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Urban agriculture on the move in Paris: The routes of temporary gardening in the neoliberal city

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Abstract

Based on the extended case study of urban agriculture in Paris and its suburbs, this article illustrates the shift in land regulation and ownership structures that follows the neoliberalization of the urban economy and its impact on the dynamics of urban agriculture initiatives. Our findings highlight the fact that as urban agriculture struggles to find permanent locations, temporary open spaces are made available by urban regeneration processes. Some initiatives have come to terms with this precarity of land access and have adapted to it by taking advantage of the plant and animal properties that allow temporary and nomadic farming and relocation of gardens. This has led to the burgeoning of new subtypes of urban agriculture initiatives over the past decade. Our case study of *shared gardens* shows that the revival of urban farming and gardening is not due to the resurgence of permanent land access that prevailed for traditional family gardens establishment but to the re-negotiation of land access temporality institutionalised by municipal policy. It

illustrates a new form of public action where "temporary gardened urbanism" prevails and reflects the commoditization of urban rhythms and spaces, and ultimately leads to the displacement of gardens, without guaranteeing the survival of the gardeners' community. But the case of Paris and its suburbs also provide a good case to study how inhabitants' initiatives can grow in the urban fabric outside the national allotment policy frame, creating new temporary places and nomadic activities that can outlast the timeframe imposed by neoliberal temporary urbanism.

Keywords

Urban agriculture; temporary urbanism; nomadic gardening; shared gardens; Paris.

Introduction

In the past decade there has been large-scale rediscovery of gardens and food production within densely populated cities, reviving a stream of research on "urban agriculture", defined in the 2000s as "the growing, processing, and distribution of food and other products through intensive plant cultivation and animal husbandry in and around cities" (Urban Agriculture Committee of the CFSC, 2003, quoted in Tornaghi, 2014, 3). The generic nature of this definition bears witness to the efforts to conceptualize the phenomenon in a way that encompasses all the forms and processes observed.[1] Working with this generic definition, researchers throughout the world agree on the fact that urban agriculture contributes to food security, especially for the poorest segments of the population, to satisfying city-dwellers' demand for natural spaces, and to maintaining green belts (Duchemin et al., 2008; Wirskerke and Viljoen, 2012). Adopting these preliminary principles, many studies and proposals for the preservation and development of urban agriculture spaces have consequently emerged (Viljoen et al., 2005; Lohrberg et al., 2015).

Radical and neoliberal urban agriculture

The deeper these studies go into the complexity of maintaining urban agriculture spaces in the city, the more they reveal the various – and sometimes ambiguous – functions they fulfil for a range of heterogeneous stakeholders. Scholarship in the humanities and social sciences on this multidimensional subject has highlighted the fact that, beyond the technical dimensions of production in artificial environments, urban agriculture has proven in many situations to be the driver of a city's socio-political change (McClintock, 2014). Urban gardens and

[1] It thus avoids the distinction that tends to be made *a priori* between professional (commercial) practices on the one hand and recreational activities on the other, including both cultural and livestock farming activities.

farms are described as places where socially and spatially marginalized individuals are afforded an opportunity to have greater control over their own local food production and their everyday space (Reynolds, 2015). Some authors also emphasize the role of urban agriculture in the formation of citizen movements demanding "the right to the city", as Henri Lefebvre defined it in 1968 (Purcell and Tyman, 2015). The literature has thus studied the similarities and articulations between various daily endeavours to maintain cultivated spaces through networks of exchange and mutual help. These actions are structured around gardens and the wish to collectively transform the city through political action involving ordinary citizens (Rosol, 2012).

Furthermore, the ambiguous role of public policies and discourse is attracting a lot of attention, given their influence on the dynamics (including maintenance or eradication) of spaces devoted to urban agriculture. Indeed, studies have shown that despite generic discourse that frames urban agriculture as a tool for achieving a more "sustainable" city, urban gardens and farms – the last remaining land potentially available for building in cities – are often a source of multiple tensions between property developers and city-dwellers. Urban agriculture spaces are often perceived as pockets of resistance to urban development (Staeheli, Mitchell and Gibson, 2002; Eizenberg, 2012) whereas public authorities are shown to be in favour of building projects that benefit business and generate additional income for the city (Wekerle and Classens, 2015). Paradoxically, from another perspective, scholars show that urban gardens can also play a role in urban redevelopment programmes that stem from neoliberal reforms to shift the provisioning of collective services to non-governmental organizations, unpaid city-dwellers, or self-funded commercial initiatives (Brenner and Theodore, 2002a; Allen and Guthman, 2006; Pudup, 2008; Rosol, 2012).

Research on urban agriculture has thus been driven by this debate, in which some claim that the vitality of urban agriculture lies in its ability to create spaces of freedom, where social relations of domination produced and/or reinforced by the neoliberal economy can be challenged, and others see it as a mechanism reproducing the neoliberal urban model. In a recent statement, Nathan McClintock proposes that we move beyond this paradox by arguing that urban agriculture "has to be both" as urban agricultural spaces are the outcome of various and contradictory social processes that play out at differing scales of economic and political organization of the city (McClintock, 2014).[2] He builds his argument on an analysis of the meanings of urban agriculture as expressed by urban agriculture programme facilitators and participants in Oakland. This last perspective has unfolded a new scholarly approach that we wish to engage with here, whereby a

[2] The author identified how urban agriculture initiatives can simultaneously "serve the shadow state", "subsidise social reproduction", "oppose the industrial agri-food system", "reclaim the commons", "reconnect to the means of production", "provide food security" etc… (McClintock, 2014, 160).

more accurate analysis entails attending to how political economic factors allow these apparently contradictory processes to generate urban agriculture spaces in various contexts.

The influence of property ownership structures

To do so, following the latest work of Michael Classens (2015), we wish to give more attention to the role played in that matter by the property ownership structures that bind "nature" (the "stuff" of gardens) and "society" (the people, practices and cities surrounding the garden) where urban agriculture rises. Reviewing the way in which urban agricultural dynamics are studied, Classens (2015, 236) stresses out the fact that urban agricultural spaces are hybrid, produced socially but also dependent on the properties of the natural spaces that determine the latitude one has to use space. Nature (tended or wild) is indeed not an entity outside of built-up city space, but rather a non-human actor of the urban fabric that can be "a solid counterpoint to the pervasive logic of neoliberal capitalism" as the biophysical processes of plant biology has always and continues to be a serious constraint to the social relations of capital. An illustration of this unique aspect of nature is that "plants self-reproduce for free … they can be grown by anyone, almost anywhere [and] they allow one to disentangle themselves from the corporate food system" (ibid.). But because they are socio-natural hybrids, the fact that urban gardens can provide "accessible sites within which to build up the seed sovereignty and ultimately food sovereignty movements" is highly dependant on "broader ecological and political economic processes [which] work to structure particular kinds of human and non-human relationship". In particular, it is crucial, from his perspective, to unveil the property ownership structures to understand "to what extent these aspects might limit or enable radical social change" (ibid.). These elements thus support Tornaghi's call for a critical geography of urban agriculture that "should first look for the specific forms of land regulation and ownership which determine the set of constraints and opportunities which shapes the initiatives in their contexts" (Tornaghi, 2014, 561).

