cases studied to show that they offer new ways of planning and of offering "services" that are supposed to be taken care of by public institutions.[14]

In fact, each of these experiences is situated on public soil. Two of them started with the occupation of the area and are now curing them. Orti Urbani Garbatella have been active for more than 8 years now, and Orti Urbani Tre Fontane have been active for 4 years. They take care of cleaning, maintaining and enhancing the areas (from their point of view). The experience of Caffarella is a bit different as the didactic garden represents a small lot of the whole Caffarella's park. It was created since the beginning, as an educational experience, but what makes it similar to the other initiatives is that it came from citizens from the area who decided to use a small part of the park to organise environmental education initiatives. In this sense, Caffarella's garden can be considered as a way of planning the city from below.

The last experience of urban gardens is the one which accompanied La Città dell'Utopia initiative. In fact, the project is much broader as it started with the occupation of the Casale by many activists. One association took care of the garden which surrounds the house with a particular vision of nature and of the harmony of plants. Indeed, one notable fact is that the trees planted, all belonged to the mediterranean area showing a will to be coherent with the local environment.

With different modalities, Guerilla gardening and Frutta Urbana, in the same line of social claim, show interest for the use of public space and self-management. They offer another vision of public space as a place where people can interact not only by crossing it but also by bringing to life and modelling it.

Frutta Urbana tries to make visible the public areas where there are fruit trees, highlighting that they are not only ornamental but that the fruit can be used and transformed and distributed to whom needs it more. Here, the approach is different from the gardens as they propose another use of the existing fruit trees. The idea is to change the perspective on the city, on the streets, and to give a new life to things that were merely decorative before. The Collective Frutta Urbana also involves

---

[14]We do not develop the debate about the complementarity or opposition between those forces here, as it opens another great debate about grassroots initiatives, about the risk of becoming a palliative to a weak State.

many volunteers in their activities, the moment of harvesting become shared moments with a social scope.

The Giardinieri Sovversivi, guerrilla gardening group of Rome, also tries to involve the inhabitants of the areas where they act, the aim is that people start curing and "greening" their neighbourhood.

All the experiences studied, the gardens, guerrilla gardening, urban fruit, have in common to promote an "active" relationship to space, in this case, streets or "green open spaces". They have an impact on the city, transforming it according to their own vision, and not waiting for urban planners to decide what to do with these spaces. This is why these experiences can be considered new ways of ordering the city, not with a global vision of the whole but by acting directly on the neighbourhood, at a small scale.

13.3.2.2 New Socialites and Intricacy of Orders

Now, we will see how these examples offer a new way of conceiving the relationship inside their organisation not only in the city but also in the way they relate to each other and to other groups.

Indeed, one aspect that characterises the gardens is the will to create spaces of conviviality; in fact, they all have common spaces for picnic, gathering, and they organise many moments of collective work but also of celebration like spring feast or gathering on the first of May. Some people come to study or read or chat with friends or family. Therefore, it can be seen as a new kind of "public space" where people can meet without having to buy or consume. In a broader sense, this is a new way of conceiving the relationship to others and to public space.

Moreover, these experiences create spaces for environmental education. Most of the urban gardens observed, have an area dedicated to a didactic garden where they organise activities with surrounding schools and children in general. Some of them are sometimes requested by the schools to help create a vegetable garden inside the courtyard. Besides, the guerrilla gardening group of Rome also created a school for adults so that they can learn how to grow and cure plants. So the transmission of knowledge is an important dimension of these experiences, and we can highlight here that the activities are free so that a large part of the population is able to follow these formations.

Regarding social inclusion, Orti Urbani Tre Fontane and Orti Urbani Garbatella, for example, develop activities with other associations, some of them working with refugees, others with ex-prisoners or disabled. The collective Frutta Urbana is also linked to a volunteer network making their actions, moments of sociality. The fruit of their harvest has also a social use as they are distributed to popular canteens.

Another aspect, which can be highlighted here, is that these gardens are also places of intergeneration encounter. Indeed, many retired people come to cultivate their lots and participate in these gardens where they mix with families (parents and children) and a few young people (under 30).

All these examples illustrate the fact that the six experiences taken into exam here include strong social dimensions; they are places of encounter of varied publics. The idea is not to show the best practices but to evidence conditions which enable diversity to happen without following a pre-existing scheme or rules or regulations which would be imposed.[15]

13.4   Conclusion

As we stated at the beginning, disorder and order are complementary. Therefore, the urban agriculture experiments, that can be seen as an element of disorder, subversion or irregularity, can also be considered as another conception of what "order" can be. They showed us that from the contestation of the previous order, through collective processes of conflict and creativity, it is possible to experiment new ways of intending urban space, developing alternatives to the grey of cement and cars. In fact, they change the urban landscape by opposing heterogeneity to a movement of standardization and control of the urban space imposed by formal planning and speculative projects. These dimensions make clear the will of gaining centrality in their territories.

Pickerill and Chatterton use the terms resistance and creation to qualify the dynamic created by two opposed forces which are nonetheless both necessary to invent new models. These experiments are a "combination of making protest part of everyday life, but also making life into workable alternatives for a wider social good" (2006: 737).

This happens in Rome through the contestation of the prevailing order, and by interrogating the way of planning. It represents a way of questioning what democracy is and how it is applied or not in our Western societies. In this period of established crisis, these initiatives emerge, in some cases, as a consequence from the lack of public action, and sometimes from the collusion of public actors with private ones (through real-estate speculation mainly).

These urban agriculture experiments create a movement of resistance and contestation of the existing order in many fields. As we amply demonstrated, they realise it in planning, both from a visual perspective, with the promotion of urban landscape diversity, and from a social perspective, through the implementation of different uses of urban spaces, making them collective and public. The movement of creation includes propositional elements regarding conception of the city but also regarding social issues (inclusion, solidarities, education) and environmental matters (biodiversity, organic agriculture, curing green areas). All these issues are essential in particular in urban contexts. To sum up, we want to make clear the

---

[15]Of course, we do not intend that these experiences are perfectly harmonious and we could observe many conflictual issues in their internal organisation but this should be explored in other writings.

potential role that these experiences can play in remaking the city fabric. That is, while opening new conflictual dimensions and proposing new solutions, they introduce social and political elements that can allow to rethink new ways through which collectively manage and imagine urban public spaces.

Bibliography

Barberi P (2010) È successo qualcosa alla città, Manuale di Antropologia Urbana. Donzelli Editore, Roma

Barrett A et al (2016) The emperor nero: a guide to the ancient sources. Princeton University Press, Princeton

Bauman Z (1998) Globalization: the human consequences. University Press, Columbia

Berdini P (2008) La città in vendita. Donzelli, Roma

Bevilacqua P (2007) L'utilità della storia: il passato e gli altri mondi possibili, vol 34. Donzelli, Roma

Cerasoli M (2008) Periferie Urbane Degradate. Regole insediative e forme dell'Abitare. Cittalia, ANCI Ricerche

Certomà C (2016) 'A new season for planning': urban gardening as informal planning in rome. Geogr Ann Ser B Hum Geogr 98(2):109–126

Cervelli P (2016) Il degrado dell'eternità. In: Pezzini I, de Oliveira A (eds) Roma in divenire tra identità e conflitti. Edizioni Nuova Cultura, Rome, pp 91–116

Claridge A et al (2010) An oxford archeological guide. Oxford University Press, New York

Costes L (2010) Le Droit à la ville de Henri Lefebvre: quel héritage politique et scientifique? Espaces et sociétés 1:177–191

Dan N, Fornasin A (2013) Una indagine CATI per lo studio della mobilità interna in Italia in un'ottica longitudinale

Dunnage J (2002) Twentieth Century Italy: a social history. Pearson Education Limited, Edimbourgh

Ensoli S, La Rocca E (eds) (2000) Aurea Roma: dalla Città Pagana alla Città Cristiana. Assessorato alle Politiche Culturali, Comune di Roma

Giarè F, Lupia F, Pulighe G (2015) Capitolo 4: Agricolture Urbana. In: Giarè F, Vanni F (eds) Agricoltura e città

Harvey D (2008) The right to the city. The New Left 6:23–40

Indovina F (2016) Urban disorder and vitality. City Territory Architect 18(3)

Lupia F, Pulighe G (2014) Orti residenziali, orti sociali e altri usi degli spazi verdi urbani. Una mappatura del territorio del Comune di Roma. Seminario coltivare la città, INEA

Lupia F, Pulighe G, Giarè F (2016) Coltivare l'urbano: una lettura in chiave territoriale del fenomeno a Roma e Milano, Agriregionieuropa, anno 12, n 44

Mooney G (1999) Urban disorders'. In: Pile S, Brook C, Mooney G (eds) Unruly cities? Order/disorder. Routledge, London and New York

Mudu P, Marini A (2016) Radical urban horticulture for food autonomy: beyond the community gardens experience. Antipode

Pickerill J, Chatterton P (2006) Notes towards autonomous geographies: creation, resistance and self-management as survival tactics. Prog Hum Geogr 30(6):730–746

Piettre B (1997) Ordre et désordre in: Désordre(s). PUF

Pile S et al (eds) (1999) Unruly cities? Order/disorder. Routledge, London and New York

Purcell M (2007) City-Regions, neoliberal globalization and democracy: a research agenda. Int J Urban Reg Res 31(1):197–206

Rudolf F, Taverne D (2012) La ville-nature. In: Poirot Delpech S, Raineau L (eds) Pour une socio-anthropologie de l'environnement, Tome 1, Par-delà le local et le global. L'Harmattan, Paris

Signorelli A (1999) L'Antropologia urbana Introduzione alla ricerca italiana. Guerini Studio, Milano

Stambaugh J (1988) The ancient Roman city. The Johns Hopkins University Press, Baltimore

Von Stackelberg K (2009) The roman garden: space, sense, and society. Routledge, New York

Wickham C (2015) Medieval Rome: stability and crisis of a city, 900–1150. Oxford University Press, Oxford

Author Biographies

Beatrice Del Monte is an anthropologist. She is a Ph.D. candidate in sociology and methodology of social research at the universities of Turin and Milan with a thesis on the role of urban agriculture practices. She studied, worked and did research in Rome, Modena, Milan, Paris, India and Madagascar. Her main fields of study are environmental social movements, humans–nature relations and urban ethnography.

Victoria Sachsé is a Ph.D. candidate in geography at university of Strasbourg, Laboratoire Dyname (UMR 7367). She is currently working on citizenship participation and appropriation of public space in urban gardens in France and Italy. She studied and worked in France (Strasbourg, Lille and Toulouse) and Italy (Rome, Bologna and Trento), in Belgium (Brussels) and in Togo (Kpalimé). The main fields of studies are common studies, participation, city–nature relationship with a methodology inspired from urban anthropology and comparative ethnography with a geographical interest to spatial and social dimensions.

Chapter 14
The Emergence of a Green "Intermittent" City? The Case of Parisian Nomadic Gardens

Kaduna-Eve Demailly

Abstract This contribution, which focuses on nomadic community gardens in Paris, aims to lay out the contemporary urban landscape at a crossroads between temporary uses and the sustainable city. Nomadic gardens are "on the move" collective gardening projects managed by inhabitants as the sites await urban redevelopment. The Parisian nomadic gardens emphasize new political and social discourses and practices relating to the temporary uses and moving of urban spaces. The translocation of gardens aims to foster the acceptance, and, paradoxically, the permanence, of temporary uses. Then, it could promote the emergence of a green "intermittent" city. However, this process is not always a smooth one and it questions the association of two frames of reference: the sustainable city and the neoliberal city. This exploratory work stresses the difficulty of going beyond binary approaches (anchor/circulation; continuity/discontinuity; temporary/sustainable; sustainable city/neoliberal city) in order to grasp the realities of the contemporaneous urban fabric, pointing to the need to set up a hybrid analytical framework.

Keywords Transitory urbanism · Temporary uses · Community garden
Nomadic garden · Paris

14.1 Introduction

This chapter, which focuses on nomadic community gardens[1] in Paris, aims to lay out the contemporary urban landscape at a crossroads between temporary uses and the sustainable city. It should be noted that the nomadic garden is not central to my

---

[1] My study is based on nomadic community gardens. To simplify matters, I will use the term "nomadic garden" henceforth in this paper. The community gardens are known as "*jardin* [*s*] *partagé* [*s*]" in France, literally "shared garden[s]".

K.-E. Demailly (✉)
Lab'URBA, University Paris-Est Créteil, Marne-la-Vallée, France
e-mail: kadunaeve.demailly@gmail.com

Ph.D. dissertation (Demailly 2014) but, rather, lies at the heart of an ongoing reflection; this paper should therefore be read as a research position in progress.

Most academic works concern themselves with North American community gardens (see, along with a number of others: Schmelzkopf 1995; Smith and Kurtz 2003; Lawson 2005; Hou 2010; Eizenberg 2016; Reynolds 2014; Certoma and Tornaghi 2015). This paper, which focuses on the French—and more specifically the Parisian—community garden, specifies its characteristics, providing an empirical and theoretical analysis of one particular subtype: the nomadic garden.

14.1.1   The Community Garden: The French Story—Characteristics Peculiar to Paris

The first community garden appeared in the city of Lille[2] in 1997. It was created by the "*Amis des Jardins Ouverts mais Néanmoins Clôturés*" (friends of the open yet closed gardens) association. In the same year, the city of Lille hosted the first gardening and citizenship forum. This forum, organized under the aegis of the *Jardin Dans Tous Ses Etats* network (Garden In All Its States), brought together activists, social workers and associations.[3] At the conclusion of the forum, a charter inaugurated the founding principles of the community gardens (diversity of objectives and audiences, processes of dialogue and resident participation, solidarity and respect for the environment). Formalizing the community garden as a subject heralded a new era of urban gardening quite distinct from the family garden, itself the heir to the allotment garden (Cabedoce and Pierson 1996). The community garden is a local garden run by an association which offers collective gardening activities, the opportunity for participants to develop respect for the environment, the building of social bonds and a participatory approach to management (personal definition).

The study of community gardens is relatively new in France. Since the mid-2000s, writing on the topic by associations has been abundant (Baudelet et al. 2008; Prédine 2009; Den Hartigh 2013). More recently, several works have drawn on academic study from the fields of sociology (Dubost 2005), geography (Bourdeau-Lepage and Vidal 2013), agronomy (Aubry and Pourias 2013; Scheromm 2013) and political philosophy (Zask 2016). The development of several strands of research from various disciplines and the topicality of this subject are underlined by doctoral dissertations emerging from departments as diverse as English studies (Baudry 2010), agronomy (Pourias 2014), anthropology (Larbey 2014), geography (Ernwein 2015) and socio-anthropology (Mestdagh 2015).

---

[2]Located in the north of France, Lille is the fourth-largest city in France, after Paris, Lyon and Marseille.

[3]Other forums have since been held in Nantes in 1999, Paris in 2004 and Strasbourg in 2012.