The new temporality of open land access in the neoliberal city

When permanent green open spaces (such as public parks and forests) become scarce resources in densely populated urban areas, the search for space by gardeners, green space entrepreneurs, and public parks developers sheds lights over the only open spaces left available: vacant lots (wasteland, brownfields, etc.), which correspond to urban places unused by their owners and waiting for new development. Planners engaged in the project of designing more "sustainable" densely populated cities have also paid more and more attention to farming and gardening in and on buildings. This new form of urban food production, inspired by the "low space no space" agriculture that can be found in cities of the global South (Ranasinghe, 2009), is characterised by the non-use of land or acreage, leading scholars to refer to it as Zero-Acreage Farming (ZFarming). But as Thomaiers et al. (2015) point out, the cost of such projects remains very high and

initiatives are still rare.[3] We therefore focus our attention here on the more frequent way of expanding green urban spaces at low cost which rely on vacant lots gardening.

Vacant lot gardening is not a new phenomenon per se. In a detailed history of community gardening programmes in the USA, Laura Lawson (2004) shows the close ties between gardening and vacant land. During times of crisis, gardening has been envisaged as a use of vacant land to improve the domestic food supply. As Nilsen (2014) points out in the cases of France, England and Germany, the periods of food scarcity due to the World War, marked a turning point in the history of workers' allotments in cities, towns, and villages across Europe. Miller (2013) illustrates this phenomenon in the case of England, reminding us that "in the face of national legislation from the 1830s onwards … the number of allotments rose, from under 200,000 in 1850 to over 1,400,000 by 1943 … boosted by concerns for national food security during wartimes" (Miller, 2013, 38). In France, workers' allotments grew significantly during the period of German occupation of northern France. In the context of food rationing at the time, the idea was to improve the population's living conditions. As they were supported by food policy, more and more lands were needed during wartime and vacant lots (and other underutilised spaces such as railway rights-of-way) were used for gardening. The tiniest bit of land was gardened, with or without the owner's consent (Consales, 2005). Although poorly documented, examples of localities requisitioning land speak to the significant involvement of public authorities in securing the land for gardens (Weber, 1998); ultimately, many family gardens were set up on land owned by the local or national State.

Today, the link between urban vacancy and gardening has changed in practice and meaning. On one hand, urban gardening is becoming more and more multifunctional, as leisure and social activities are developed in addition to food provisioning (Wiltshire and Azuma, 2000). And on the other hand, plot vacancy is no longer seen solely as the spatial outcome of a wartime economy, but an intrinsic component of the capitalist city, which needs a certain level of vacant space for its very reproduction (O'Callaghan and Lawton, 2016). Under the neoliberalization of urban political economies, the vacancy of lots slated for development is due to several processes. First, brownfields are legacies of the industrial past of Northern cities, left by the industrial recession that followed the crises of Keynesian welfare states. Second, undeveloped urban sites owned by speculators frequently remain vacant, waiting for the exchange value on the land market to increase. Finally, open spaces can also be created by the destruction of one building in order to make place for another one. This is common in working class neighbourhoods where, as Weber points it at, old buildings are targeted by discourses on "obsolescence" in order to

[3] In their study of Zfarming, they inventoried existing projects across North America, Europe, Asia and Australia and found only 73 in total.

legitimate politics of urban redevelopment mainly based on the interests of private housing developers and investors (Weber, 2002).

Exploring the geography of temporary urban agriculture

With the neoliberalization of the urban economy, the fact that vacant lots can become the target of investors aiming to extract value from them is not irreconcilable with their temporary use for other purposes. Temporary urbanism, and temporary uses in particular, have given rise to a significant body of academic literature (Haydn and Temel, 2006; Bishop and Williams, 2012). Vacant lots are then no longer simply spaces "to fill" but places whose own materiality, even if precarious, is valued. They become spaces of opportunity for a green urbanism that values temporary gardening arrangements as described above, and fits squarely within a sustainable development framework structured around principles of densification, regeneration, reintroduction of nature, citizen participation, and social cohesion. A vacant lot's "waiting period" becomes a time frame in its own right (Andres, 2006) that enables the transition between two uses, before and after its vacancy.

If most studies focus on cultural temporary uses, they also point to how temporary uses allow for the combination of two irreconcilable agendas: urban planners' aims for urban development and users' need for alternative spaces in the capitalist city (Colomb, 2012). Beginning in the 1970s in the USA, it was a citizens' advocacy movement rather than a political movement that called for the appropriation of vacant urban land for gardening. These lots, first identified as "empty" spaces, testimony to the failure or abandoning of the system of accumulation, became spaces of opportunity for city-dwellers claiming a right to the city. Collective appropriation of these urban spaces by growing plants on them was, moreover, a tool for action, a way of "reconquering" them with the help of nature (Duchemin et al., 2010). The case of New York in the early 1970s is illustrative. Hard hit by the economic crisis, entire run-down buildings were often burned by their owners to collect insurance payments, or were simply abandoned. In these cases, the municipality took them over but lacked the means to renovate them and chose instead to demolish hundreds of them, leaving vacant lots in the heart of the city. Community gardens appeared in this context, an extension of the citizen movement known as the Green Guerrillas, initiated by the artist Liz Christy and others.

Recently, Armstrong and Lopes (2016, 22) have underlined how urban agriculture has been highlighted as a "flexible infrastructure", well adapted to the temporary use of urban space that has become "the focus of innovative planning." This flexibility, which facilitates urban development, is linked to the annual crop cycle of the plants but also to the new concept of "mobile urban agriculture", also described as "mobile and nomadic gardens" by Herman (2011) in his review of temporary gardens in Warsaw and Boston. This subtype of urban farming is based on a variety of technical methods, some of them a traditional part of the production

cycle (e.g., the mobile hives of urban bee-keepers or the mobile fence of urban shepherds), while others require new innovations. Landless mushroom producers, for example, often grow in portable containers filled with substrate, and collective gardeners may use planter boxes or elevated cultivation trays that can be moved in and out of public space according to land availability. A non-profit organization managing a collective garden, for example, may be asked to move to another site to make room for the construction of a retirement home.

Scholarship in engineering and the agricultural sciences provides descriptions of the material forms of these temporary and semi-nomadic activities in relation to the development of urban cropping systems and accompanying technological trends towards lighter and more transportable systems (Samangooei et al., 2016). In the post-industrial cities of the Global North, these are promoted as a technical solution to avoid risks of contamination due to the use of potentially polluted land (De Kimpe and Morel, 2000; Prasad and Nazareth, 2000; Schwartz, 2013). Such technical innovations support the conception of temporary and entirely mobile devices (raised or suspended off-ground trays; mobile sheep pens; greenhouses that can be dismantled, etc.; see, for instance, Vick and Poe, 2011).

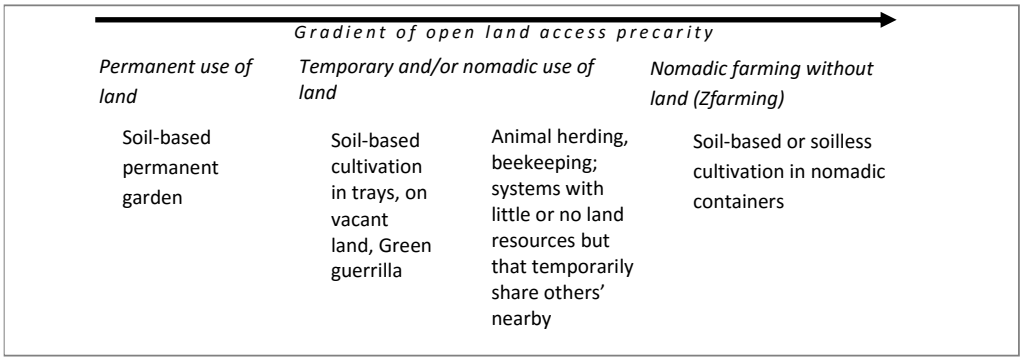


Figure 1: Evolution of urban agriculture toward temporary and/or nomadic types in response to land scarcity

Beside these technical considerations, however, the emergence in various contexts of these new subtypes of urban agriculture designed for temporary use in open spaces (see Figure 1) leads us to consider a more generalized shift toward new land regulation and property ownership structures that promote them; indeed, new arrangements based on temporary use of vacant lots are burgeoning between owners and gardeners/farmers. This tendency doesn't concern only vacant lots, but characterises a more general trend of land access (re)negotiation between urban agriculture entrepreneurs and participants and urban landowners (public and private housing developers, but also private homeowners, etc.). Wekerle and Classens (2015) explore this process of land access (re)negotiation in the specific case of Toronto, but the upsurge of new, more temporary urban agriculture initiatives signals the shift in property ownership structures in wide variety of contexts. This

shift seems to promote new human and non-human relationship where the "rootedness" of nature becomes less important than its ability to cope with displacement. Following Classens (2015), property ownership structures are likely to play a significant role in shaping this relationship.

But we are still in need of on-the-ground observations to support this assertion Moreover, these dynamics are challenging our knowledge of the relationship between the ability of urban agriculture initiatives to create spaces for socio-political change when and where "rooted", sedentary, and settled activities are no longer possible. Often rooted initiatives are used, both literally and figuratively, to describe the specific nature of urban agricultural projects. Whereas urban lifestyles are based on the multiplication of individual mobilities (daily and residential), both necessary and often desired, working the soil and producing living organisms is described in the literature as the sign of quite the opposite, that is, of aspirations and desires to reappropriate everyday living spaces (Reyburn, 2002; Duchemin et al., 2010), based on daily rootedness in the soil (Laroze, 1990; Larbey, 2014) and the neighbourhood. If not already officially established, the right to access and use permanently the land is on the top of the list of requests claimed by gardeners (Demailly, 2014a). As Holland (2004, 291) points out in the case of community gardens in the UK, "insecurity over tenure can often blight a community's development of a garden." The shift to temporary use thus seems to alter the capacity of urban agriculture to create places of socio-political change.

It is in this context that we explore this shift in Paris, France. Drawing on an inventory of vacant spaces and in-depth analysis of the various modes of urban gardening practiced thereupon, we consider how temporary forms of urban agriculture are impacting the community building function of collective gardening within the neoliberal city, as we believe this function is both the main purpose of this subtype of gardens (McClintock, 2014) and the most threatened by its displacement. Until recently, France only experienced urban gardening throughout collective workers' and family gardens composed of individual plots gardeners could lease. The land tenure of these gardens is secured by national law. The evolution of different forms of gardening in the Paris metropolitan region illustrates a longstanding dynamic of adaptation to the context of the increasing scarcity of open land in inner-city neighbourhoods. It is in this context that temporary forms of production emerged and now contribute to the diversity of the urban farming projects in vacant spaces throughout the region. Among these more temporary urban agriculture initiatives, most appeared in the early 2000s and were inspired by the community garden model. Paris and its suburbs therefore provide a good case to study how inhabitants' initiatives can grow in the urban fabric outside the national allotment policy frame.

Our data comes from a review of grey literature by non-profit and political organizations (primarily the non-profit association *Graine de Jardins*,[4] or "Gardens' Seed", and the municipal government of Paris), a series of local case studies, and an inventory of the various urban agricultural initiatives present on vacant land, which we consider ideal points for observing emergent forms of temporary urban agriculture. The inventory draws on secondary information, such as data from reports on urban agriculture initiatives in Ile-de-France (Daniel, 2013), as well as on in-depth interviews, and participant observation within the non-profit network in Saint-Denis, an adjacent northern suburb of Paris. We also carried out a more in-depth empirical study of gardens on vacant land,[5] that is, collective gardens managed by city-dwellers on vacant lots, pending a decision to reallocate the land. We distinguish between the *institutionalized* gardening of vacant land (gardens managed by non-profit organizations under contract with the owner, generally the municipality) and vacant land gardened informally by city-dwellers, without the owner's consent. The formal type comprises the majority of shared gardening in Paris and surrounding areas; since the early 2000s, 150 shared gardens on vacant lots have been institutionalized at the regional scale, 90 of them in the city of Paris), Our analysis is based primarily on the results of PhD research (Demailly, 2014b) on 49 of these gardened vacant lots (of which 44 were institutionalized and 5 informal). During this study, six of the institutionalized gardens ceased to exist. Of these, five were relocated.

In the following sections, we first contextualize and qualify the upsurge of new forms of temporary urban agriculture within the dynamics of Paris's (neoliberal) urban fabric. In order to illustrate the shift in property ownership structures that impacts the temporality of urban agriculture, we then focus on the specific case of collective urban gardens, which are burgeoning in the capital under new legal status after a long period of absence. Finally, interviews with gardeners from four relocated gardens allow us to discuss the impact of this shift on community building dynamics.

Urban regeneration and the rise of temporary urban agriculture in Paris

The city of Paris and its suburbs is the largest metropolitan area in France both in terms of number of inhabitants (some 8 million) and macro-economic indicators. It is also one of Europe's most densely populated cities. Between the

[4] These two institutions keep up-to-date inventories of shared gardens (respectively, on a regional scale, and for Paris). The association Graine de Jardins is the regional representative of the national network of shared gardens: *le Jardin dans Tous Ses Etats* (JTSE).

[5] Our results are based on a methodological corpus composed of simple and participant observations, questionnaires and interviews undertaken between July 2010 and May 2013. The questionnaire was administered to 130 members of Parisian allotment gardeners' associations. It was combined with 47 one-hour semi-structured interviews in Ile-de-France. Interviewees included political actors (councillors and administrative and technical officials), owners, non-profit organizations (existing association creating projects; participant partner association), and members.

latter half of the 19th century and the first half of the 20th century, it experienced a phase of intense industrialization of its inner suburbs (*faubourgs*). Today, vast swaths of land experiencing redevelopment attest to both the high concentration of these industrial activities and their decline from the mid-20th century to the 1980s, which brought on their conversion to tertiary activities. Paris is France's economic bridgehead, in which the country's financial, political and cultural power is concentrated. The region is distinguished by wide social inequalities between neighbourhoods, which have been mapped by Anne Clerval's work on the gentrification of Paris (Clerval, 2013). These inequalities stem from the city's industrial history and have been reinforced by more recent processes concerning the spatial distribution of migrant workers and funds allocated to local authorities. But since the 1970s Paris has also been the centre of vast networks of real estate development and financial investment. From the 1980s on, the reorientation of the investment system resulted in "the application of financial methods to the city and land, to heritage assets and to the assets of public goods or territories" (Nappi-Choulet, 2012, 44). In the wake of the 1991 financial crisis, the city witnessed the purchase of real estate by massive investment funds. Thereafter, as the principle of shareholder value gained currency, land and buildings were seen as assets whose sale could generate immediate profits. In a context of growing debt, mortgage-backed securities were generalized and many firms sold the property on which they operated. Since 2008, due to the debt crisis, funds have invested in other assets (e.g., hotels and businesses). Some vacant land in the city is thus a result of land-owning firms having shifted the concentration of their portfolios to finance. Given these dynamics, Paris provides a case study that furthers our knowledge of concrete and local forms of "actually existing neoliberalism" (Brenner and Theodore, 2002b).