Most of these scientific works examine the community gardens of Paris and the Parisian region. Indeed, Paris is the French city with the largest number of community gardens and one of the only municipalities to implement a political programme: the *Main Verte* Program.[4] The first community garden in Paris was created in the late 1990s in eastern districts. There are now 110 community gardens in Paris City and about a 100 in other parts of the Paris region. The institutionalization of these gardens came about rapidly. In 2003, the Paris City Hall had created the *Main Verte* Program designed to assist with, support and coordinate community garden initiatives. In the booklet published by the City Hall (Mairie de Paris 2005, 2007, 2011), precise details are given as to how land is provided. Being public property,[5] the community gardens cannot be regarded as public spaces as they are locked when gardeners are not present. The *Main Verte* charter is the central feature of the program since it allows for *Main Verte* certification. The principal commitments stated by the *Main Verte* charter relate to the opening of the garden to the public, the organization of events, the management of the site and communication. The community garden association agrees to regularly open for half days, with at least one of these being at the weekend, and to organize at least one event per gardening season. The associations must then be responsible for the ecological management of the site, take out third-party insurance and clearly display on the garden gate the name of the association, its contact details, the methods of access to the garden, the activities proposed and the dates of meetings. Finally, each year the association must submit a management report. There are thus few constraints for the association and the works carried out by the City Hall are of the utmost importance to the gardens since this body sees to the installation of grids, a water supply point and the input of soil to develop the land.

Approximately 60% of the Paris gardens are found in districts in the north-east of the capital. This proliferation is due to the presence of wastelands and the dense fabric of associations which exist in the area. There are several types of community garden: community gardens on vacant lands, community gardens in public gardens and parks, community gardens in residential areas and community gardens belonging to institutions (such as museums or churches). In my thesis, I am particularly interested in the first type, namely the community garden on vacant land that I call, "gardened vacant land". The gardened vacant land was the first kind of shared garden to appear in Paris (that is, in the Parisian region) and constitutes the main type of community garden in the region. Indeed, just under two-thirds of Parisian community gardens were developed on vacant lands and opened in 2000–2005 (see Fig. 14.1).

---

[4]This name equates to the English terms "green fingers" or "green thumb".

[5]In Paris, 80% of the land of community gardens belongs to the municipality. The remaining 20% are the property of social housing landlords or public bodies with industrial and commercial functions such as the SNCF group, France's national railway company.
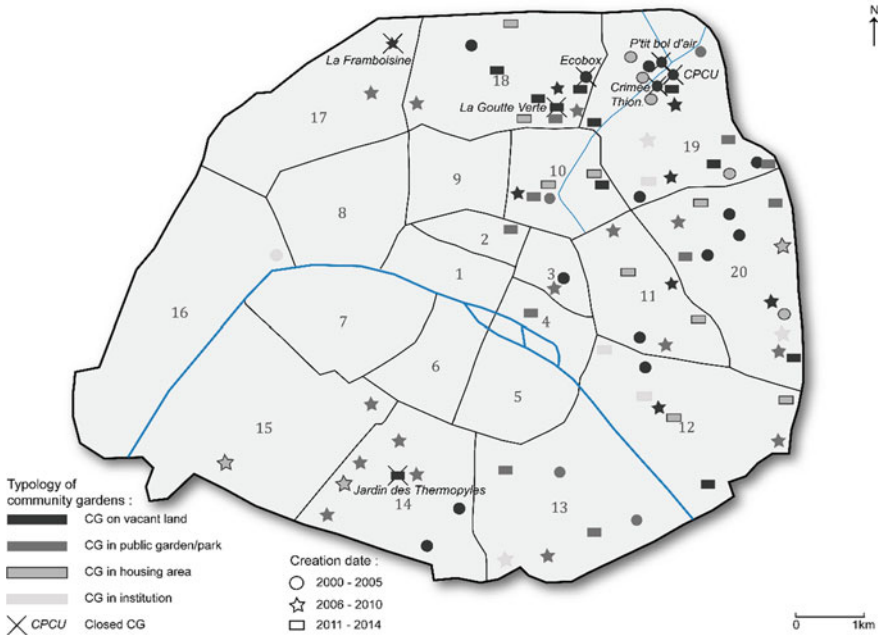
Fig. 14.1 Majority of Parisian community gardens developed on vacant lands

14.1.2 From Gardened Vacant Lands to Nomadic Gardens

I have defined gardened vacant land as an urban vacant land which is gardened by locals, with an occupation contract, waiting for permanent reassignment. The gardening of vacant lots is not a recent phenomenon. Since the mid-nineteenth century, gardening has been envisaged as the use of vacant lands to improve the domestic food supply (Weber 1998; Mundler et al. 2014), especially in times of crisis (Lawson 2004) such as at a time of world war (Miller 2013; Nilsen 2014). Today, environmental (Simon and Richard 2015), social and leisure functions have been added to the traditional role of the provision of food (Wegmuller and Duchemin 2010; Duchemin 2013). Nevertheless, the gardened vacant lots remain temporary, allowing for urban redevelopment (Drake and Lawson 2013) and in Paris especially, the development of housing and community facilities. This clearly illustrates the pre-eminence of exchange-value over use-value (Schmelzkopf 2002) and the consolidation of the historical association between vacant lots, gardening and a precarious temporality. If an urban project has already been planned when the lot is entrusted to the gardeners' association, the period of occupation is decided from the outset. The gardens often last longer than expected because of delays in work to develop infrastructures. Nevertheless, for the majority of Parisian gardened vacant lots, occupation agreements are signed for one year and renewable by tacit agreement for up to six years. Paris is a very dense city and does not extend very far

(*intra muros*—its surface area is 105 km^2). Demand for land and property is very high and there is very little wasteland. There is however a few areas awaiting short- or medium-term planning projects as well as waste ground unsuitable for building purposes.

The success of the Parisian community gardens has led to two parallel processes happening to gardened vacant lots: their perpetuation and their moving. On the one hand, some are sustained over time. Such is the case for the lots on which building is prohibited because of planning rules (for instance, a lot located between two buildings which are too close together) or for the lots which are, for a variety of reasons, (small-sized and steep slope areas, unstable soil), difficult to develop. These gardened vacant lots are generally protected as green spaces when local urban planning is reviewed (the last revision of Parisian Urban Planning Plan dates back to 2006). On the other hand, when the community garden is doomed to closure because of urban redevelopment projects, the City Hall may offer another lot to interested associations. The new land might then become a vacant lot again but could also be transformed into a permanent one. A community garden might, for example, be installed in a public garden or a park.

The case of "community gardens on the move" is incorporated within the framework of the upsurge of forms of urban agriculture that are no longer as closely connected to the land and the soil as they once were (resembling more the forms that are found in cities of the Global South—see Ranasinghe 2009). This situation is partly due to the revival of certain forms of breeding. For instance, bee-keepers may change the position of their hives, depending on the changing availability of rooftops prepared to host them. More subtly, but also more unusually, the same applies to "open field" crops. For instance, landless producers of mushrooms may set up the substratum for their production in a container. Both these old and emerging forms stem from what can be considered a certain category of practices called "mobile" urban agriculture (Demailly and Darly 2017). Since the late 2000s, several "gardens on the move" have developed in western metropolitan areas in Europe and the USA, in cities such as London, Berlin, Rome, Edinburgh and San Francisco.[6] Nevertheless, we can observe that the scientific work in this area from media reports and associative and institutional literature has been rare and patchy, and has focused on social cohesion and urban agriculture (Wunder 2013; Evers et al. 2014). Only one publication by Herman (Herman 2011) focuses on "mobile and nomadic gardens" with a review of temporary gardens in Warsaw, Poland and Boston, Massachusetts. This category is an eclectic group of gardens of the homeless ("transitory gardens", Balmori and Morton 1993), mobile and nomadic garden installations and nomadic community gardens.

The words "nomadic" and "garden" seem to be contradictory. In the academic literature, the garden is a place that acts as an anchor (Laroze 1990) and/or a place

---

[6]Cf. the websites of community gardens' associations:
   —in Rome (http://urban-matters.org/projectsbyindividuals/nomadic-agroculture)
   —in Edinburgh (https://grovecommunitygarden.wordpress.com/)
   —in San Francisco (http://nomadgardens.org).

for people without roots, such as workers, from the end of the nineteenth century (Dubost 1997). In much the same vein, since the end of 1970s, gardens which aimed to promote social and professional inclusion (Cerezuelle et al. 1990) and therapeutic gardens for patients (Rivasseau-Jonveaux et al. 2012) have grown. In his brief history of gardening, Gilles Clément explains that: "*The first garden is the one of the man who has chosen to stop wandering*" (Clément 2011, 12). The garden, as an appropriated and demarcated space, also offers the opportunity for a place to settle (Gagnol 2011)[7] and needs time to thrive. Thus, the "nomadic garden" brings together opposing ideas of the anchor and the long-term in relation to the garden, and moving and the short-term in relation to nomadism.

   In spite of these contradictions, I have opted to use the term "nomadic" for two main reasons. Firstly, it is the common term used by associations, unlike "mobile garden" which is most often used by designers, architects and artists more generally. I refer more specifically to the work of the Austrian artist Lois Weinberger (Weinberger 2009). The term "mobile garden" refers to movable miniature gardens and gardens in kit-form or else to means of transport transformed into gardens. Secondly, it is not only the gardens' mobility which interests me but also the fact that these gardens exist as temporary places of anchorage which are also moving. This movement allows the garden and the gardening activities to persist. In this sense, it refers to the definition of nomadism as a way of life that guarantees survival (Scholz 2001). Moreover, as with nomadic territory, the nomadic gardens' territories are discontinuous and plural (Retaillé 2014). Nevertheless, the network structure is chronological (a new spot replaces the previous one) and not spatial (the garden does not grow in multiple locations simultaneously). Finally, in nomadic space, it is not the territories which create the group identity but the social bond. This is also true of the nomadic garden, founded and managed as it is by an association.

14.1.3 Does the Nomadic Garden Reinvent the Urban Fabric of the City?

This chapter questions to what extent the nomadic community garden, as a new object territory, reconfigures the urban fabric. By urban fabric, I mean the interplay between social practice and forms of urbanity in line with Roncayolo's works (Roncayolo 1996; Noizet 2009). The study of urban fabric focuses here on specific spaces—gardened spaces—which are not built. My aim is not to highlight the urban fabric of the natural environment (Ernwein 2015) but to understand how the

---

[7]The Tuaregs in the North of Niger use the term *Kelifergan* meaning "people with fences" by way of metonymy using the "garden" to refer to sedentary people.

Parisian nomadic gardens emphasize new political and social discourses and practices relating to the temporary uses and moving of urban spaces. The translocation of gardens aims to foster the acceptance, and, paradoxically, the permanence, of temporary uses. However, this process is not always a smooth one and it questions the association of two frames of reference: the sustainable city and the neoliberal city. Following the presentation of my fields of study and research methods, my results will be structured around two points: the emergence of a green "intermittent city" and the resistances and limitations relating to this new order. I will finish with a discussion which focuses on nomadic gardens as possible emblematic figures of the sustainable city and/or the neoliberal city.

14.1.4   Fields of Study and Research Methods

In my thesis, I studied forty-eight gardened vacant lands in the north-east of the Parisian region (Île-de-France). Thirty-three are located in Paris and fifteen in other areas that I studied. Indeed, the community garden is a real metropolitan innovation, which explains the disproportionate under-representation in the surrounding municipalities.

During the course of my Ph.D. research, seven community gardens closed (see Fig. 14.1); three of them returned or are going to return to the initial site after an interruption of some activities: *Le Jardin des Thermopyles* (14th arrondissement), *Crimée-Thionville* (19th arrondissement) and *La Framboisine* (17th arrondissement). *Charmante Petite Campagne Urbaine—CPCU* (19th arrondissement) is a distinctive case because the garden was first moved to the *Parc de la Villette*—the biggest park of the French capital located on the 19th arrondissement—before returning to its original site. The three others, *P'tit bol d'air* (19th arrondissement), *Ecobox* (18th arrondissement), *La Goutte Verte* (18th arrondissement), were relocated less than five kilometres from the previous sites. This chapter relies on the analysis of these latter four nomadic gardens. *P'tit bol d'Air* was displaced once; *Charmante Petite Campagne Urbaine* and *Ecobox* moved twice and *La Goutte Verte* four times. The community gardens studied demonstrates the different types of nomadism in relation to the users' associations and their objectives. In the case of *P'tit bol d'air*, the users accepted the move in order to ensure the continued existence of the garden but asked that the new location be nearby. This is an example of proximity nomadism. *Charmante Petite Campagne Urbaine* returned to the first site after being moved to the *Parc de la Villette,* representing a case of round nomadism. *Ecobox* was set up in a redevelopment and was designed to be temporary. Nevertheless, the association tried and succeeded in negotiating another site with the City Hall (again, in a renewal area). *Ecobox* is thus typical of

Table 14.1 Studied gardens and the nomadism features

Name of nomadic garden and date of creation	Current location	Number of moves (year)	Type of nomadism
P'tit bol d'air 2004	6 rue de l'Ourcq 75019	1 (2011)	Proximity nomadism
Charmante Petite Campagne Urbaine 2003	36 quai de la Marne 75019	2 (2010, 2016) (2nd is expected for spring 2017)	Round nomadism
Ecobox 2002	7 impasse de la Chapelle 75018	2 (2005, 2009)	Convenience nomadism
La Goutte Verte 2006	4 rue Cavé 75018	4 (2009, 2010, 2011, 2012)	Hypernomadism

convenience nomadism. Finally, the mobility of the garden was an objective of the first association which managed *La Goutte Verte*. In spite of the change of association, the garden has continued to move several times; it is an example of hypernomadism. The table below summarizes the current locations, number of moves and types of nomadism of each of the studied gardens (See Table 14.1).

The methodological structure of my thesis is composed of three sociological investigation techniques: interview, questionnaire and observation, which help in understanding the practices and viewpoints of all the parties involved in the community gardens (institutional players including councillors, administrative officers, owners, associations and users). The questionnaire provided me with information about the practices of the community garden users and their socio-economic profiles. The database consisted of 130 questionnaires submitted between July 2010 and October 2011 in sixteen Parisian community gardens (it represents approximately 20% of the members of each garden, its most active members). Fourteen users of *Ecobox* and *Charmante Petite Campagne Urbaine* answered the survey. Forty-three interviews were then carried out between September 2011 and May 2013, providing me with information clarifying the co-production, objectives and impacts of the community gardens. The analysis of these interviews was entirely qualitative and focused on a comparison of comments made. Thirty interviews were conducted in Paris with key officials in the relevant institutions including seven users. Three of them were members of the nomadic gardens *P'tit bol d'air*, *La Goutte Verte* and *Charmante Petite Campagne Urbaine*. The number of questionnaires and interviews carried out with those players involved in nomadic gardens certainly remains low compared to the total survey. It is for this reason that this chapter should be read as an exploratory work which aims to propose avenues of reflection and the stimulation of academic debate.