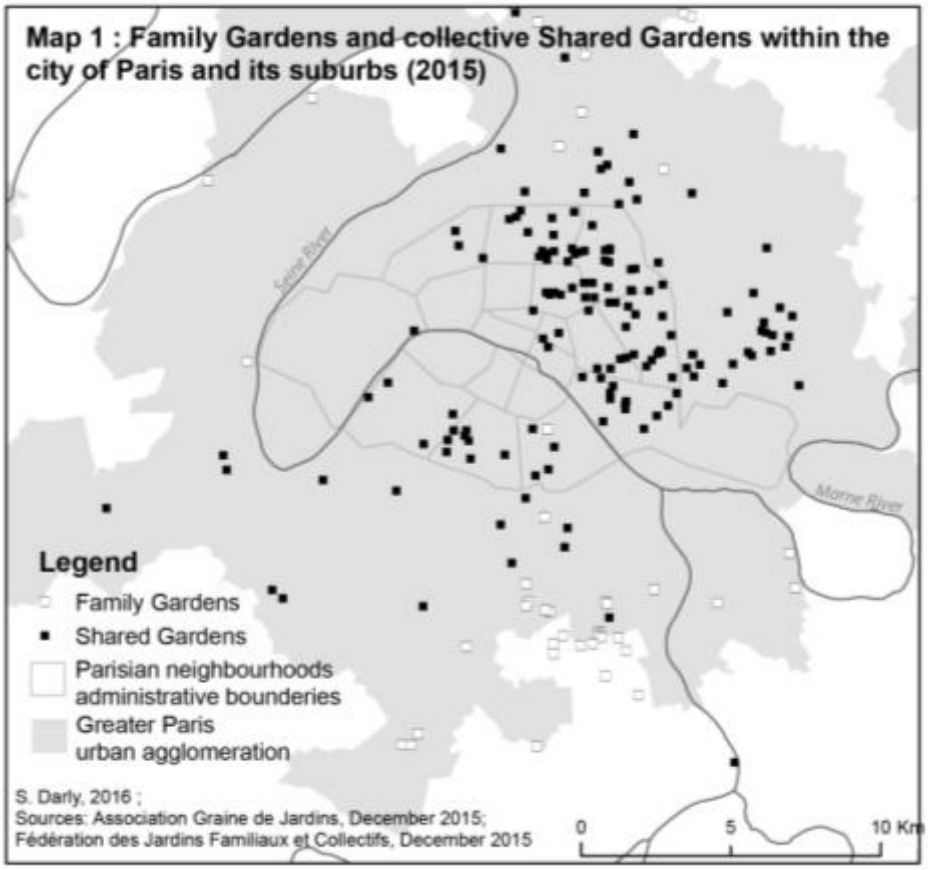
The uneven dynamics of "green" open spaces within the Parisian urban agglomeration

In the last decades, access to public green spaces (parks and squares) is a constant issue for Parisians and inhabitants of the suburbs. While the World Health Organization recommends secure access to 10 m² of public green spaces per inhabitant, census data since 1990 reveal that the majority of inner-city neighbourhoods offer a total of 580 hectares (7% of the total surface of Paris inner city), amounting to less than 5 m² per person – and in some cases less than 1 m² (IAU, 2009; APUR, 2010). This situation is improving within Paris, at a very low rate (+0,5% between 1990 and 2009), whereas for most of the suburbs, the reverse is true. From a quantitative perspective, the situation in in regard to the question of green space access in the suburbs nevertheless seems less problematic, as private green spaces are significantly more numerous than within Paris (27% of the total surface of the administrative circumscriptions compared to 4% within Paris border, Riboulot-Chetrit, 2015). A recent quantitative analysis of high resolution satellite images of the inner Paris and suburbs confirmed these figures, revealing that only 17% of the total surface of the city of Paris is occupied by non-built, green spaces

(i.e., occupied by vegetation or tree canopy), which makes Paris part of the group of European cities with "limited green space availability" (Fuller and Gaston, 2009). In the suburban surroundings the ratio is systematically higher, as high as 70% in some cases, as in Villetaneuse and Stains in the northern part of Parisian agglomeration, for example. Finding places to grow food and nature in Paris is therefore becoming more and more challenging for gardeners and UA entrepreneurs and shapes the context in which access to land is currently re-negotiated.

Farming in and on buildings is almost inexistent in Paris, even if the mayor's teams are promoting it. They launched the *Objectif 100 hectares* program, which aims to support thirty-three "greening" projects in and on the capital's buildings, but most of these are at the very early stages of implementation. Presently, most urban agriculture initiatives are using interstitial spaces left vacant by the urban economy.

When the industrial development of the Parisian agglomeration reached its climax in the 1970s, major production sites were already located outside the municipal boundary of the inner, densely populated core, mainly in the northern and eastern suburbs. This is therefore where one finds the region's remaining brownfields from its 20th century industrial past. But, as a recent public report revealed (IAU, 2009), these are being replaced by new urban developments; total brownfields area shrank from 408 hectares in 1998 to 140 in 2007. The same report suggested that at the same time as these large industrial sites were redeveloped, new wastelands appeared (122 hectares between 1998 and 2007) that are smaller and more entangled in the urban fabric. Focusing on vacant lots dynamics inside the administrative boundaries of Paris, we calculated that the amount of wastelands recorded in the regional land cover database (provided by the regional planning institute IAU) fell from 80ha in 1982 to 24 hectares in 1999, but has remained close to 20 hectares since then (last record in 2012), the majority of sites being less than 5 years old. As these results include only those vacant lots large enough to be mapped via automatic image classification, smaller temporary vacant lots associated with more punctual urban regeneration efforts may go uncounted. Spatial analysis performed by Clerval indicates that the waves of gentrification correlated to these operations have been continually and gradually spreading since the 1970s until now, from the centre of Paris toward well-known southern, northern and eastern working-class neighbourhoods that constitute good opportunities for investors (Clerval, 2013). These neighbourhoods also happen to be where we find the highest numbers of "shared gardens", the latest type of (smaller and less permanent) collective garden that have been burgeoning in the capital only since early 2000 alongside other forms of temporary and nomadic urban agriculture initiatives (see Map 1).



Map 1: Family gardens and shared gardens in Paris and its suburbs. Most of the gardens are located in the eastern side of the urban agglomeration, and follow the distribution of working class neighbourhoods. Family Gardens are entirely located outside Paris whereas the majority of Shared Gardens located in Paris.

Temporary and nomadic gardening in Paris and its suburbs

The extreme precarity of land access for gardening that characterizes this recent chapter in Paris's urbanization seems indeed to have been followed by new types and spatial arrangements of agriculture, more or less temporary, which we identified during our examination of the gardened vacant lots (Table 1).

Table 1: The various forms of urban agriculture initiatives in Paris and their land access conditions

Urban agriculture subtypes	**Initiatives in Paris**	**Land access conditions**
Permanent collective gardens and farms	*Jardins parisiens* (family gardens; only one remaining inside Paris, 70 in the working-class suburbs)	Long term access to public land secured by family gardens' law; relocated to the commons in cases of land pre-emption
Temporary on-the-ground and off-the-ground gardens	*Réseau Graine de jardins* (institutionalized shared gardens); informal "guerrilla" gardens	Short term access to public or private land; informal or secured via a written contract
Nomadic on-the-ground animal herding	*Association Sors de Terre* (goats to maintain green spaces), *Bergers Urbains* (urban pastoralists)	
Nomadic off-the-ground gardens	*U-farm* (production of mushrooms on coffee grinds in a container); *Projet Ecobox* (a temporary garden built on pallets); *La Goutte Verte* (itinerant vegetable patch in the north of Paris)	

The most fleeting activities found on vacant lots – those lasting only a few months –are the nomadic ones, which have adapted to total absence of soil availability. In these cases even a vehicle may serve to contain the cultivated substrate. They are set up for street fairs, and on sidewalks or parking lots until harvest. Nomadic farms may be created by commercial firms that seek maximum visibility in the short term. U-farm in Paris is one example:

> The U-Farm project is part of a "smart street furniture" experiment aimed at both developing an economic activity via the production of mushrooms on coffee grinds, and fostering social linkages in a public urban space. The concept is inspired by a technique for producing mushrooms in Zimbabwe, on coconut fibres. At the moment the demonstration container in which the mushrooms are produced is in front of the stadium. (Daniel, 2013, 37)

Figure 2: Ecobox, a garden on pallets in the 18th arrondissement, Paris. Photos by the authors, March 2010 and April 2012.

Nomadic collective gardening projects are another type of off-the-ground temporary gardening, less provisional than the previous and lasting at least a year. For most of these projects, the owner (generally the municipality) considers gardening activities to be transitional as the site awaits urban redevelopment. Users, under contract, commit to returning the lot as it was found. For the Ecobox garden project, created in 2002, a collective of architects (AAA) proposed an above-ground structure on pallets, presented as an integral part of an "eco-urbanity strategy". The structure could be dismantled and thus moved (Figure 2).

Indeed, because of the success of collective gardens, non-profit associations managing temporary gardens often ask the municipality for a new lot to keep gardening. The garden's mobility is thus the consequence of the temporary status, but for some gardens the ability to move clearly appears as central to their identity. *La Goutte Verte* ("The Green Drop"), for instance, was designed in 2006 as a mobile garden project by the organization *Semipublic*, and since replaced by a community center. The concept, clearly displayed on the gate of the previous site, has nevertheless been challenged by the lack of expertise on relocation techniques; after the first pitfalls were encountered, experiments were designed with more suitable technologies.

> "Basically their idea was to create a mobile garden, to plant in trays and to … the day of the move, to put wheels on the trays 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 for sure not little wheels that you buy at the local hardware shop and put onto trays [laughs]". (User of La Goutte Verte, interview with the authors, April 2012)

Besides nomadic gardens, more traditionally nomadic activities, such as animal herding (urban pastoralism) can also be found (see Figure 3), another type of on-the-ground agriculture that negotiates temporary access to land with natural resources. For example, the non-profit organization *Clinamen* experimented with the reintroduction of sheep herding in the northern suburb of Saint Denis in order "to mobilize urban territories through the promotion of farming practices." Without stable land resources, the organization relied on the informal accessibility of urban wasteland and vacant lots to find rangelands. A member of Clinamen explains:

> "To preserve agricultural land near the cities one has to build here, in the urban fabric. One can't protect all vacant spaces from building. Sheep are ideal because when the time comes to build, one can move" (interview with the authors, October 2012).

Figure 3: Pictures of sheep herding (top) and rangelands on vacant lot (bottom) in Saint-Denis, north of Paris. Photos by the authors, 2013.

These nomadic off- or on-the-ground UA initiatives comprise only a small part of the urban agriculture initiatives we observed. Nevertheless, a greater number of gardens – half of the collective gardens we visited – have only

temporary access to their lots and, as a consequence, many have adopted temporary structures to hold soil, such as raised beds or trays (see Figure 4), without making them an explicit objective of the project (which is why we do not consider them "nomadic"). Most garden participants explained that the main reason they adopted raised beds and trays is because they are in fact a relatively cheap way of resolving the issue of possible or existing soil contamination, which can be used by city health departments as a justification to prohibit food production. In 2014, twenty-three of the forty-four institutionalized gardens studied were entirely cultivated with raised beds or trays, and nine partly so. All were used for vegetable production. This proportion has since increased; of the six gardened vacant lots that have been removed, which were among the oldest shared gardens, five were cultivated directly on the ground.

Figure 4: Cristino Garcia collective garden in Saint-Denis, north of Paris. Photo by the authors, 2013.

Informal vs. contractual land access for collective gardening

The upsurge of these new subtypes of urban agriculture is not only the result of commercial projects adapting to the new temporality of the city, but also the outcome of growing citizen engagement in creating informal collective gardens for community building. A few local residents developed one of these informal gardens, *Petite Ceinture,* without asking the consent of the owners. The users did not initially intend for it to last (the project ended in 2012); they had simply wanted to create an activist territory that was open to all, symbolically and materially, free

of institutional recognition. Their participation in the garden was based on illicit occupation, the absence of legitimization, the flouting of social conventions, and rejection of the political system. Those committed to the project advocated for the cultivation of other vacant land throughout the city, as practised in their garden and elsewhere. This example attests to the mobility of seeds and activists, whose militant actions spread across various urban territories and served to better anchor citizen movements and, at the minimum, construct a more networked civic activism. We find here similarities with the other recent histories of urban agriculture activists' informal occupation of vacant lots and itinerant interventions, around which they were able to build collective resources for action and protest. Through our observations, we found that activists promoting an urban agricultural social movement see dispersion and mobility as equally important – and even more important – as the desire to appropriate and to anchor; indeed, the ability to be mobile has been described as a condition for the participation and spread of protest movements (Ripoll, 2005). One emblematic reference to Liz Christy's historic movement in New York is the seed bomb, a Green Guerrilla mainstay that has found new resonance in Paris. As the name suggests, these bombs resemble portable "arms" which are light and can be transported across an entire city for better spatial coverage. This form of action, often found in militant urban agriculture circles, has also been observed in Paris in certain informal gardens on vacant lots where users define themselves as guerrillas gardeners and encourage visitors to throw the seed bombs across the city. The inscription on a pot containing seed bombs for visitors to the PC 19 garden, for example, reads, "These balls of earth contain seeds: butterfly seeds!! Scatter them liberally on the many vacant lots across Paris!!!!"

Despite these similarities, most of the informal collective gardens nevertheless differ from this model, as they remain less nomadic and tend to negotiate the right to stay with owners (mostly public) in order to cease being informal. Moreover, we observed an increasingly active effort by city planners to contain these informal activists' interventions, which, unchecked, risk leading to resistance to closure and radicalization of the collectives. This is further reflected in the institutionalization of *anticipated* temporary occupation of vacant urban spaces by urban gardeners, as well, even when there are no pre-existing collectives. Municipalities put out calls for project proposals (cf. excerpt below) in order to optimize, both in space and time, the conditions for profitable urban development. One request for proposals (RFP) from the city of Saint-Denis read:

> The offer is for a Synergie vacant urban lot to be made available to one or more artists, architects, designers, social facilitators, gardeners, etc. to develop a cultural project in the broad sense, with local residents and users living in the area … It may include cultural, sports, recreational, or festival proposals that raise awareness about sustainable development (gardens, urban

> agricultural activities, recovery, upcycling, etc.) … The land will be made available for two years from the date the agreement is signed.[6]

The RFP from which the text above is excerpted demonstrates how residents' participation is carefully framed by terms of references drawn up by the owner (the municipality or a private operator). Despite the examples discussed above, it is therefore unsurprising that the collectives involved in institutionalized gardening of vacant lots are only weakly engaged in militant action (and discourse) towards socio-political transformation of the city.

The nature and future of collective gardening in Parisian "shared gardens"

Within this diversity of temporary and nomadic UA initiatives, the case of new collective gardens has drawn our attention, especially those temporary gardens recognized under the institutional label of "shared gardens". As we have discussed in the previous section, the growth of temporary urban agriculture initiatives contrasts with the "rootedness" of "traditional" urban agricultural spaces, that is, the individual vegetable gardens inherited from the industrial past of cities across the Global North. The current geography of these sedentary forms of urban agriculture – and in particular the fact that they have vanished from Paris's low-income neighbourhoods (see Map 1) – is closely linked to the property ownership structures under which they were established in the Fordist period. By focusing on the shift from (traditional) family gardens to (recent) shared garden spaces, we wish to contextualize the socio-political conditions of new land regulation arrangements and their impact on the ability of nature to support community-building dynamics.