14.2 The Emergence of an "Intermittent Green City": From Theory to Reality

Since the 1990s in Paris, the City has supported and fostered temporary events such as the short-lived garden located in the City Hall esplanade, or the *Paris-Plage*s,[8] year on year. The rise in these kinds of events confirms the intertwining of events initiatives and urban planning schemes, which highlights the emergence of a temporary urbanism. The aim of these events is to redesign some public urban spaces and to redefine their uses. In the short term, temporary urbanism would have positive effects thanks to the event. In the medium term, it would favour the regeneration of some urban areas. Finally, in the long term, it would contribute to urban redevelopment and foster social bonding (Pradel 2012). In the scientific literature, a number of studies have focused on temporary uses (rather than focusing specifically on temporary urbanism) as an opportunity for the contemporary city: "*Temporary uses might be part of a solution to the challenges that are facing cities as they struggle to adapt to the conditions of the twenty-first century*" (Bishop and Williams 2012, 4).

14.2.1 The Nomadic Garden as Result of Transitory Urbanism

The example of the Parisian community gardens suggests that temporary uses are a part of a transitory, rather than a temporary, urbanism. Temporary urbanism has to do with short-term events (generally lasting a maximum of two months), whereas transitory urbanism relates to the development of land that is awaiting permanent reassignment. Although the lifespan may vary, it rarely lasts less than one year. Transitory urbanism is the institutionalized form of pioneer experiences stemming from occupations of vacant lands and sites without a permit; transitory projects have multiplied in the Parisian region since the early 2010s (Diguet et al. 2017). Several studies have emphasized the institutionalization process of these occupations in several cities in France and in Europe and focused on its cultural and artistic dimensions (Groth and Corijn 2005; Janin and Andres 2008). The analysis of cultural occupations of "indeterminate spaces" and building on wastelands suggests three main conclusions: that localization is crucial for the appropriation process; that project initiators are civil society actors (in general artists and, secondarily, resident associations); that the mix of stakeholders involved in these projects leads to new forms of urban space production. While the temporary uses of vacant lands

---

[8]Every year since 2011, the municipality of Paris has set a short-lived garden up in late spring. *Paris-Plages* (Paris Beaches) is a plan run by the City of Paris that creates temporary artificial beaches each summer since 2002 along the river Seine in the centre of Paris, and, since 2007, along the *Bassin de la Villette* in the north-east of Paris.

were widely ignored by political actors for some time, they were gradually integrated into urban development policies in the early 2000s building on a "creative city" agenda (Peck 2005). For this very reason, it is important to distinguish between a diverse set of practices known as "temporary uses" and a promotional policy discourse based on these temporary uses (O'Calagghan and Lawton 2016), as is reflected in the case of Berlin, popularized as a model of a creative city (Colomb 2012) which features "tactical urbanism" (Mould 2014). Some authors mention cases in which cultural temporary uses have moved into the city. In the typology of Panu Lehtovuori and Sampo Ruoppila's temporary uses, we can note the inclusion of the category "migrant temporary use" (Lehtovuori and Ruoppila 2012).

It is clear that the nomadic garden, and temporary gardening and the greening of vacant lands more generally, does not refer to an urban model but rather to the wider sustainable city. Indeed, the nomadic garden meets the general principles of the Aalborg charter adopted in 1994 by participants at the First European Conference on Sustainable Cities and Towns. In fact, the nomadic garden contributes to promoting citizen participation and social justice and protecting natural capital, as well as representing opportunities for vacant lands awaiting permanent reassignment in the context of a compact city. Finally, the development of nomadic gardens in Paris could question the emergence of a new order, inciting us to look beyond the "intermittent city" (Farone and Sarti 2008), to the possibility of a green intermittent city. However, there is growing recognition and development of urban temporary uses, including gardening temporary uses, from the City of Paris. Transitory urbanism is becoming a new form of public action which leads to a rethinking of urban temporalities and spaces to benefit of city dwellers. One councillor explained during an interview that the move of gardened vacant lots facilitates their acceptance and would allow for a rise in urban gardened spaces, as requested by the local inhabitants:

"[…] It is perhaps easier than to say to a collective, to an association "well, here you have a garden, it is temporary, you will have to leave and your project will stop there", if we say "you will have to leave but you could continue your project elsewhere", then it becomes easier and you can make gardens everywhere." (Councillor of Paris, interview with the author, September 2012).

For users, the nomadism of gardens has an impact on gardened structures which must be adapted to allow for mobility. Such is already the case for *Ecobox* and *La Goutte Verte* which were designed to be temporary and mobile. The collective of architects who created *Ecobox* in 2002 proposed a structure on pallets which could be dismantled and thus moved. For *La Goutte Verte*, mobility was an objective of the project created in 2006 by the association *Semipublic* and led to the garden being cultivated solely with crates. It should be noted that the adoption of crates in gardened vacant lots also offers an answer to the issue of potential or existing soil pollution (De Kimpe and Morel 2000; Prasad and Nazareth 2000; Schwartz 2013). It is clear that the possible development of nomadic gardens leads to technical innovations to support the creation of temporary and entirely mobile devices (see Vick and Poe 2011).

Finally, nomadic gardens are a part of transitory urbanism as a new form of public action, providing an answer to issues of the sustainable city. It implies a rethinking of urban temporalities and spaces but also encourages gardeners to develop technical innovations adapted to mobility. Nevertheless, the political aim of the development of nomadic gardens is not only to increase urban gardened spaces. Furthermore, from the users' point of view, the moving of gardens also faces technical challenges and the collective does not always survive the closure of the original site.

14.2.2   Limits of and Resistance to the Nomadism of Gardens

For the Parisian municipality, the purpose of the nomadism of gardens is not only to increase urban gardened spaces. The municipality is the main owner of gardened vacant lots. By providing new land to the associations, it increases the probability of the obligations under the occupation agreement being honoured. In brief, the translocation of the garden allows the project to last and so to avoid any conflicts relating to planned closure, as this member of the garden *Charmante Petite Campagne Urbaine* explains:

"[…] the land, you've got it for one year or two or three and then, suddenly, when you feel good etc. … just like that it's over and they say "we warned you but you're going to another place anyway" (User, Interview with the author, April 2012).

Moreover, the moving of a garden is a difficult task. The gardeners underline the technical difficulties of displacement, even for gardens like *La Goutte Verte* which was cultivated entirely in crates in order to facilitate the move. One user explains the gap between the rhetoric around the nomadic garden and the practical reality:

"Basically their idea was to create a mobile garden, to plant it in crates and to … the day of the move, to put wheels on the crates and then to move. Which is, which was a great idea as such, but which … in terms of logistics was totally impossible to actually do because it's such a huge weight, well … it's … we set, we set up a completely different thing in terms of … of moving, it's a lorry with a skip […] but certainly not the little wheels that you buy at the local hardware shop and put onto crates [laughs]."(User, Interview with the author, April 2012).

All of the nomadic gardens' users regret losing their plants in the process, and some are unable to conceal their disappointment at being confronted with some characteristics of the "new" garden felt to be crucial (location, size, exposure, quality of soil) which are sub-standard. The displacement represents a constraint for users, going against a political discourse which insists on the development of the nomadic garden as a solution to satisfy the city dwellers' demands for urban gardening.
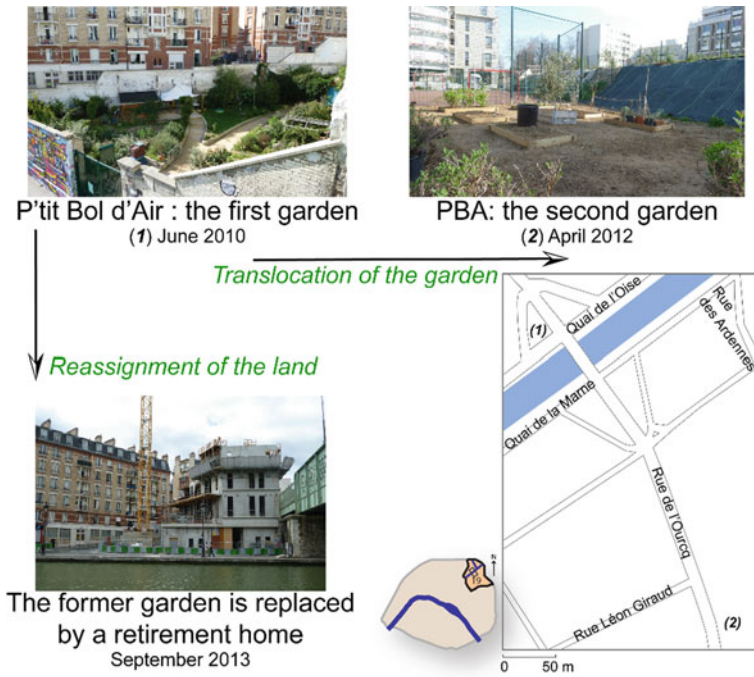
Fig. 14.2 Trajectory of *P'tit bol d'air*

The questionnaire submitted in sixteen gardened vacant lots demonstrated that three-quarters of respondents expressed an interest in joining another community garden when their garden is closed. However, more than half were undecided as to whether they would continue their involvement in the proposed replacement garden. If nomadism allows for the continuation of gardening activities, these last responses show that the continuity of members committing to the association is not guaranteed. In the four gardens studied, we noticed that only the most engaged users continued being involved in the relocated collective garden. Moreover, we identified two key factors which contributed to a sustained commitment. The first is the proximity to the former site. The active members of *Charmante Petite Campagne Urbaine*, created in 2003 and closed in the winter 2010, for example, remained mobilized to reclaim a piece of land following the end of a housing construction program (although some of the plants were planted in a lot on the *Parc de la Villette*). The second factor is the balance between the features of the old and the new site. In the case of *P'tit bol d'air*, some users did not extend their membership because they considered the new site to be too small (the garden area decreased from 580 to 200 m^2) and they felt uncomfortable with the new site being adjacent to a basketball court and the railroad of the *Petite Ceinture* (see Fig. 14.2).

The nomadism of community gardens highlights new forms of urban production which rely on temporary uses and mobility. The technical and social difficulties of

moving suggest that users suffer from these aspects of nomadism and lead us to look to other reasons for the emergence of the green intermittent city.

14.3 Discussion

Does the green intermittent city refer to the sustainable city or the neoliberal city? We stressed above that nomadic gardens contribute to the principles of the sustainable city by promoting citizen participation and social justice, protecting natural capital and representing opportunities for vacant lands awaiting permanent reassignment in the context of a compact city. Furthermore, nomadic gardens may (also) be considered as elements of the neoliberal city (Brenner and Theodore 2002; Peck and Tickell 2002; Harvey 2005).

Over the last ten years, there has been criticism of academic research on community gardens that is seen to overstate their emancipatory role in social, economic and political terms. Some works have shown their role in the ongoing processes of segregation and gentrification of inner city areas (Gould and Lewis 2012; Marche 2015) as well as the persistence and even the reinforcement of urban inequalities and injustices (Reynolds 2014). Community gardening has more generally been considered as a reflection of the neoliberal city for two main reasons (Ernwein 2015). Firstly, the community garden is a tool of the entrepreneurial city because these forms of nature are showcases of urban marketing campaigns in a global context of urban competition (Méliani and Arnould 2012). In this sense, urban agriculture is incorporated into urban development policies in order to generate renewed images of the city (McClintock 2014; Tornaghi 2014). Secondly, these projects rely on the mobilization of volunteers (Rosol 2012) which contributes to the fashioning of neoliberal subjectivities based on autonomy and self-entrepreneurship (Pudup 2008). More specifically, the promotion of gardened vacant lots as low-cost solutions to urban regeneration and reorganization in the context of "austerity urbanism" (Peck 2012; Pratt and Hutton 2013) has negative impacts including land speculation. Such impacts attest to the commodification of urban temporalities and spaces (vacant lands awaiting redevelopment) and are part of a process of financialisation of urban areas which began in the 1980s (Nappi-Choulet 2012) and of the neoliberalization of "nature" (Bakker 2005; Castree 2003; Ernwein 2015). This process could be strengthened by the nomadism of gardened vacant lots. While circulation and flexibility are central values of neoliberalism (Harvey 1985), nomadic gardens are evidence of the spread of the mobility of urban spaces and users' flexibility adapted to the spatial and temporal reconfigurations of urban production.

14.4 Conclusion

The study of the Parisian nomadic community garden as the figure of a green "intermittent city" emphasizes new political practices and discourses. Indeed, the nomadic garden shows on the one hand the recognition and development of urban temporary uses and urban temporary spaces, and on the other their paradoxical permanence brought about by their moving. The nomadic garden is a part of transitory urbanism as a new form of public action, which implies a rethinking of urban temporalities and spaces. The move of community gardens also impacts social practices. This particularly concerns such issues as technical innovations, ways of territorial appropriation by users and their continued commitment to the association.

Indeed, a gap exists between rhetorical discourses about "gardens on the move" and their reality. The gardeners underline the technical difficulties of displacement, and their collectives do not always survive the closure of the original site. For the City of Paris, the translocation of the gardens allows them to avoid any conflict relating to planned closure and demonstrates the profitability of urban spaces and temporalities in benefiting urban redevelopment. In this sense, the nomadic gardens are a part of an entrepreneurial or neoliberal vision of the city, which relies on flexibility and circulation.

Finally, this exploratory work stresses the difficulty of going beyond binary approaches (anchor/circulation; continuity/discontinuity; temporary/sustainable; sustainable city/neoliberal city) in order to grasp the realities of the contemporaneous urban fabric, pointing to the need to set up a hybrid analytical framework.