Workers' and family gardens, the previous and "rooted" form of urban agriculture

The upheavals of the industrial era spawned a discourse on the benefits of working the land. The French urban gardens of the 19th century were initiated by charity work and industrial employers. In the late 19th century, workers' allotments became common, following the creation of the *Ligue du Coin de Terre et du Foyer* by Abbé Lemire. The aim of this abbot, who represented social Catholicism, was to improve workers' living conditions by affording them access to property with a garden that was "not liable to seizure" (Cabedoce and Pierson, 1996). In parallel, Abbé Lemire developed workers' allotments for the most underprivileged classes.[7] The garden represented a means of restoring public order; it constituted both

[6] http://ville-saint-denis.fr/jcms/upload/docs/application/pdf/2015-09/appel_a_projet_-_friche_synergie_-_2015.pdf, accessed on 8 December 2015. Translated from French.

[7] Leagues similar to the *Ligue Française du Coin de Terre et du Foyer* were created in Belgium, Denmark, and Germany. Such initiatives have also existed since the late 19th century in the USA (Lawson, 2004).

economical and moral underpinning for the workers' family, which was commonly viewed as uprooted (Dubost, 1997).

After WWII, during the period of reconstruction, Western Europe experienced a period of steep economic growth. French workers' allotments shifted from the realm of charity to that of non-profit organizations. Gardeners were thus no longer considered as beneficiaries but rather as users of these spaces, for which they had to pay a fee. Changes in the legal structure of these gardens were just the first step that concretized the split between people's gardens and social assistance. The law of 26 July 1952 changed the name "workers' allotments" – which had been discredited due to their association with the Vichy regime – to "family gardens". However, apart from the name, the definition of the family garden remained identical to that of the worker's allotment, that is, a space for the production and consumption of a family's own food, intended to ensure that the poorest households could feed themselves.

Between the 1950s and '70s, family gardens came to be seen as something bleak and outdated, at a time when there was no lack of competing urban facilities: housing, hospitals, schools, etc. Three-quarters of all workers' allotments consequently ceased to exist (Dubost, 1997). The growing importance granted to the environment, however, along with the emergence of public opinion attentive to ecological issues, provided fertile ground for the rediscovery of urban gardening (ibid.). In November 1976 a law was enacted to create and protect family gardens in France, to avoid the risk of expropriation. It ensured that they were granted the status of protected areas in local planning documents (POS) and that substitute land was provided in cases of expropriation. This law embodied the wish to ensure permanent access to land needed for gardening, given various constraints such as soil quality, access to water, fences, and so forth. These measures were highly protective but they also paradoxically limited the creation of family gardens. Map 1 shows that while the vast majority of family gardens are situated in working or lower- to middle-class areas, they have totally disappeared from the most densely urbanized area –the city of Paris itself – where access to vacant land is most precarious.

Temporary gardens on vacant lots: public policy issue, citizen approach

However, other types of urban gardens have reappeared in Paris since the 2000s, which are more informal, more collective, and less institutionalized than the traditional workers'/family gardens. These early experiences on vacant lands played a central role in shaping new land regulation for temporary urban agriculture in Paris. In 1999, a large vacant lot located in the north of Paris was spontaneously occupied and gardened by a few neighbouring residents under the name of *Jardin Solidaire*. It became a space of unity and sustainable development in a neighbourhood better known for insecurity problems. Yet the construction of a gymnasium had been planned for a long time on this land, which belonged to the the *arrondissement*. Institutionalization was unavoidable in order to maintain

control over the space while entrusting its management temporarily to the inhabitants, grouped together as a non-profit association. This example is one of several similar cases that the city hall had to face in the early 2000s. In particular, there were problems renewing agreements in the absence of clearly defined partnerships with the owner, as well as a lack of support from municipal councillors. In the meantime, the same City Hall department and the mayor's cabinet were invited to meetings concerning collective and educational gardening projects.

Despite much opposition due to neighbouring residents complaints and demands that vacant plots be cleared and maintained regularly, a "maturing process" was initiated, in which Laurence Baudelet, co-founder of the association *Graine de jardins* played a significant part as she was responsible for formalizing a municipal programme launched in 2003. At that time, Paris was the first municipality in France to set up a collective gardens programme called *Main Verte* ("Green Hand") in which gardens are officially called *jardins partagés* – literally "shared gardens". It was followed in 2009 by another in the adjacent eastern suburb of Montreuil. Other surrounding suburbs, without defining and adopting charters, used these pioneering experiences to specify precise rights and duties in the framework of conventions for land use and occupation.[8]

One could say that these "new" gardens are more dedicated to community building than the traditional family gardens were, as the food and plants are collectively grown by all the participants instead of being produced individually by one family on his allocated plot. But we believe that this dimension is undermined by the fact that the new charter sets a time limit, after which the land use rights of the owner prevail over those of the gardeners' and legitimate the clearance of the site. Owners accept the agreement if they judge it is adapted to the emergence and possible maturity of projects on vacant lots and being sufficient to justify the existence of a garden. In Paris and surrounding localities, agreements are generally renewed tacitly for five to six years. If the future urban development project has already been formalized and is underway, the agreement may be for a shorter period but is at least for one year (e.g., the *Super potager productif* – Super Productive Vegetable Garden) or two years (e.g. the garden *Autour du chêne 2*- Around The Oak Tree 2).

The Main Verte policy thus allows the municipality to retain control of building on vacant lands while non-profit organizations cooperate. Managing these new urban territories was not part of an activist struggle to counteract the urban re-

[8] Contracts grant the municipality the right to organize the space, generally by putting up fences, connecting the land to the water and electricity supply, bringing in topsoil, and installing taps or tanks to recover rainwater. In return, neighbouring residents must create a non-profit association, take out insurance and comply with certain constraints concerning the ecological management of the site and regular opening to the public. Their activities must correspond to those stipulated at the time the land is allocated, and must not disturb the neighbours.

development projects;[9] rather, it was born more from a need to create a pleasant place for the community to meet and bring nature into the city. Claims to preserve gardens did exist but were not very influential, and only one succeeded. Some gardeners even acknowledge the gardens' precarity:

> "Nothing is given for sure, greenery is not a priority for everybody … we have to cope with housing needs" (user of *Leroy Sème*, interview with the authors, October 2011).

More basically, most of gardeners stress their obligation regarding the signature of the temporary occupation contract. For example, the Jardin Solidaire initiative mentioned at the opening of this section signed its charter in December 2003 and closed down in the spring of 2004.[10]

This evolution clearly shows that the municipalities involved see these gardens less as a tool for social and environmental action than as "something that serves an immediate need, but ultimately and eventually will be replaced as a socioeconomic condition returns to normal" (Drake and Lawson, 2013, 2). An understanding such as this endorses exchange value at the expense of use value (Schmelzkopf, 2002) in a world dominated by the market economy and urban entrepreneurship (Harvey, 1989). The gardened vacant lot, attesting to the commodification of urban rhythms and spaces,[11] reveals a consolidation between the historical association of vacant lots, gardening, and increasingly precarious time frames.

Moving the gardens: what is left behind…

While institutionalization is no longer a guarantee of the longevity of the place in a hyper-competitive urban context, it does hold the promise of safeguarding the activity by way of planned relocation. Even if, unlike for family gardens, it is not mandatory for municipalities to offer an equivalent alternative space, they tend to do so whenever possible. Bound by commitments made through the charter, gardeners who see the date of closure of their garden approaching are faced with an injunction to end activity or to create a new garden nearby.

When possible, such process of displacement clearly impacts the garden spaces, but also the community-building dynamics related to nature. Three-quarters of respondents to a questionnaire we circulated in sixteen gardened vacant lots

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[9] This contrasts with the New York example, where community gardens emerged from a citizen movement and had to struggle for legitimacy in the 1990s when hundreds of community gardens were threatened by building projects, which, in turn, motivated a stronger alternative political movement (Schmelzkopf, 2002).

[10] Confronted with the users' mobilization, the municipality of the *arrondissement* offered them land nearby which had been redeveloped in 1997. Finally, none of the members of the Jardin Solidaire became involved in the new space.

[11] Indeed, it is not the "nature" itself that is commodified (Castree, 2003) but the lots on which gardens are developed, as they are incorporated in the real estate market (Ernwein, 2015).

expressed an interest in joining another community garden when their garden closes. However, more than half were undecided as to whether they would continue their involvement in the proposed replacement garden. If the relocation allows for the continuation of gardening activities, these last responses show that the continuity of members committing to the association is not guaranteed.

To better understand this assessment, we focus our attention on four gardens that were actually relocated during and after our research work (see Table 2). The four lots belong to the municipality and are located in neighborhoods where urban regeneration programs are underway and vacant lands increasingly "filled". These four cases pinpoints what is left behind by gardeners.

Table 2: The impacts of gardens' displacement through four examples of nomadic gardens, all located in northeast neighborhoods of Paris (19ème and 18ème *arrondissements*)

Name of nomadic garden	**Date of creation**	**First site Area / Number of members**	**Number of moves** (year) / **Distance between current and first sites**	**Current (2017) site area** (change) / **Number of members** (change)
P'tit bol d'air	2004	580 m² 30	1 (2011) 400 m	100 m² (-480 m²) 20 (-10)
Charmante Petite Campagne Urbaine	2003	850 m² 15	1 (2010, 2nd expected in 2017) return to first site	700 m² (-100 m²) 10 (-5)
Ecobox	2002	~ 400 m² 80	2 (2005, 2009) ; 700 m	200 m² (-200 m²) 80 (=)
La Goutte Verte	2006	310 m² 30	4 (2009, 2010, 2011, 2012) 200 m	220 m² (-90 m²) 20 (-10)

First, it appears that the material conditions of the relocation process did not allow for the *stuff* of the garden (the living plants and soil) to follow the gardeners. The gardeners all associated displacement with the loss of their plants, caused by several "natural" factors (the plants died) or logistical reasons (the next garden is smaller or is not ready when the first one closes down). In the case of *P'tit Bol d'Air*, when gardeners had to leave their vacant lot and wait several months before finding a new place, they spontaneously scheduled open-house days to distribute free plants to others gardeners from the neighbourhood, for example. This serves to remind us that the (relative) mobility of living organisms, through gifts and trading of seeds, plants or certain organic inputs, has for a long time been an aspect of how

urban agriculture functions, especially non-commercial agriculture.[12] Despite these well-known facts, it seems that in the case of the four *shared gardens* we investigated the relative capacity of nature to support transplantation is not the only factor needed to support a successful relocation process from one place to another. As a more specific study of this relocation underway and publications forthcoming, we focus here on the discourses employed by gardeners when we asked them how and why they stay involve in translocated gardens.

In the four displaced gardens, only the most engaged users kept being involved in the relocated collective garden. The proximity to the former site seems also to be predominant factor. For instance, the active members of one garden, *Charmante Petite Campagne Urbaine* which was created in 2003 and closed in the winter of 2010, chose to wait the until the completion of the construction project to take back a piece of land nearby, as promised by the local elected representative. Joined by new persons interested in gardening, the most active members of the organization waited six years in the end, but they will soon inaugurate their new garden. In addition to proximity, gardeners highlight the size and the setting of the new site. In one case (P'tit bol d'air), some users didn't extend their membership because they considered the new site to be too small (the garden area decreased from 580 m² to 200 m²) and find it unsafe:

> "It's too small then there is the basketball court and the railroad just next door so I am a little afraid … We are afraid our equipment would be stolen easily" (Member of P'tit bol d'air, interview with authors, October 2010).

In a few cases, anticipating displacement boosted a radicalization of discourse and demands. Most of the time, this was insufficient to stop the closure that was agreed in the contract, but for those who waited and stayed involve in the garden activities seemed to be more active within radical movements defending ecological, political or urban alternatives. For instance, in 2013 the translocated Goutte Verte garden hosted the Concrete Utopia Festival, the annual festival of Transition Towns aimed at presenting concrete local solutions to combat current and local environmental, social, and economic crises, around the theme of reconquering public spaces.[13]

If relocation guarantees the continuation of gardening activities, gardeners experience it as a constraint. Nevertheless, no Parisian gardening social movement seems to have initiated any debate about alternatives approaches or asked what

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[12] It is even currently at the heart of reflection on the development of the social functions of collective gardens, notably in the context of "plant bartering" organized by gardeners' associations and municipalities.

[13] This nation-wide movement and its local group (*Quartiers en transition*) are inspired by the transition movement initiated in Totnes in the UK in 2006. The aim is to reflect on a more sustainable future in which the challenges of global warming and peak oil are predominant. This reflection has the local outcome of promotion of urban agriculture.

might happen when all "holes" will be gone. From the municipality's side, a garden's displacement does not follow any specific policy. Rather, if the non-profit association expresses a wish to get another lot, the agents extemporaneously look for an available land, as there is no dedicated inventory.

Conclusion

The case of Paris and its suburbs illustrates the shift in land regulation and ownership structures that follows the neoliberalization of urban economy and its impact on the dynamics of urban agriculture initiatives. Drawing on Classens' conceptual framework (Classens, 2015), our case also demonstrates how these shifts also alter the link between "nature" and "society" in gardens and urban farms.

This article has highlighted the fact that urban agriculture struggles to find permanent locations in the neoliberal city, but is burgeoning in temporary open spaces made available by the urban regeneration processes. We have also showed that even if informal collective gardens do not seem to carry any weight compared to building projects, their vitality is strong and, like commercial UA projects, contribute to maintaining community building dynamics in lower- and middle-class neighbourhoods under urban regeneration process.

The case of Parisian shared gardens demonstrates that the revival of collective urban gardening is not due to the resurgence of permanent land access (such as that which allowed for the establishment of family gardens, historically); rather, it is the outcome of citizens' willingness to (re)negotiate temporary land access that led to their engagement in more collaborative gardening activities. These choices ultimately lead to the closure of gardens and dissolution of communities of gardeners, unless they manage to relocate their activities. Moreover, it seems that those who succeed in coming to terms with this precarity of access to land are the most alternative and militant. Adopting the well-known dissemination strategies of Green Guerrillas, they value and take advantage of the plant and animal properties that allow for nomadic farming and relocation of gardens. Indeed, we see many similarities with other cases of nomadic gardens that have appeared since the late 2000s in several cities in Europe and the United States, such as the Nomadic Community Garden in London or the Nomad Gardens in San Francisco.[14]

Finally, by looking at urban liberalisation at play in Paris and surroundings, we are also extending theoretical frameworks developed by UA scholars in order to