References

Aubry C, Pourias J (2013) L'agriculture urbaine fait déjà partie du «métabolisme urbain». Demeter 2013:135–155

Bakker K (2005) Neoliberalizing nature? Market environmentalism in water supply in England and Wales. Ann Assoc Am Geogr 95(3):542–565

Balmori D, Morton M (1993) Transitory gardens, uprooted lives. Yale University Press, New Haven, London

Baudelet L, Basset F, Le Roy A (2008) Jardins partagés : utopie, écologie, conseils pratiques. Terre vivante, Mens

Baudry S (2010) Cultiver son jardin, s'inscrire dans la ville: approche anthropologique des community gardens de New York City. Dissertation, University Paris Diderot Paris VII

Bishop P, Williams L (2012) The Temporary City. Routledge, New York

Bourdeau-Lepage L, Vidal R (2013) Nature urbaine en débat: à quelle demande sociale répond la nature en ville? Déméter, 195–210

Brenner N, Theodore N (2002) Spaces of neoliberalism: urban restructuring in North America and Western Europe. Blackwell, Malden

Cabedoce B, Pierson P (1996) Cent ans d'histoire des jardins ouvriers, 1896–1996: la Ligue française du coin de terre et du foyer. Créaphis, Grane

Castree N (2003) Commodifying what nature? Prog Hum Geogr 27(3):273–297

Cerezuelle D, Le Formal Y, Roca P-J (1990) Les Jardins collectifs: un outil d'insertion. Institut régional du travail social Aquitaine

Certomà C, Tornaghi C (2015) Political gardening. Transforming cities and political agency. Local Environ 20(10):1113–1131

Clément G (2011) Une brève histoire du jardin. L'œil neuf, Paris

Colomb C (2012) Pushing the urban frontier: temporary uses of space, city marketing, and the creative city discourse in 2000s Berlin. J Urban Aff 34(2):131–152

De Kimpe C, Morel J-L (2000) Urban soil management: a growing concern. Soil Sci 165(1):31–40

Demailly K-E (2014) Jardiner les vacants. Fabrique, gouvernance et dynamiques sociales des vacants urbains jardinés du nord-est de l'Île-de-France. Dissertation, University Paris 1 Panthéon Sorbonne

Demailly K-E, Darly S (2017) Urban agriculture on the move. The routes of temporary gardening in the neoliberal city: the case of Paris (France). ACME Int J Crit Geogr 16(2):332–362. https://www.acme-journal.org/index.php/acme/article/view/1384/1262

Den-Hartigh C (2013) Jardins collectifs urbains: parcours des innovations potagères et sociales. Eduagri éditions, Dijon

Diguet C, Zeiger P, Cocquière A (2017) L'urbanisme transitoire: aménager autrement. Note rapide de l'Institut d'Aménagement et d'Urbanisme de la Région Île-de-France (741)

Drake L, Lawson L (2013) Validating verdancy or vacancy? The relationship of community gardens and vacant lands in the U.S. Cities 40:133–142

Dubost F (1997) Les jardins ordinaires. Harmattan, Paris

Dubost F (2005) Des jardins partagés dans Paris. Polia, revue de l'art des jardins 4:109–118

Duchemin E (ed) (2013) Agriculture urbaine: aménager et nourrir la ville. Editions VertigO, Montréal

Eizenberg E (2016) From the ground up: community gardens in New York City and the politics of spatial transformation. Routledge, New York, London

Ernwein M (2015) Jardiner la ville néolibérale: la fabrique urbaine de la nature. Dissertation, University of Genève

Evers A, Ewert B, Brandsen T (eds) (2014) Social innovations for social cohesion. Transnational patterns and approaches from 20 European Cities. Giessen, Nijmegen

Farone C, Sarti A (2008) Intermittent cities, on waiting spaces and how to inhabit transforming cities. Archit Design 78(1):40–45

Gagnol L (2011) Le territoire peut-il être nomade ? Espace et pouvoir au sein des sociétés fluides et mobiles. L'Information géographique 75(1):86–97

Gould K, Lewis T (2012) The environmental injustice of green gentrification. In: DeSena J, Shortell T (eds) The World in Brooklyn: gentrification, immigration, and ethnic politics in a global city. Lexington Books, Plymouth, pp 113–146

Groth J, Corijn E (2005) Reclaiming Urbanity: indeterminate spaces, informal actors and Urban Agenda Setting. Urban Studies 42(3):503–526

Harvey D (1985) The Urbanization of Capital: Studies in the History and Theory of Capitalist Urbanization. Johns Hopkins University Press, Maryland

Harvey D (2005) A brief history of neoliberalism. Oxford University Press, Oxford

Herman K (2011) Temporary, mobile and nomadic gardens in urban space. Paper presenter at the EFLA Regional Congress

Hou J (2010) Insurgent public space: guerrilla urbanism and the remaking of contemporary cities. Taylor & Francis, New York

Janin C, Andres L (2008) Les friches: espaces en marge ou marges de manœuvre pour l'aménagement des territoires ? Annales de géographie 663:62–81

Larbey V (2014) Jardins et jardiniers: les pieds dans la terre, la tête dans les nuages. Une anthropologie du potager. Dissertation, University Paul Valéry—Montpellier III

Laroze C (1990) Une histoire sensuelle des jardins. Editions Olivier Orban, Paris

Lawson L (2004) The planner in the garden: a historical view into the relationship between planning and community gardens. J Plan Hist 3(2):151–176

Lawson L (2005) City bountiful: a Century of Community Gardening in America. University of California Press, Berkeley

Lehtovuori P, Ruoppila S (2012) Temporary uses as means of experimental urban planning. Serb Archit J 1(4):29–54

Mairie de Paris (2005) Jardins partagés, programme Main Verte. Mairie de Paris, Paris

Mairie de Paris (2007) Les jardins partagés, programme Main Verte. Mairie de Paris, Paris

Mairie de Paris (2011) Le jardins partagés, programme Main Verte. Mairie de Paris, Paris

Marche G (2015) What can urban gardening really do about gentrification? A case-study of three San Francisco community gardens. Eur J Am Stud 10(3) http://ejas.revues.org/11316. Accessed 28 Jun 2017

McClintock N (2014) Radical, reformist, and garden-variety neoliberal: coming to terms with urban agriculture's contradictions. Local Environ 19(2):147–171

Méliani I, Arnould P (2012) Marchands de nature » : 20 ans de communication institutionnelle dans la métropole lyonnaise de 1989 à 2009. VertigO 12(2) http://vertigo.revues.org/12960. Accessed 28 Jun 2017

Mestdagh L (2015) Des jardinier.e.s «partagé.e.s» entre discours et pratiques: du lien social à l'entre-soi. Dissertation, University Sorbonne Nouvelle—Paris III

Miller W (2013) Allotments and alternative food networks: the case of Plymouth. University of Plymouth, Plymouth

Mould O (2014) Tactical urbanism: the new vernacular of the creative city. Geogr Compass 8 (8):529–539

Mundler P et al (2014) Tous agriculteurs? L'agriculture urbaine et ses frontières. Géocarrefour 89 (1–2):53–63

Nappi-Choulet I (2012) Esquisse d'une histoire de la financiarisation immobilière et urbaine. Urbanisme 348:42–45

Nilsen M (2014) The working man's green space. Allotment gardens in England, France and Germany, 1870–1919. University of Virginia Press, Charlottesville

Noizet H (2009) Fabrique urbaine: a new concept in urban history and morphology. Urban Morphol 13(1):55–66

O'Callaghan C, Lawton P (2016) Temporary solutions? Vacant space policy and strategies for re-use in Dublin. Irish Geogr 48(1):69–87

Peck J (2005) Struggling with the creative class. Int J Urban Reg Res 29:740–770

Peck J (2012) Austerity urbanism: American cities under extreme economy. City 16(6):626–655

Peck J, Tickell A (2002) Neoliberalizing space. Antipode 34(3):380–404

Pourias J (2014) Production alimentaire et pratiques culturales en agriculture urbaine. Analyse agronomique de la fonction alimentaire des jardins associatifs urbains à Paris et Montréal. Dissertation, AgroParisTech and University of Québec

Pradel B (2012) L'urbanisme temporaire: signifier les «espaces-enjeux» pour réédifier la ville. In: Bonny Y et al. Espaces de vie, espaces enjeux. Presses Universitaires des Rennes, Rennes, pp 245–256

Prasad L, Nazareth B (2000) Contamination of allotment soil with lead: managing potential risks to health. J Public Health 22(4):525–530

Pratt A, Hutton T (2013) Reconceptualising the relationship between the creative economy and the city: Learning from the financial crisis. Cities 33:86–95

Prédine E (2009) Des jardins en partage: échange avec Jean-Paul Collaert. Rue de l'échiquier, Paris

Pudup M (2008) It takes a garden: Cultivating citizen-subjects in organized garden projects. Geoforum 39(3):1228–1240

Ranasinghe T (2009) Manual of low/no-space agriculture cum family business gardens. RUAF Fondation, Sri Lanka

Retaillé D (2014) De l'espace nomade à l'espace mobile en passant par l'espace du contrat: une expérience théorique. Can J African Stud/ Revue canadienne des études africaines 48(1):13–28

Reynolds K (2014) Disparity despite diversity: social injustice in New York City's urban agriculture system. Antipode 47(1):240–259

Rivasseau-Jonveaux T et al (2012) Les jardins thérapeutiques: recommandations et critères de conception. Gériatrie et Psychologie Neuropsychiatrie du Vieillissement 10(3):245–253

Roncayolo M (1996) Les grammaires d'une ville. Essai sur la genèse des structures urbaines à Marseille, EHESS, Paris

Rosol M (2012) Community volunteering as neoliberal strategy? Green space production in Berlin. Antipode 44(1):239–257

Scheromm P (2013) Les jardins collectifs, entre nature et agriculture. *Métropolitiques,* http://www.metropolitiques.eu/Les-jardins-collectifs-entre.html. Accessed 28 June 2017

Schmelzkopf K (1995) Urban community gardens as contested space. Geogr Rev 85(3):364–381

Schmelzkopf K (2002) Incommensurability, land use, and the right to space: community gardens in New York City. Urban Geography 23(4):323–343

Scholz F (2001) Nomads/nomadism in history In: International encyclopedia of the social and behavioral sciences. Available via E-books-University of Fribourg. https://www.unifr.ch/bp2/fr/recherches/b_elec/e-books_soc. Accessed 15 Nov 2016

Schwartz C (2013) Les sols de jardins, supports d'une agriculture urbaine intensive. VertigO Hors-série 15 http://vertigo.revues.org/12858. Accessed 28 Jun 2017

Simon L, Raymond R (2015) Les espaces urbains: un système complexe des territoires d'expériences pour la conservation de la biodiversité In: Mathevet R, Godet L Pour une géographie de la conservation. Biodiversités, natures et sociétés. L'Harmattan, Paris, pp 154–181

Smith C, Kurtz H (2003) Community gardens and politics of scale in New York City. Geogr Rev 93(2):193–212

Torghani C (2014) Critical geography of urban agriculture. Prog Hum Geogr 38(4):551–567

Vick J, Poe J (2011) Safe container gardening practice guide# 28. University of Louisville, Louisville

Weber F (1998) L'honneur des jardiniers: les potagers dans la France du XXe siècle. Belin, Paris

Wegmuller F, Duchemin E (2010) Multifonctionnalité de l'agriculture urbaine à Montréal: étude des discours au sein du programme des jardins communautaires, Vertigo 10(2) http://vertigo.revues.org/10445. Accessed 28 Jun 2017

Weinberger L (2009) The mobile garden. Damiani, Bologna

Wunder S (2013) Learning for sustainable agriculture: urban gardening in Berlin. Solinsa, Berlin

Zask J (2016) La démocratie aux champs. Du jardin d'Éden aux jardins partagés, comment l'agriculture cultive les valeurs démocratiques. La Découverte, Paris

Author Biography

Kaduna-Eve Demailly is doctor of human geography of University Paris 1 Panthéon-Sorbonne. Her work focuses on the role (social, political and ecological) of collective gardening projects on the metropolitan fabric. Actually postdoctorate of the LABEX "Urban Futures" affiliated to the University Paris-Est, its researches are more broadly interested in objects of public policies on sustainable development (collective garden and walking).

Chapter 15
Shared Gardens in Strasbourg: Limited Sharing Spaces

Kenjiro Muramatsu

Abstract The history of French shared gardens is inseparably linked to social problems resurging at the end of the twentieth century such as precariousness and social exclusion, as the allotment gardens were with the poverty problem at the end of the nineteenth century. But this aspect tends to be forgotten by many studies on shared gardens rather focused on their environmental aspects. Yet the dynamics of shared gardens seem to be complex regarding this double social and ecological questioning. In this study, we investigated the shared gardens in Strasbourg (France) in order to bring out the diversity and complexity of these gardens according to their local contexts. Then, we suggest a typology of these gardens with qualitative analysis on their possibilities and limits. Three types of gardens emerge: 1 gardens "at the foot of buildings" intended for disadvantaged population groups which are part of the social and urban policy; 2 gardens "in town" organized by autonomous associations of gardeners for the purpose of greening and user-friendliness; 3 hybrid gardens which combine these two forms in an original way. Our investigation combines an ethnographical survey conducted in a shared garden and in-depth interviews conducted with organizers of several gardens. We supplemented our surveys by documentation on quantitative data on all existing gardens in Strasbourg. We finally highlight the limited nature of sharing practices in these gardens regarding their social and territorial conditions and the concrete commitments of actors in the space and over time to improve their practices.

Keywords Shared garden · Social inequality · Urban policy · Green infrastructure Commitment · Living together

K. Muramatsu (✉)
Department of Japanese Studies, University of Strasbourg, Strasbourg, France
e-mail: muramatsu@unistra.fr

15.1   Introduction

The politics of the French shared gardens joins in a double social and ecological questioning. But these two dimensions are not always compatible and their articulation is not evident. We considered this dilemma of "limited sharing" by examining the collective and local dynamics involved in the politics of the shared gardens in Strasbourg. Our monographic and sociological case studies carrying on various types of gardens attempt at first to analyze, by a typological approach, operating modes and socioeconomic and territorial conditions of each garden. Then, we qualitatively analyze, with this typology, contrastive developments of representative gardens of each type. By these analyses, we try to show the possibilities and the limits of these shared gardens in their social and ecological dimensions.

Our research method is qualitative and supplemented by quantitative data: We led at first an investigation by participatory observation as a member of a shared garden in Strasbourg that of the district of *Gare* (Station), from the summer 2012 to the spring 2015 (Muramatsu 2016a). At the same time, we visited a dozen other gardens in Strasbourg and conducted in-depth interviews with their leaders and facilitators (eight interviewees). These inquiries were supplemented and updated by documentation on historical and statistical data concerning the localities and initiatives of the various existing gardens of Strasbourg.

15.2   Social and Ecological Issues Upstream of the French Shared Gardens

We previously underlined (Muramatsu 2012a, 2015; see also Dubost 1997, pp. 17–35) the importance of the social question of poverty and its related social policies as regards the history of the French shared gardens, such as the allotment gardens called in French, "Workers' gardens (*Jardins ouvriers*)," from which the shared gardens partially derived in the 1980s, and which were the fruit of the Catholic and solidarity movement tackling the issue of workers' housing policy at the end of the nineteenth century. The beginning of shared gardens in France dates back at least to the project called "allotment gardens for social development" carried in Bordeaux by the association "Gardens of today (*Jardins d'aujourd'hui*)" in the middle of the 1980s. This project was supported by the Urban Policy (*Politique de la Ville*)[1] in association with a sociological research program on the non-monetary work and the

---

[1]The French "*Politique de la Ville*" aims at reducing the social inequality within cities by public investment in the disadvantaged districts.

social development.[2] The purpose of this project was to tackle the problem of growing precariousness among the inhabitants of social housing affected by mass unemployment by offering them a means of self-production as "*a tool of social development, and socioeconomic and cultural prevention in disadvantaged districts* (Ibid., p. 11)." It is also necessary to underline that the approach of this project consisted of renovating the politics of the allotment gardens by a break with the traditional and paternalistic vision by a participative approach. Daniel Cérézuelle, sociologist and collaborator of the project, underlined then the loss of "*father figure*" and the value of work which structured formerly the labor life (Ibid., p. 13). Hence, the need to respond to various needs which were not only economic, but concerned about the education of young people, the support for single mothers and fathers affected by unemployment and precariousness.

This movement of the renewal of the allotment gardens was linked to the Urban Policy which was a new form of social intervention. It is also necessary to mention the movement of the social inclusion gardens (*jardins d'insertion*) federated by a national network called "Réseau Cocagne" from the beginning of the 1990s which employs the organic farming as a way of social integration by the work (Réseau Cocagne 2009; Muramatsu 2012b, 2014, 2015, 2016b). These two forms of gardening are closely articulated in the new methods of social intervention appeared by the beginning of the 1980s in response to the arising problems of the new poverty and the social exclusion in France.[3]

Without continuing further on these historical aspects, we would underline this anchorage of the French collective gardens in the social questions which tend to be forgotten or to be put aside in a large number of recent studies on the urban or community gardens. We especially need to keep our distance with the utopian or ideological discourses which attempt to promote the urban or community gardens by placing them either in the linear and international movement of "community gardens" taking root in the American hippy movement of the 1970s, or in also linear evolution of the environmental movement advocating biodiversity conservation. If we have put forward the social question as a dominant factor in the development of the French shared gardens, it does not mean that the influence of these international movements is unimportant. Indeed, the initiators of the French

---

[2]Cérézuelle, Jardins d'Aujourd'hui (1999, pp. 3–4). This association multiplied its experiences of monitoring of gardens intended for a public with social problems, in particular by means of a national funding created in 1988 for the Urban Policy with a number of local authorities and social services in France.

[3]The new social professions, namely those of the Urban Policy and the "*insertion* (inclusion)," appeared at the beginning of the 1980s by adopting a territorial and transverse approach carrying on the living conditions of the people at multiple levels instead of a clinical approach limited to the public unsuitable for working (Estèbe 1998).

shared gardens explicitly referred to these movements from the 1990s.[4] After this period let us say "pioneer" of the French shared gardens, the explicit reference to the notion of biodiversity and green infrastructure appears to the end of the 1990s, with the naming of "shared garden (*jardin partagé*)" in a series of conferences organized by a French network of collective and shared gardens[5]. Then, the project of "shared garden" obtains its popularity by joining the policy of "green infrastructure (*trame verte*)." The brochure of the Program "Green hand (*Main verte*)" of the Paris City defines a shared garden as following: "*it is a garden of neighborhoods livened up by an association which proposes collective activities of gardening developing the education, the social inclusion and the creation of a social bond. It finds its place either on a ground belonging to the City of Paris, or on the ground made available for it. By favoring the biodiversity, it participates in the extension of the green infrastructure* (City of Paris 2010)." We find there a double social and ecological vocation attributed to the shared gardens at the public policies level.

Furthermore, as regards the operating mode of the French shared gardens, we underline the weight of the local public policy which lends grounds to associations and makes initial constructions for the implementation of gardens. So, in the case of Paris, the management of the shared gardens is framed by the Direction of the Green spaces and the Environment of the City (Ibid.). This fact is explicitly bound to a distrust expressed by the politicians on the operating mode of the traditional allotment gardens judged "*too personal*" and on the short-lived character of the associations.[6]

It is the same in Strasbourg. The installation of the first shared gardens was "scheduled" in 2004 by a collaboration between a private organization of training of eco-councilors (*Eco-Conseil*), which is also a correspondent of the network "*Jardin dans tous ses états,*" and the municipal direction of town planning aiming at the renovation of sensitive areas as eco-districts called "garden districts" (Ziegler 2011;

---

[4]For example, the person in charge of the movement of community gardens in New York "Green Guerrilla" was invited in a conference which took place in 1997 in Lille to form the French network of collective and shared gardens called "Jardins dans tous ses états" (Chantier Nature 1997, see below). We also know that the networking of the Belgian "solidary" gardens grouping the gardens for social inclusion and shared or community gardens was organized during the years 2004–2008 on the initiative of a Quebecker who had been one of the founders of the first community gardens of Quebec City in the 1980s (Muramatsu 2012a).

[5]This network is called "*Jardin dans tous ses états* (Garden in all its states)" livened up by the same activists of the Association "Gardens of today" of Bordeaux and facilitators of shared gardens of the other regions (Lille, Lyon, Paris) and supported by the Foundation of France, a philanthropic foundation (Chantier Nature, op.cit.; Jardin dans tous ses états 2000).

[6]This point is obvious in following statements given by an ecologist councilor and a deputy mayor of Paris in charge of Parks and Gardens in a conference on shared gardens of Paris in 2005: "*When A.L., project leader to my cabinet, told me it is necessary to make shared gardens I answered 'no'. I had in mind the model of allotment gardens with their individual management of the plots of land and thus too personal appropriation. Fear of the clientelism, the risk of privatization of the public place, the fear that associations 'do not carry on over time' and that their investment crumbles off, problems of soil pollution*" (Contassot 2005, p. 3).

Morovich 2011; Voudouhe 2015). This initiative appeared for years 2006–2008 with the first two precursory shared gardens in social housing zones of the district of Hautepierre where a dense and dynamic associative network for the urban renewal project as well as the network of schools for the politics of the priority education[7] already existed.

Afterward, impelled by the victory of the socialist-green coalition in the municipal election of 2008 and its campaign called "Zero phytosanitary product" an inhabitants' association opened in 2009 their first shared garden located in the city center of Strasbourg.[8] It should be noted that this initiative does not arise from the urban renewal policy focused on social housing areas, but directly impelled by an ecological and citizen initiative for the purpose of greening and pedestrianization of the city center, in contrast to the gardens of Hautepierre.

Even there, we notice that the development of shared gardens is marked by social and ecological discourses and initiatives. The process of this development requires to be analyzed by taking into account the complex and uncertain connection between these two different concerns. For this purpose, we will focus on local politics which claim to frame and to implement these gardens in collaboration (or in conflict) with diverse local stakeholders.[9]

15.3 Typology of the Shared Gardens: Case of Strasbourg

We shall present here a typology of shared gardens of Strasbourg so as to highlight the relation between their social and territorial conditions and operating mode. In a previous publication (Muramatsu 2016a), we listed thirteen shared gardens created in Strasbourg between 2006 and 2012 on the basis of the following criteria: type of location, facilitator, institutional support, method of distribution of spaces, and access mode in the garden (e.g., open or locked gate). The first type we named "gardens at the foot of buildings" grouped four gardens located in areas of social housing, used mainly by a group of inhabitants gardeners, supported by an outside facilitator, and largely based on individual or familial plots of land. The access to the garden is limited by locked gates when the gardeners are absent. These gardens

---

[7]Kayser E., Quintin, J. (2004) Jardins participatifs en pied d'immeuble dans les quartiers d'habitat social, Eco-Conseil (internal document); Facilitator of Eco-Conseil, interview, June 21, 2012.

[8]The website of the association underlines the importance of the support offered by a local representative. See: http://www.ahbak.org/2009/03/24/un-jardin-partage-place-ste-madeleine/.

[9]In the case of the Belgian solidary gardens, this division appeared clearly as regards differences at several levels: at the regional level between Brussels marked by its multicultural context and Wallonia marked by several cities formerly industrial affected by a massive and chronic unemployment; at the institutional level enter the politics of the environment promoting the urban agriculture and the social action using the gardening for social inclusion; finally, at the political level between the local representatives of various political persuasions supporting each of the projects of gardens. This division was one of the major causes of the failure of the networking of the Belgian gardens (Muramatsu 2012a).

are distant from the city center and are the object of the Urban Policy. Hence, these gardens are individualized and reserved for a target public: the inhabitants of the surrounding social housing. The second type we named "gardens in town[10]" grouped seven gardens organized by a group often supported by a Community center (Centre Socioculturel) or inhabitants' association, located outside the social housing areas and in diverse spaces of the city such as city center, residential zones, touristic zones, green areas, and parks. They are established largely by collective plots of land. The access to the garden is left free to the inhabitants with a permanently open gate. Then, on the basis of this categorization which aims to be comprehensive rather than a systematic theorization, we underlined a trend of diversification and hybridization as regards the gardens created since the end of the 2000s and which mix elements of these two types. So, two gardens were categorized as "hybrids."

By extending and updating this categorization, we present here a Table 15.1 with a map (Fig. 15.1) of the gardens of Strasbourg integrating a dozen gardens created from 2013 to 2016. Then, we enriched the table by adding two statistical criteria to clarify the social and territorial characteristics of each garden, namely the poverty rate[11] and the median income of households concerning the location of every garden.[12] These two data clearly differentiate the gardens in terms of social and territorial contexts. For example, the contrast is clear between the first shared gardens of Strasbourg: If the first two gardens "at the foot of buildings" are located where the poverty rate exceeds 60% and the median income of the households per year is lower than 10,000 euros, the poverty rate and the median income of the inhabitants where the third garden "in town" are respectively 17.8% and 25,024 euros.

In 2016, we count six gardens of the Type I "at the foot of buildings" (1, 2, 5, 6, 17, 24) which are all located in the areas of the same type as the first two gardens mentioned above. Among them, the one that opened in 2013 (17) stands out from others in terms of operating modes and approaches and then the "hybrid" type: Created in 2013 by an association of young students in art, anthropology, and town planning in collaboration with young architects,[13] the garden consists of table

---

[10]This naming firstly relies on the current expression of French "*aller en ville* (to go in town)" meaning moving toward the city center by going out from one's residence. Its implications are related to the distance from one's residence and the move of the people. Secondly, the concept corresponds to the expression used in the French urban policies for biodiversity called "Nature in town (nature en ville)" which promotes the concept of "ecological network" in varied urban spaces since the mid-2000s.

[11]The rate of reported incomes under the threshold of 60% of the median reported income per consumption unit (INSEE 2016).

[12]The statistical unit used here is the IRIS (Grouped blocks for Statistical Information) which largely designates the residential zones where the population is generally between 1800 and 5000 inhabitants, in the municipalities of at least 10,000 inhabitants and a large number of municipalities of 5000–10,000 inhabitants. INSEE: http://www.insee.fr/fr/methodes/default.asp?page= definitions/iris.htm.

[13]This association was created in 2009 for the purpose of "*showing a plural image of the district which is not stigmatizing*" (Morovich 2011, p. 93).

Table 15.1 Shared gardens of Strasbourg

	Type	Opening date	Type location	Organizer	Institut. support	Distribut. Plots	Access (open or locked)	Surface (m²)	Number or users	District (IRIS)	Poverty rate (%)	Median income
1	I	January 2006	Social housing	Gardeners' asso.	Eco-Conseil	Indi. (28 plots)	Locked	650	40–50	Hautepierre Sud Est	62.7	8142
2	I	January 2008	Social housing	Gardeners' group	Eco-Conseil	Indi.	Locked	750	55–60	Hautepierre Ouest	70.7	9218
3	II	March 2009	Center	Gardeners' group	Asso. (Inhab.)	Collect.	Open (without fences)	230	10–20	Mairie Sud	17.8	22,938
4	II	April 2009	Park/allotments	Gardeners' group	Asso. (Inhab.)	Collect.	Locked	2000	14	Shiltigheim Ouest	23.8	18,704
5	I	Sept. 2009	Social housing	Gardeners' group	Eco-Conseil	Mixed Indi./Collect.	Locked	300	30–40	Port du Rhin Centre Est	45.2	13,014
6	I	June 2010	Social housing	Gardeners' group	Asso. (social service)	Indi. (19 plots)	Open	400	6	Cronenbourg Ouest Ouest	60.5	9896
7	Hyb.	February 2011	Length of the streetcar/resid.	Gardeners' association	Divers	Mixed Indi. (40)/Collect. (20)	Open	1400	40	Neudorf Ouest Centre	19.4	20,546
8	II	May 2011	Green space/allotments	Gardeners' association	Community Center	Collect.	Locked	460	Approximately 10	Koenigs Hoffen Ouest Centre-Est	32.6	16,484
9	Hyb.	August 2011	Fallow land/social housing	Gardeners' association	Divers	Collect. (30 planters)	Open	1000		Gare Sud Ouest	50.4	11,558
10	II	March 2012	Park	Gardeners' group	Asso. (Inhab.)	Collect.	Open	500	15	Koenigs Hoffen Ouest Nord-Ouest	34.1	15,240

Table 15.1 (continued)

	Type	Opening date	Type location	Organizer	Institut. support	Distribut. Plots	Access (open or locked)	Surface (m²)	Number or users	District (IRIS)	Poverty rate (%)	Median income
11	II	March 2012	Residential	Gardeners' group	Asso. (students)	Collect.				Plaine des Boucher Est	Figure non-available	29,600
12	II	June 2012	Tourist	Gardeners' group	Asso. (Inhab.)	Collect. (planters)	Open	100	30	Petite France Nord Ouest	22.2	21,447
13	II	2012	Residential	Gardeners' group	Community Center	Collect.	Open	200	?	Esplanade Sud Est	32,1	16,176
14–16	II	2012	Center	Gardeners' group	Asso. (Inhab.)	Small plots	Open (without fences)			Krutenau Centre Est	21.8	19,646
17	I	2013	Social housing	Inhabitants' group	Asso. (artists, students)	Collect.				Hautepierre Nord	64.8	8980
18	II*	March 2013	River/green space		Asso. (rowing club)	Mixed collective/Indi.	Locked	70	Over 100 members	Plaine des bouchers Ouest	Figure non-available	29,600
19–21	II	2013	Center	Gardeners' group	Asso. (Inhab.)	Small plots	Open (foot of trees)			Poincare Est	23.3	22,224
22	II*	Sept. 2013	Natural urban park	Gardeners' association	City	Collect.	Locked	8000	30	Koenigshoffen Est Sud	24.6	18,996
23	II	2014	Center	Gardeners' group	Asso. (Inhab.)	Collect.	Open (with a fence)			Gare Nord Est	29.7	19,088
24	I	June 2014	Social housing	Gardeners' association	Eco-Conseil	Indi.	Locked	600		Hautepierre Nord	64.8	8980
25	II	March 2016			Community Center					Montagne verte Nord Est	27.7	19,046

Table 15.1 (continued)

	Type	Opening date	Type location	Organizer	Institut. support	Distribut. Plots	Access (open or locked)	Surface (m²)	Number or users	District (IRIS)	Poverty rate (%)	Median income
26	II	February 2016	Resid		Asso. (artists)	Collect.	Open (with a fence)	1800 m²	About 10 families	Robertsau Centre	Figure non-available	28,962
27	II*	April 2016	Natural urban park		Asso.	Collect.	Locked	6000 (1600 m² cultivated)	About 20 families	Koenigshoffen Est Sud	24.6	18,996
28	II	July 2016	Resid		Asso. (gardeners)	Collect.	Open (with a fence)		About 15	Robertsau Centre	Figure non-available	28,962

Main sources Available data on the Web site of the Shared gardens of the Great East (Réseau des jardins partagés du Grand Est): http://www.ecoconseil.org/decouvrir-nos-actions/reseau-jardins-partages-grand-est/reseau-jardins-partages-grand-est; Compte rendu de la réunion du 26 janvier 2016: Réunion d'échanges entre jardins partagés et collectifs de Strasbourg et environs (internal document); Archives of Dernières Nouvelles d'Alsace: http://archives.dna.fr/selection_audio.html; Official sites of gardens; Social and fiscal localized files (FiLoSoFi) par IRIS—Year 2012 (INSEE 2016); Infra-municipal data—Population (INSEE 2016)

Asso. mean association. *Collect.* mean collective. *Distribut.* mean distribution. *Indi.* mean individual. *Inhab.* mean inhabitants. *Resid.* mean residential
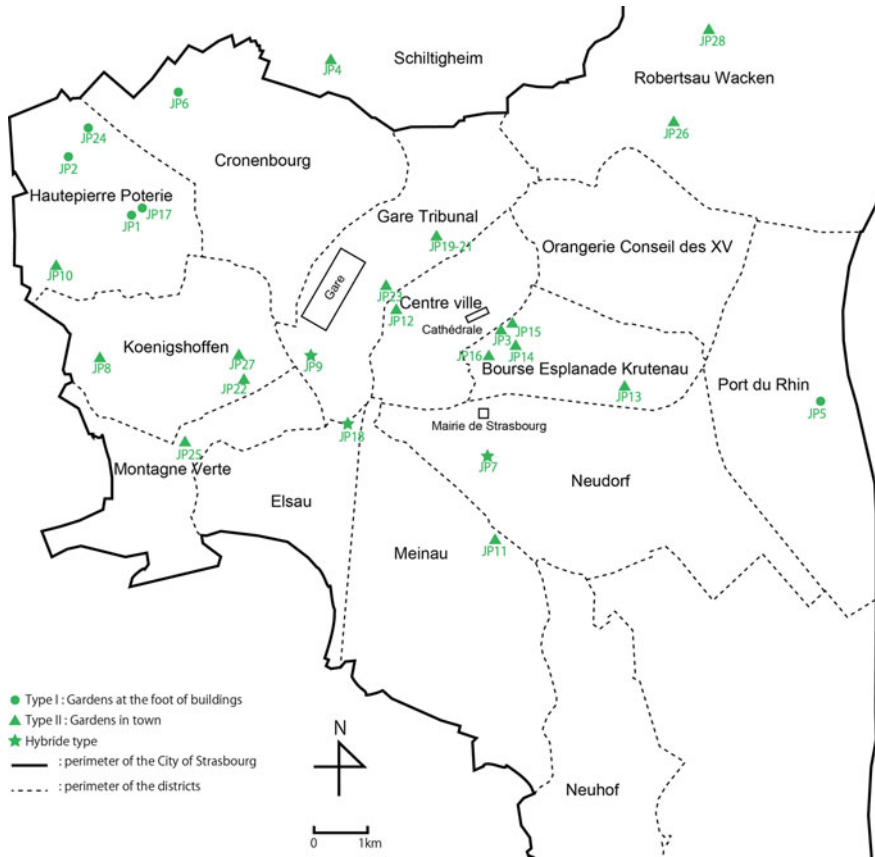
Fig. 15.1 Shared gardens of Strasbourg

planters, all collective and open to all the inhabitants. There, we can also notice that the design of the garden does not emanate directly from a group of inhabitants, but from external associations working as part of the Urban Policy.

Then, we count 20 gardens of the Type II "in town" (3, 4, 8, 9, 11–16, 18–23, 25–28)[14]. We have to notice that the median income of the inhabitants has a tendency to be high where these gardens are implanted (more than 15,000 euros or even 20,000 euros for eight cases). Furthermore, the poverty rate remains clearly low there (from 17.8 to 34.1%). These gardens are often a collective initiative

---

[14]Among them, three (14–16) are tiny plots of land of less than 10 m² and managed by the same association, and three (19–21) are small a few plantations under trees and managed by the same association.

coming from inhabitants' association (3, 4, 10, 12, 14–16, 19–21, 23), while the other initiatives come from community centers (8, 13, 25) or a student association (11) or gardeners (22, 28) or a rowing club (18). The operating mode of gardening is collective for all these cases, and the gate of the garden is always open to the public (except 4, 8, 18, 22, 27). Some exceptional forms of gardens (18, 22, and 27 marked "II*") located in large natural spaces rarely frequented by urban pedestrians, and usually locked, are making a new tendency.

We categorized two gardens as "hybrids" among which one is located along a streetcar (*tram*) route in a relatively wealthy residential area, managed by a gardeners' autonomous association (7). The gate is always open there, but the plots of land are divided between about forty individual ones and about twenty collective ones so as to adapt to the variability among the gardeners in terms of availability and gardening experiences. The other case (9) is located in a formerly vacant space near a former industrial site and a social housing area and in a relatively poor area (50.4% of the poverty rate, 11,558 euros of median income). It was created by a student association in architecture, with its gate and planters voluntarily collective and open to the public. We shall illustrate below these two cases.

After this general analysis of the spatial and social morphology of the shared gardens of Strasbourg, we notice that in spite of their diversity, a contrast seems to remain between the gardens "at the foot of the building" and the gardens "in town." We notice between these two types a difference of their basic objectives: the "social" objective intended for a population with low income and relatively isolated and invisible from the city center, and the ecological objective designed for all the public and the bystanders and visible to the public.

We shall show in the following part how difficulties of linking these two dimensions appear in various types of gardens by looking closely their collective and local dynamics.

15.4 Contrasted Evolutions of Gardens Between the Social and Ecological Dimension

We present here some monographic illustrations of shared gardens which appear to be a representative of each of the three types presented above. We shall compare these case studies established on the basis of data collected by interviews and observations, which has been supplemented by documentation. These illustrations will confirm that every project of garden "did not fall from the sky" being inspired by national or international movements or by utopian ideas. But it arises from a social and local context which gives and limits its possibilities. The linking between the social and ecological dimensions is not evident in these cases and will appear as a tension which structures the political and collective dynamics of each garden.

15.4.1 Type I Gardens at the Foot of Buildings

We already mentioned the first two shared gardens of Strasbourg created respectively in 2006 and 2008 in the district of Hautepierre through a facilitator of Eco-Conseil which promotes shared gardens in the East of France and is part of the national network "*Jardin dans tous ses états.*"

The district of Hautepierre[15] is a product of an urban, modernist, and utopian design created in the 1960s. Designed as a transitional zone between the center of Strasbourg and its rural periphery, this district was organized in several residential zones called "stitch (*maille*)" in the image of "villages" where are located the local services, green spaces, and pedestrian ways shielded from the highways (Ziegler 2011, pp. 80–82). But following the oil shock of 1974, construction work slowed down and the unemployment rate amounted to 25% (Ibid., p. 85). The vitality inside the stitches expected by the town planners did not come true, for the benefit of parking zones which increased after. Due to the lack of local services and public transport, the district was enclosed and knew increasing social problems accompanied by successive degradations (Ibid.).

The works of renewal began in mid-1980s with the arrival of a new socialist mayor (Catherine Trautmann) in Strasbourg. In 1994, the first streetcar of Strasbourg connected the district of the city center in fifteen minutes to "open up" in this district. Since 2006, the district is the object of successive politics of urban renovation which re-put back forward on the theme of "garden district" which marked the memory of its former inhabitants.[16] Both shared gardens were created as part of this policy.

According to the public document of the Urban Policy of Strasbourg (Strasbourg Eurométropole 2015, p. 188), in spite of a certain concentration of commercial activities (hypermarket) and of health services (University Hospital Center) along the highway, and one dense and dynamic network of associations, the population of the district remains marked by a "generalized" social precariousness. And "*this precariousness affects in particular the young people, the retired people and the new populations mainly stemming from the recent immigration (ex-Eastern country among others).*" The document also underlines that "*'living together' is not always lived in a soothing way (disputes between neighbors, intercultural incomprehension…).*"

Then, the Eco-Conseil aimed to support the shared gardens in this district. Upstream, there were already projects of participatory garden since 1999 for an

---

[15]Some data on the district: the poverty rate 62.7% (Southeast—Garden 1), 70.7% (West—Garden 2); the median income 8142 euros (Southeast), 9218 euros (West); the unemployment rate 29.30% (zone designated for the Urban Policy); the rate of social housing 75% (idem.) (Strasbourg Eurométropole 2015, p. 184; INSEE 2016).

[16]In the project of urban renewal submit to the National Agency of the Urban Renewal at the end of 2006, the inhabitants formulated the question of protection and value of green spaces as "heart of stitches" (Morovich 2011, p. 96).

"*appropriation of public places by the adults*" as well as experiences of school gardening made in the district as part of the policy of the priority education for the years 2003–2006. Then, the initial idea was to create inhabitants' participatory gardens relying on the parents of pupils (Kayser, Quintin, op.cit., p. 32).

A shared garden at the foot of buildings of social housing emanates not only from an agreement between associative and political actors, but also from a series of local actions preparing the conditions favorable to its design. For that purpose, the facilitator of Eco-Conseil applied the method recommended by the network "*Jardin dans tous ses états*" for the creation of a shared garden by beginning with a canvassing in buildings so as to present the project to the inhabitants and ask them about their interests and needs, and organize afterward a public meeting on the organization of their future garden. There were also small exhibitions of projects in front of schools which were already leading a process of environmental awareness through gardening.[17]

Thus, these gardens were created according to the wishes of inhabitants and got organized with small individual plots of land (4–6 m^2) and of collective elements (paths, water pumps, composting site, hut, etc.). Each individual plot of land is cultivated in family often in order to complete their food needs. This individualized form of plots of land similar to the allotment gardens comes from the choice of the group of inhabitants, what the facilitator of Eco-Conseil appreciates as a base of shared garden. According to them, the collective and participatory life is fundamental for a shared garden whatever its forms of culture.[18] The gardeners are inhabitants of buildings of social housing surrounding gardens. These gardens are fenced in: We reach it by a locked gate; schedules are planned for the use of the water. Compared to the classic allotment gardens, the size of the plots of land is smaller, and the collective life between the gardeners must be central and determinant for the functioning of the garden. Finally, the cultivating mode is left to the choice of every gardener and does not always respect the standard of the ban on phytosanitary products promoted by the municipality since 2008[19] or the principles inspired by the permaculture such as the mulching or the non-plowing, often adopted in other gardens in town.

The first quality of these gardens would be the relaxation they can offer to the inhabitants often confronted with multiple difficulties in their life. For the facilitator of Eco-Conseil having supported these gardens since the beginning until 2015,[20]

---

[17]Facilitator of Eco-Conseil, interview, June 21, 2012.

[18]*A shared garden, it is a garden where there are men and women, it is a garden where people decide on what they are together going to make, it is a garden open to all in a regular way* (Ibid).

[19]Website of the Strasbourg Eurométropole: http://www.strasbourg.eu/environnement-qualite-de-vie/nature-en-ville/zero-pesticide.

[20]Having participated in the creation of the first shared gardens in Lyon around 1998, this salaried facilitator d'Eco-Conseil was for the initiative of numerous shared gardens of Strasbourg since 2004 until she leaves her mission in 2015.

the garden offers "a *moment of breath*" for people who are exhausted by their "*survival*" of every day.[21] This place is also for some a place of tranquility toward the others, given the often bad insulation of the housings of the buildings.[22] This place creates a space of respect which distinguishes itself from other spaces undergoing damages in the district, which is a respect aroused by the fact that the adults known and seen by the inhabitants work and maintain the place. Daniel Cérézuelle qualifies this function as "civility" which connects the domestic space to the public place (Cérézuelle 2003). The facilitator qualifies such a place as "*a sort of oasis*" among other places which risk being degraded: "*(…) It is true that there are nearby places which are really disgusting. Other spaces, not in the garden, the garden is respected. There are the entrances of buildings nearby which are destroyed, entrances really exploded. (…) It is necessary to see sometimes on Mondays mornings after the weekend, the state of the district, the dirt, here we have a sort of oasis*[23]."

These gardens are not always organized in perfect harmony by the inhabitants. These gardens also reflect the problem of "living together" mentioned above: In garden 1 (Fig. 15.2), we notice a problem of intercultural comprehension. A couple of Alsatian inhabitants have tried there to organize a gardeners' association with a support of the facilitator of Eco-Conseil. According to the facilitator, they do not hide their reluctance to be with people of Maghrebin origin and find difficult to bear their cultural difference. For example, they cannot make the barbecue together because of the refusal by the Muslims to mix some pork with other foods. Moreover, if the Alsatians want to celebrate Christmas, the others want to celebrate rather the end of the year and the New Year or the Ramadan.

In the garden 2, the same problem arises in another cultural context. At the beginning of the project, it was only Moroccan men organized in an association "*a little bit community-oriented*" according to the facilitator, who wanted to garden among them without women and other inhabitants. To counteract this imbalance, the facilitator intervened so that all the types of interested inhabitants, namely children, young people, adults, and women of all cultures, can come to garden. This problem of cultural imbalance in this shared garden was observed by the French sociologist Jacques Donzelot who visited this site in 2011 and noticed there an exclusive presence of Maghreb men (Donzelot 2011, p. 26). But it is also necessary to mitigate the criticism of the sociologist by underlining that the garden allows, as we mentioned above, the inhabitants to find themselves in serenity shielded from the contact of others and to arouse the mutual respect between inhabitants who share this space.

---

[21]*I think that what I see is that there are people for whom the garden is a moment of breath, because their life, it is the survival, it is completely exhausting. When we do not have money, when we have many difficulties, everything is difficult, that takes some energy, that takes time, it is exhausting. Thus sometimes, here we rest* (Ibid).

[22]Facilitator d'Eco-Conseil, interview, June 4, 2013.

[23]Facilitator d'Eco-Conseil, interview, June 21, 2012.

Fig. 15.2 Garden 1 (photo taken by the author on July 12, 2012)

Besides these internal cultural problems among the inhabitants, a problem also arises at the level of organization of gardens. Indeed, in spite of the support made by the facilitator for more than seven years, the gardeners of garden 2 do not yet manage to get organized in an autonomous association. They had difficulty in being a leader for others and in assuming the responsibility to solve diverse problems of the collective life. Behind this difficulty, it is necessary to recall the problem of precariousness which affects these inhabitants and thus limit their availability. Even for garden 1, the gardeners asked the facilitator to be the secretary of their association for lack of finding somebody to assume this role.

Thus, these gardens need to have a long-term support so as to be able to work. These gardens at the foot of buildings would distinguish themselves from other gardens we call "in town" which are often organized by inhabitants' associations which take in charge entirely their project of garden. Furthermore, as this support asks for an important investment for both the social and financial levels to engage facilitators, the city does not seem to encourage this type of shared gardens intended for the inhabitants of social housing anymore.[24] To fill this gap, since 2013, the city encourages rather the design of what they call "Urban and collective kitchen garden

---

[24] *(…) I think that it is just a little unfortunate that we do not turn to a multiplication of this kind of gardens, projects in the disadvantaged districts. (…) The city of Strasbourg at the moment tries now, and if there is a group of inhabitants who exist and preexist and that they want a shared garden, they can visit the services, saying there, 'we would want a shared garden'. The municipality has to try to answer. But there will be no social support for that.* (Facilitator d'Eco-Conseil, interview, June 21, 2012).

Fig. 15.3 Garden 6 (photo taken by the writer on February 24, 2014)

(*Potager Urbain Collectif*)" which are a sort of mini-allotment garden administered by the municipality and propose renting small-scale plots of land (from 10 to 50 m^2 per user) by grouping about a dozen individuals in the same site without a fence between the plots of land to arouse a collective life of the gardeners there.

The garden 6 (Fig. 15.3) in the district of Cronenbourg[25] located in the northeast of Hautepierre is part of the Urban Policy which spreads strongly since the 2000s. The garden is located in a concentration area of social housing built in the 1960s. The public document of Strasbourg notes its characteristics common to most of this type of area: "*young population, strong rate of people stemming from the immigration, the large-sized households, the high rate of unemployment and dependence on the social benefits, and low level of qualification*" (Strasbourg Eurométropole 2015, p. 196). The document underlines especially, as the case of Hautepierre, an aggravated trend of the impoverishment of the local population, which affects in particular the young people and the new populations.

This garden created as part of the project of urban renovation committed since 2011 in the district can also be defined as a garden at the foot of buildings stemming from the Urban Policy. It has common features to this type of garden: The design of the garden does not come directly from inhabitants' initiative, but from outside interventions; the inhabitants supposed to be users of the space were organized by a

---

[25]Some data on the district of Cronenbourg: the poverty rate 60.5%; the median income 9896 euros; the unemployment rate 30.50%; the rate of social housing 90% (zone called "Cité nucléaire") (Strasbourg Eurométropole 2015, p. 195; INSEE 2016).

socio-educational association aiming to organize the garden in partnership with
the city. An employee of the association works with a volunteer who supports the
gardeners daily on the spot since September 2013. The problem is similar to the
cases of Hautepierre as regards to? the collective organization of the inhabitants.
Indeed, if the volunteer tries to support the gardeners by frequenting the garden
several times a week by cultivating her own plot of land, it is partially because the
salaried facilitator of the association knew difficulties to mobilize the inhabitants for
the garden. According to the volunteer, this facilitator "*got tired*" by trying des-
perately to gather people who did not come to the garden and to the meetings in
spite of numerous mails and phone calls she sent to them.[26]

In fact, this volunteer[27] decided to cultivate herself a plot of land with the other
inhabitants first to quench her passion for the permaculture and second to be better
known in the district where she does not live, so as to be both "*justifiable for the
gardeners*" and "*an informant*" of the salaried facilitator of the association. Since
her arrival, the collective organization of the gardening has begun with a numbering
of the plots of land each of which measures a little less than 10 m^2.

However, among the users of nineteen plots of land in total (in February 2014),
the facilitator managed to gather only six people for the last meeting concerning the
organization of the gardening (days of watering, management of keys of the water
pump, distribution of the plots of land). The difficulty for the organization of the
gardeners is also due to the fact that the facilitators cannot know all the profiles of
the gardeners who occupy their plots of land only occasionally, and that the gar-
deners themselves, often, do not know each other.

If the regular and daily intervention of a facilitator is important for the organi-
zation of gardeners, the dilemma is that the facilitator is "frustrated" by the gap
between her motivation to work on the spot with the gardeners and the limited
influence that she can have within the association as a volunteer. To make a
reorganization of the garden which she wishes to make, she has to count on the
initiative of gardeners themselves, but the lack of cohesion and their "disorgani-
zation" does not facilitate the task. This dilemma shows more clearly than for the
cases of Hautepierre the importance of the mediation between the political level and
the local level as regards to the organization of garden projects.

As the cases of Hautepierre, the facilitator of Cronenbourg faces the problem of
intercultural incomprehension between people from different backgrounds (Turks,
Italian, Moroccan, etc.), ages, and sexes: An Italian lady whom the volunteer
nicknames "Dragon" widens its plot of land to the detriment of the others and
stands out; a Turkish man who finds the garden "*not very clean*" and wants in an
authoritarian way that everybody digs as him; Moroccans plant only the mint which

---

[26]Volunteer, interview, February 25, 2014.

[27]Having finished the training of primary school teacher and having spent one year in Paris as a
temporary teacher, her current project is to go to training to become educator.

can invade other plots of land; a mother who is stolen vegetables and insulted by young people of the district.[28]

The motivation and the possibility of a better organization gradually appear among the gardeners when the facilitators manage to be known and set up a participatory process. However, the real autonomy or the initiative of the inhabitants seems far from being acquired, they rather need more interventions by the facilitators or the public authority, and they "*want a leader*" and "*wait that there is a decision which falls from the sky*"[29]. According to the volunteer: "*the inhabitants, in any case, this group which was artificially created, is not going to build up themselves into association, because they do not even know each other* (ibid)."

This problem of the wait-and-see policy or the dependence of the beneficiaries on social policies is well known. But it would be necessary to rethink here: Can the garden create one day a process which can reconcile social actions in favor of the disadvantaged people and the politics which aim to be participatory, civic, and ecological?

15.4.2   Type II Gardens in Town

We can quote the garden 3 (Fig. 15.4) located in the district of Krutenau[30] as a typical garden "in town." In contrast to the gardens at the foot of buildings of social housing in the suburbs, it is located in a strong touristic and trading value area between the historic center and the administrative center. The median income is upper to 20,000 euros there, and the poverty rate is relatively low (21.8%). The civic initiative of inhabitants organized into association is decisive for the creation and the operating of the project. Then, the association called AHBAK (Association d'Habitants Bourse-Austerlitz-Krutenau) was created in 2004.

The creation of the garden explicitly is in the context of a renewal of the Place Austerlitz which, by the request of the association, deleted definitively in 2007 the stop of tourist buses which existed there since the 1980s. The association had formulated a "list of expectations (*cahier des attentes*)" submitted to the city in May 2008, whose guidelines can be summarized in two points: Restore a continuity between places and small places in the district for the traffic of pedestrians and cyclists (conviviality); restore a vegetal continuity, namely a "green infrastructure"

---

[28]According to the volunteer, the gardeners are mainly mothers, elderly, or unemployed persons. Then, these people "*really represent the district*."

[29]Volunteer, Ibid.

[30]Some data on the district of Krutenau: poverty rate 21.8%; median income 22,938 euros (INSEE 2016). The district is integrated into a larger territory called Bourse-Esplanade-Krutenau at the level of the municipal administration.

Fig. 15.4 Garden 3 (photo taken by the writer on March 27, 2013)

in the district by greening of streets by perennials.[31] The project of the shared garden appears then in agreement with the policy of the "nature in town" promoted since 2008 by the municipality of coalition socialist-green (e.g., "zero phytosanitary product" campaign mentioned above).

In this series of actions having given rise to the creation of the garden, the association became a source of proposals for the city by forming a narrow network with political and technical agents. The convention signed between the association and the city in autumn, 2009 for the provision of the ground clarifies the partnership with officials in charge of the management of neighborhoods and the green spaces.[32] The regular organization of the collective composting (twice-weekly meeting) with convivial moments and the network strengthened with parents of pupils attending elementary school adjacent to the garden also show the very organized and collective aspects of the initiative. These collective aspects contrast with the lack of cohesion of the gardeners noticed in gardens at the foot of buildings. This collective "success" can be due to the social and economic differentiation at the territorial level which can be confirmed by a low poverty rate in this district. However, given its smaller size (approximately 200 m^2) and its character of fancy garden, the meaning of this garden remains symbolic, especially as it actually

---

[31]AHBAK 2008. Downloadable on the following site: http://www.ahbak.org/wp-content/uploads/2008/06/cahier-des-attentes-place-austerlitz.pdf.

[32]*Convention of provision of a green space for the creation of a shared garden. Place St. Madeleine* (AHBAK and Strasbourg City 2009).

Fig. 15.5 Garden 4 (photo taken by the writer on July 6, 2013)

seems to serve as a "showcase" for the local elected officials in favor of their green politics.[33]

We also characterize garden 4 (Fig. 15.5) as a "garden in town" in spite of its location in a residential area of the City of Schiltigheim[34] bordering Strasbourg. The garden is at the edge of a large park of greenery and flowers called "Park of Birds" surrounded by sites of allotment gardens. This garden possesses all the attributes as a garden in town: created in 2009 by the inhabitants' association created by "neighbors" (president of the association) in 2005 having their own residence in the district; the plots of land are quite collective and shared by the gardeners. The shared garden is one of the activities of the association including collective meals and parties, as well as the actions toward the town planning, which aim at bringing the user-friendliness and the quality of life as closely as possible to their housing. The cultures occupying a third of the total surface are organized according to the principles of the permaculture such as the mulching, the non-plowing, and the lasagna gardening. Indeed, we find few examples of this type of culture in gardens at the foot of buildings. The exceptional feature of the garden

---

[33]This aspect of political marketing seems obvious when a local representative of the district and the councilor in charge of the environment put their hand in the soil for the inauguration of the second garden of about twenty square meters which the association AHBAK created in the same district in 2012 (Dernières Nouvelles d'Alsace, May 12th, 2012).

[34]Some data on the district of Schiltigheim (west): poverty rate 23.8%; median income 18,704 euros (INSEE 2016).

is especially the importance of its size, which is 2000 m^2, that makes it one of the biggest shared gardens of Strasbourg and very restricted number of its gardeners: There are only four or five "*regular*" gardeners or "*three very active couples*" and seven or eight "*occasional*" users according to the president of the association we interviewed.[35]

Indeed, with its locked gate, unlike the garden 3, this garden is characterized by its relative exclusivity. The gardeners seem to perceive such a situation as if they were presented "*in a showcase*" in their relationship with the surrounding inhabitants who "*just peep*" the garden with a certain jealousy for the rent of a big garden attributed by the city and a certain skepticism on their ecological gardening which seems "*not clean*" to these inhabitants. According to the president of the association, these people "*do not want to share*" and do not believe in the idea of sharing, but "*want to have their own plot of land.*"

However, this exclusivity is not merely undergone by the gardeners, but rather chosen by the association which "*does not necessarily want to create social ties*" "*as the gardens with community centers,*" and "*does not try to attract too many people*[36]." Indeed, unlike garden 3, the site of composting of this garden interested few inhabitants because many of them already have their own garden and possibly a composter.

This garden highlights more than garden 3 the dimension which strays from the idea of solidarity by reinforcing both its ecological and exclusive practices. This phenomenon seems close to the trend called "*clubization*" by the French sociologist Eric Charmes as regards French suburban residents who defend actively and publicly their own microcosm (Charmes 2011). By minimizing the social diversity in the garden, they choose rather to intensify their ecological practices deserving of their "shared" faith among them, which strengthens de facto the exclusivity of access to the garden for the surrounding inhabitants.

15.4.3 Hybrid Types

Garden 7 (Fig. 15.6) is located west of the district of Neudorf,[37] one of the most dynamic districts of Strasbourg in particular with a series of big projects of urban renewal along the ponds of the port (*Bassin Vauban*) going from the district of Heyritz to the Eco-District Danube via the Rives Étoile including a number of important cultural institutions (music hall, library, shopping mall, cinema, etc.). The garden is just nearby this area along a streetcar route which connects itself with the city center via this renewal zone and the administrative center of Strasbourg.

---

[35]President of the association, interview, July 6, 2013.

[36]Ibid.

[37]Some data on the district of Neudorf (west centre): poverty rate 19.2%; median income 21,602 euros (INSEE 2016).

Fig. 15.6 Garden 7 (photo taken by the writer on July 6, 2013)

Considering its location and the social configuration of the district marked by a wealthy and active layer of the population,[38] this garden may be close to a "garden in town." The garden was created in 2011 on the initiative of a group established by residents of an ecological housing adjacent to the garden. Unlike garden 3, the garden extends over 1500 m^2 and also makes contrast with garden 4 by grouping hundred gardeners divided into about forty individual plots of land and the other collective plots of land. The rest of the garden is attributed to common spaces such as resting places, hut for storing tools, and children's playground. Finally, the gate of the garden is always open to the public.

This organization of the individual and collective plots of land differentiates this garden from the other "gardens in town." It is not only a combination of the forms of plots of land, but also the fruit of a collective, democratic, and participative choice. On the one hand, the users of the individual plots of land pay the annual contribution of ten euros, but have to change their plot of land every year (or every two years, according to a gardener we interviewed) by a random draw, which would avoid the risk of too personal appropriation of plots of land by certain gardeners.[39] On the other hand, the more occasional or novice users cultivate the collective plots of land by paying the annual contribution of five euros. The decisions on the use of

---

[38]According to a gardener we questioned, the majority of the gardeners are in the age range of 35–45 years and often in couple with children.

[39]As mentioned above, this risk was quoted by a Parisian representative as regards the allotment gardens.

the garden are taken during regular exchanges on Saturday afternoon in the garden, which gather about fifteen people[40] and monthly meetings of the gardeners (Bruzi 2013, p. 69). Furthermore, the president and the members of the association's office are elected by an annual random draw. The regular attendance of the garden by a large number of gardeners also reduces the risk of vandalism (Ibid.). Finally, the ecological and collective requirement of this garden also expresses itself in the operating of collective composting which is reserved for the gardeners in order to be able to monitor its contents without opening to the public.[41]

This garden unquestionably represents a case of success not only from the quantitative point of view (surface, number of gardeners) but also from the qualitative one (ecological and democratic management). At first, this success certainly owes to its territorial and social conditions: integration in the dynamic of urban renewal; initiative of a group of inhabitants made sensitive and experimented regarding management of collective projects. But the use and the attendance of the garden are limited to these members who are not always local residents, while few "real" local inhabitants participate in its annual parties (Bruzi, op.cit.: 70.). However, we conclude that the "club" aspect of this garden would not simply be due to the will to favor the microcosm among the members, but more to their ecological and collective requirement which cannot be shared immediately by all. We notice, even there, a difficulty in reconciling the social and ecological requirements around this "model" shared garden.

The garden 9 (Fig. 15.7) which we categorized as a "hybrid" garden may rather be close to a garden at the foot of buildings for its location in the zone of Laiterie[42] recently classified as a "priority district" of the Urban Policy due to increasing precariousness of its population (Strasbourg Eurométropole 2015, pp. 257–261). But this zone seems quite different from other districts designated by the Urban Policy because of "*a strong turnover (of inhabitants)*" generating "*a demographic dynamic which is positive, but also a lack of attachment of certain inhabitants to the life of the district* (Ibid., p. 258)." Furthermore, this zone presents a more important poverty than the whole district which integrates it (sub-district of Gare): median income of 11,400 euros against 16,310 euros, strong rate of social housing (44.2% against 16.2%), and an important rate of youth unemployment from 15 to 24 years (31% against 19.1%) (Ibid.). Another aspect of the district is the presence of associative, cultural, and "alternatives" activities which are developed since the 1990s around former industrial sites. But the document of the city of Strasbourg for the Urban Policy mentions a threat of "gentrification" on the cultural life of the zone where "*the situation is paradoxical, because the territory is appreciated and used*

---

[40]Gardener, interview, July 6, 2013.

[41]Gardener, interview, op.cit.

[42]Some data on the district Gare (southwest): 12,731 inhabitants in the whole district; poverty rate 50.4%; median income 11,400 euros; rate of social housing 44.2% (Strasbourg Eurométropole, op. cit., p. 257; INSEE 2016).

Fig. 15.7 Garden 9 (photo taken by the writer on June 2, 2013)

for its numerous alternative and cultural facilities, but the part of local inhabitants frequenting there is low (Ibid.)."

This configuration also marks the shared garden in question created in 2011 by a group of students in architecture and in arts who do not all live in the zone and thus are not the target public of the Urban Policy. The garden is located in a fallow land of about 1000 m^2 being placed nearby a set of social housing and a former industrial site already invested by other artists. In spite of its location in a zone for the Urban Policy, the garden is not completely similar to a garden at the foot of buildings, but rather to a place of playgrounds and pedestrians' passage.

We presented in other publications about our participative investigation conducted on this garden for about three years since spring 2012 as an active member of the expanding association of the project (Muramatsu 2016a, c). This garden presents in fact defects as regards its social dimension by absence of dialog with the local inhabitants, especially those who live in surrounding social housing, as well as its green dimension by a lack of collective organization for the gardening among the active members of the association. These defects owe at first to the youth of the main members of the association who undertake in the short term in the project by a spontaneous and temporary enthusiasm. By promoting the free access of the inhabitants to the garden with a permanently open gate in opposition to the model of allotment gardens or shared gardens at the foot of buildings, the initiative led to numerous problems such as massive theft of vegetables, recurring vandalism by children, squats, frictions between artists working nearby the site, and teenagers playing in a playground nearby the site. The lack of regular presence of the

members in the garden was an obvious factor of worsening of these problems. The parties of the garden organized several times a year with a refreshment bar and concerts fill this absence in the daily landscape of the garden and attract only external public coming from personal or "social" networks of members.

However, this garden presents a social and ecological potential as rare green space getting offering fresh and free produce in a zone which lacks services and convenience stores. So a number of inhabitants are dog walkers who use the dog toilet space adjacent to the garden. The problem which crosses this case seems not only owe to the whim of the members of the garden, but more structural factor. The place reveals, in fact, due to the lack of coordination and of social adjustments, the classic problem in sociology called "*spatial closeness and social distance* (Chamboredon, Lemaire 1970)" appearing between people with very different backgrounds who cross there. The following words expressed by initial members of the garden or the so-called collaborators show a latent and insuperable social and cultural distance between the inhabitants: "*here, there are prostitutes, social cases and alcoholics*" (Collaborator of the garden); "*I cannot cross this street* (a street crossing the set of social housing before reaching the garden) *without putting me headphones on*" (a founder of the garden); "*ah, these old inhabitants there, I don't want to speak with them because of their racist speeches*" (another founder of the garden). Under this cultural background, we better understand the absence of vision of the solidarity in their so-called collective idea defended by the founders of this garden (Muramatsu 2016a, p. 63): The active members always defended the term "collective" in opposition to a "private" that represents to them individualized plots of land present in allotment gardens or shared gardens at the foot of buildings. When the investigator during a meeting of the office asked the question of "lack of presence" in the garden, a member showed his distrust toward the surrounding inhabitants by criticizing their "lack of responsibility": For him, they "only grumble" and emit only negative remarks on the garden. Also, another member of the association and the activist of the Incredible edible "*do[es]n't care*" if the inhabitants of the surrounding social housing do not frequent the garden or not, because the garden is always "*open to all*" without making actions for their participation as canvassing.

Furthermore, old inhabitants of social housing mentioned a worsening of the situation of their residence during the last ten years due to a permanent presence of drug dealers and prostitutes at the bottom of their buildings, which aroused an atmosphere of mutual distrust and withdrawal of the residents to their rooms.

Numerous attempts to remedy the situation of decay and solitude of the garden were thrown in recent years: at the associative level, the increase in the regular presence of members in the garden; gardening in autumn and in winter with salads of winter or some green manure; monthly meetings of the gardeners in the garden; cooperation with other associations for social services (nursery, education). However, without a true participative dynamics of mediation conducted by organizers as carried out in gardens at the foot of buildings (e.g., Hautepierre and Cronenbourg), or in gardens in town in an autonomous way (e.g., Saint-Madeleine and Neudorf), the social and cultural mix cannot be made, and then, the uncertainty

seems to reign over this garden. Finally, this "hybrid" garden marked by both a high rate of poverty and a coexistence of people with different backgrounds represents a challenge indeed, but also possibly an opportunity to overcome the limits met by the other shared gardens in terms of social cohesion and ecological quality of the project.

15.4.4 Limited Sharing in the Shared Gardens of Strasbourg

Through the examination of various shared gardens of Strasbourg, we notice the common phenomenon which we qualify as "limited sharing," the word which appears to us relevant to characterize different situations of these gardens. These so-called shared gardens develop various places designed for sharing between the citizens in a limited way firstly by their differentiated social and territorial conditions and secondly by the voluntary or involuntary modes of use by the relevant stakeholders, including the users. Among various types of shared gardens examined here, there is neither "good" nor "bad" sharing, but various ways to organize the so-called sharing around the garden and hence to limit this sharing under the circumstances and the arbitration of those who get involved there. Thus, we assert that there are no universal models of the practices of shared gardening and that there are as many orders as disorders in the gardens, without excluding the possibilities of understanding, evaluation, and possibly improvement in their situations by taking into account experiences and reflections engaged case-by-case.

The gardens at the foot of buildings require, due to needs and constraints of the life which weigh specifically on the inhabitants of social housing, certain mode to facilitate a collective organization around the garden by arousing the mutual respect between the gardeners and that between the gardeners and the surrounding inhabitants. This support ensured by an external facilitator may require as much economic cost as human cost for the relational and physical commitment in response to everyday situations. The individual plot of land can be significant considering the weight of the needs of family, the relations of neighborhoods which are often delicate, the "culture" (vegetal or cognitive) of every inhabitant, and the stigmatized image which weighs on the district and prevents the social cohesion of the inhabitants. It is the same for certain exclusivity and a "closure" symbolized by the locked gates which serve for these needs and the sensibility of the population concerned. The gardens with a social purpose often subject to the criticism of paternalism or even for their non-compliance as regards ideals of shared gardens, namely free access and ecological greening. But considering these gardens with a social purpose was a source of the shared gardens in France, and continuing to be a model of the Urban Policy (e.g., "garden district" in Hautepierre), it would rightly be necessary to consider it as one of the justifiable forms of shared gardens tackling the challenge of living together and solidarity.

The gardens in town, as for them, represent certain interest to the public authority for their financial and organizational autonomy, effective organization, and effects of "showcase" as model cases at the political level. They symbolize especially certain ideals of the contemporary town planning such as that of "*compact city*" by contributing to both greening and user-friendliness. But it would be simplistic to consider them as a single model of the shared gardens, and it would be necessary to be careful to overestimate their social and ecological effects, considering their often limited size and certain exclusivity as regards the public who benefit from them. These gardens would not require much external and "social" intervention by the public authority, but would not exclude the risk of near privatization of the public place for which the allotment gardens are often criticized, if the social balance is not respected in favor of their "nature" in town.

Finally, the gardens which we qualified as "hybrid" type show possibilities to overcome the limits of both types of gardens by combining elements of these respective types, but they also show the risks of falling in insuperable dead ends due to a permanent discrepancy between their ideals and the social and territorial reality. Given that the shared gardens are in a process of diversification, it is more necessary to watch the balance between the social and ecological approaches of each garden so as to bring these new projects to a successful conclusion.

15.5   Conclusion and for an Opening

The fact that the shared gardens are under the influence of social and territorial conditions is largely due to the trend of spatializations or of territorializations of current public policies both in the field of social services where the flow and the mobility become a benchmark of the public actions (Donzelot 2006) and in the field of ecology in particular in the increasing consideration of the ecological network and the biodiversity in the land-use planning. Then, we are at the heart of the theme of sustainable development which requires the economic, social, and ecological balances in the territorial development. The territorialization in question here does not indicate anymore simply the form of organization of the public action, but the situation in which a consideration of all the specific data in every relevant "milieu[43]" for the action becomes determinant and imperative to be able to bring the project to a successful conclusion. The stake is to adapt itself and to respond as well

---

[43]Michel Foucault had rediscovered the equivalent idea of this notion in the town planning appearing in Europe in the eighteenth century. Designed as "influential circumstances" (Lamarck), the milieu became then a central element of the town planning to manage the traffic of the populations and the events in a probabilistic way (Foucault 2004, pp. 14–24). Since then, via the development of the hygienism and the organized industrial and urban growth, the notion of "milieu (environment)" appears to regain in importance not only with its experts (architects, town planners, geographers) but especially with its inhabitants invited to participate in its appropriation and management.

as possible to this situation to be able to evolve in a better way. The fashionable practice today so-called shared diagnostic in the Urban Policy shows well the situation where the local actors and the population are called to study and to think together about what takes place in their territory and in their environment and lives which are not a priori shared among them. The fact that the garden enters this system is not trivial as far as the territory of action is "spatialized" for a better collective appropriation of the public place by the inhabitants. The gardening seems to have an important place as a significant activity and as intensification factor of this spatial relationship which is active between the population, the territory, and the public policies.

The social and local dynamics of gardens observed here join this very complex context involving different types of data and speeches such as the social and the ecology. Even if the only case of the shared gardens will not be enough to exhaust this theme, these gardens potentially seem to be rare infrastructure susceptible to allow the dialog between these two dimensions not only at the abstract level, but in a concrete way by showing their mutual contributions (or ignorance). They are tools of action and research susceptible to create desirable changes for all. We underline the importance of the commitments of the actors in the space and over time to be able to concretize these changes. We were able to illustrate these commitments for example with facilitators of gardens at the foot of buildings who "hold on" to make possible the mediation between the policies, the association and the inhabitants, or daily contacts in the garden between the club members who take forward the democratic management of the projects of gardens in town.

References

Bruzi E (2013) Les jardins partagés de Strasbourg: expression locale d'une idéologie globale. Master's thesis, Strasbourg National Superior School of Architecture

Cérézuelle D (2003) Les jardins familiaux, lieux d'initiation à la civilité. Communications 74(1):65–83

Cérézuelle D, Les jardins d'aujourd'hui (1999) Jardinage et développement social. Du bon usage du jardinage comme outil d'insertion sociale et de prévention de l'exclusion. Guide méthodologique. Charles Léopold Mayer, Paris

Chamboredon JC, Lemaire M (1970) Proximité spatiale et distance sociale. Les grands ensembles et leur peuplement. Revue française de sociologie 11(1):3–33

Chantier Nature (1997) Solidarité – Proximité – Biodiversité. Proceedings of the Forum Le Jardin dans tous ses états, Lille, 23–24 October 1997

Charmes E (2011) La ville émiettée. Essai sur la clubbisation de la vie urbaine. PUF, Paris

City of Paris (2010) Jardins partagés Programme Main Verte. City of Paris

Contassot (2005) Introduction. In: Proceedings of the Forum 4 days for the shared gardens, City of Paris, p 3

Donzelot J (2006) Quand la ville se défait: Quelle politique face à la crise des banlieues? Seuil, Paris

Donzelot J (2011) Chronique de la France des cités (IV). Strasbourg: le tram et les cités. Esprit, octobre 2011, pp 17–27

Dubost F (1997) Les Jardins ordinaires. L'Harmattan, Paris

Estèbe P (1998) Les métiers de la ville. Esprit, mars–avril 1998, pp 48–59

Foucault M (2004) Sécurité, territoire, population: Cours au Collège de France. 1977–1978. Seuil/Gallimard, Paris, pp 13–24

INSEE (2016) Social and fiscal localized files (FiLoSoFi) par IRIS—Year 2012, INSEE. https://www.insee.fr/fr/accueil. Accessed 25 June 2016

Jardin dans tous ses états (2000) Solidarité Proximité Citoyenneté Environnement. In: Proceedings of the 2nd Forum Le Jardin dans tous ses états, Nantes, 8–9 December 1999

Morovich B (2011) Hautepierre: de l'espace conçu à l'espace vécu (Partie 2). In: Proceedings of the conferences of the 100th anniversary of the garden city of Stockfeld, City of Strasbourg, pp 92–98

Muramatsu K (2012a) Les jardins collectifs: une agriculture du social. In: Nizet J, Stassart PM, Van Dam D, Streith M (ed) Agroécologie: Entre pratiques et sciences sociales, Educagri, Dijon, pp 219–232

Muramatsu K. (2012b) Dispositif d'insertion par le maraîchage biologique. À la recherche d'un "social durable". In: Stoessel-Ritz J, Blanc M, Mathieu N (ed) Développement durable, communautés et sociétés. Dynamiques socioanthropologiques, Peter Lang, Bruxelles, pp 87–98

Muramatsu K (2014) L'insertion par le travail agricole: une pépinière pour réinventer l'autonomie et la solidarité. In: Ferréol G, Laffort B, Pagès A (ed) L'intervention sociale en débat, nouveaux métiers, nouvelles compétences, Eme Éditions/Proximité, Bruxelles, pp 155–167

Muramatsu K (2015) Jardins collectifs, ancien et nouveau mode de traitement du social. Quelques clés de compréhension. In: Bresson M, Colomb F, Gaspar JF (ed) Les territoires vécus de l'intervention sociale, Presse Universitaire de Septentrion, Villeneuve-d'Ascq, pp 215–225

Muramatsu K (2016a) Expériences des jardins partagés à Strasbourg: dynamique d'hybridation entre le social et l'écologique. In: Allemand S, Heurgon E (ed) Nourritures jardinières dans les sociétés urbanisées, Hermann, Paris, pp 60–66

Muramatsu K (2016b) Étude de cas: l'insertion sociale par le travail agricole. Le cas des «Jardins de Cocagne». In: Grésillon E, Alexandre F, Sajaloli B (ed) France des marges, Armand Colin, Paris, pp 369–372

Muramatsu K (2016c) Problems and future of welfare gardens in France: Shared gardens in Strasbourg. In: Ando T, Miura A (ed) Proceedings of the symposium urban environment and food security, Saitama University (Japan), 22–34 (English and Japanese)

Réseau Cocagne (2009) Guide des Jardins de Cocagne. Alternatives, Paris

Strasbourg Eurométropole (2015) Contrat de Ville de l'Eurométropole de Strasbourg 2015–2020. Strasbourg Eurométropole

Voudouhe G (2015) Hautepierre: Un éco-quartier modèle pour la ville de Strasbourg: utopie ou réalité? Doctoral thesis, Strasbourg University

Ziegler V (2011) Hautepierre: de l'espace conçu à l'espace vécu (Partie 1). In: Proceedings of the conferences of the 100th anniversary of the garden city of Stockfeld, City of Strasbourg, pp 80–90

Author Biography

Kenjiro Muramatsu has a Ph.D. in political and social sciences and currently is associated researcher in Laboratory of Social Dynamics and Spatial Reconstruction (LADYSS, Paris) and lecturer in Japanese studies (language and civilization) in Strasbourg University. His research focuses on the social and contemporary uses of agriculture and the history of back-to-the-land movements in Europe and in Japan.