[14] See, for example, organizational websites of groups in London: (http://nomadiccommunitygardens.org); San Francisco (http://nomadicgardens.weebly,com); Rome (http://urban-matters.org/projectsbyindividuals/nomadic-agroculture); Edinburgh (https://grovecommunitygarden.wordpress.com/); and Berlin (http://prinzessinnengarten.net). All sites accessed 10 May 2017

explain why it has to be *both* neoliberal and radical. For McClintock (2014), the starting point of such an interpretation is based on the fact that neoliberal urban regeneration creates voids in working-class and lower middle-class neighbourhoods where radical UA initiatives can find their popular roots and its most active participants. Following Tornaghi's and Classens' calls to pay more attention to the materiality of property ownership structures that bind "nature" (the "stuff" of the gardens) and "society" (the people, practices and cities surrounding the garden) (Classens, 2015), we argue here that the temporary access to these "voids" supports the inclusion of nomadic practices inherited from the most militant of UA spaces, spreading new radical nature-society relationships within the neoliberal urban fabric. On one hand, the rise of temporary lease agreements illustrates new forms of public action where "temporary gardened urbanism" prevails and reflects the commodification of urban rhythms and spaces but, on the other hand, it seems that these temporary land use arrangements have also opened new possibilities for citizens to create spaces where the biophysical characteristics of plant growth can stymie capital and capitalist social relations through new commercial alternative food production spaces (Wekerle and Classens, 2015), but also through community gardens where the plants grow for free thanks to unpaid and collaborative work, and via the new routes taken by displaced gardens, where free seeds, substrate, and plants can travel with gardeners and thus outlast the timeframe imposed by neoliberal temporary urbanism.

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References

Allen, Patricia and Guthman, Julie. 2006. From "old school" to "farm-to-school": Neoliberalization from the ground up. *Agriculture and Human values* 23 (4), 401–415.

Andres, Lauren. 2006. Temps de veille de la friche urbaine et diversité des processus d'appropriation : la Belle de Mai (Marseille) et le Flon (Lausanne). *Géocarrefour* 81 (2), 159-166.

APUR. 2010. *Situation et perspectives de la place de la nature à Paris. Rapport d'étape*. Paris: APUR.

Armstrong, Helen and Mellik Lopes, Abby. 2016. Re-Ruralising the Urban Edge: Lessons from Europe, USA & the Global South. In Maheshwari, Basant, P. Singh, Vijay, Thoradeniya, Bhadranie and Vijay P. (ed.) *Balanced Urban Development: Options and Strategies for Liveable Cities,* pp. 17-27.

Bishop, Peter and Williams, Lesley. 2012. *The temporary city.* New-York: Routledge.

Brenner, Neil and Theodore, Nik (eds.). 2002a. *Spaces of Neoliberalism: Urban Restructuring in North America and Western Europe*. London: Blackwell.

Brenner, Neil and Theodore, Nik. 2002b. Cities and the geographies of "actually existing neoliberalism". *Antipode* 34 (3), 349–379.

Cabedoce, Béatrice and Pierson, Philippe. 1996. *Cent ans d'histoire des jardins ouvriers, 1896-1996 : la Ligue française du coin de terre et du foyer*. Grane: Créaphis.

Castree, Noel. 2003. Commodifying what nature? *Progress in human geography* 27 (3), 273-297.

Classens, Michael. 2015. The nature of urban gardens: toward a political ecology of urban agriculture. *Agriculture and Human Values* 32 (2), 229-239.

Clerval, Anne. 2013. *Paris sans le peuple. La gentrification de la capitale*. Paris: La Découverte.

Colomb, Claire. 2012. Pushing the urban frontier: temporary uses of space, city marketing, and the creative city discourse in 2000s Berlin. *Journal of Urban Affairs* 34 (2), 131-152.

Consales, Jean-Noël. 2005. Les jardins familiaux de Marseille, Gênes et Barcelone. *Rives méditerranéennes* 3 (15), 21-40.

Daniel, Anne-Cécile. 2013. *Aperçu de l'agriculture urbaine, en Europe et en Amérique du Nord*. Rapport d'étude Agroparistech/VINCI.

De Kimpe, Christian R. and Morel, Jean-Louis. 2000. Urban Soil Management: A growing concern. *Soil Science* 165 (1), 31-40.

Demailly, Kaduna-Ève. 2014a. Les jardins partagés franciliens, scènes de participation citoyenne? *EchoGéo* 27 doi:10.4000/echogeo.13702. Online: http://echogeo.revues.org/13702.

Demailly, Kaduna-Ève. 2014b. *Jardiner les vacants. Fabrique, gouvernance et dynamiques sociales des vacants urbains jardinés du nord-est de l'Île-de-France*. Thèse de doctorat, Université Paris 1 Panthéon Sorbonne.

Drake, Luke and Lawson, Laura. 2013. Validating verdancy or vacancy? The relationship of community gardens and vacant lands in the U.S. *Cities* 40 (B), 133-142.

Dubost, Françoise. 1997. *Les jardins ordinaires*. Montréal: Éditions l'Harmattan.

Duchemin, Éric, Wegmuller, Fabien and Legault, Anne-Marie. 2008. Urban agriculture: multi-dimensional tools for social development in poor neighbourhoods. *Field Actions Science Reports. The Journal of Field Actions* 1. Online: http://factsreports.revues.org/113.

Duchemin, Éric, Wegmuller, Fabien and Legault, Anne-Marie. 2010. Agriculture urbaine: un outil multidimensionnel pour le développement des quartiers. *VertigO* 10 (2). URL : http://vertigo.revues.org/10436.

Eizenberg, Efrat. 2012. Actually existing commons: three moments of space of community gardens in New York City. *Antipode* 44 (3), 764–782.

Ernwein, Marion. 2015. *Jardiner la ville néolibérale: la fabrique urbaine de la nature*. Thèse de doctorat de géographie, Université de Genève.

Fuller, Richard A. and Gaston, Kevin J. 2009. The scaling of green space coverage in European cities. *Biology letters* 5(3), 352-355.

Harvey, David. 1989. From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism. *Geografiska Annaler. Series B, Human Geography* 71 (1), 3-17.

Haydn, Florian and Temel, Robert. 2006. *Temporary urban spaces: concepts for the uses of the city spaces*. Boston: Basel Birkhäuser.

Herman, Kristof. 2011. Temporary, mobile and nomadic gardens in urban space. EFLA Regional Congress 2011.

Holland, Leigh. 2004. Diversity and Connections in Community Gardens: a contribution to local sustainability. *Local Environment* 9 (3), 285–305.

IAU Île-de-France. 2009. Moins de friches industrielles en Île-de-France. *Note rapide* (467).

Larbey, Vincent. 2014. *Jardins et jardiniers : les pieds dans la terre, la tête dans les nuages. Une anthropologie du potager*. Thèse de doctorat, Université Paul Valéry – Montpellier III.

Laroze, Catherine. 1990. *Une histoire sensuelle des jardins*. Poitiers : Editions Olivier Orban.

Lawson, Laura. 2004. The Planner in the Garden: A Historical View into the Relationship between Planning and Community Gardens. *Journal of Planning History* 3 (2), 151-176.

Lefebvre, Henri. 1968. *Le droit à la ville*. Paris: Anthropos.

Lohrberg, Frank, Licka, Lilli, Scazzosi, Lionella and Timpe, Axel (eds.). 2015. *Urban agriculture Europe*. Berlin: Jovis.

McClintock, Nathan. 2014. Radical, reformist, and garden-variety neoliberal: coming to terms with urban agriculture's contradictions. *Local Environment* 19 (2), 147-171.

Miller, Wendy M. 2013. *Allotments and alternative food networks: the case of Plymouth, UK.* University of Plymouth.

Nappi-Choulet, Ingrid. 2012. Esquisse d'une histoire de la financiarisation immobilière et urbaine. *Urbanisme* 348, 42-45.

Nilsen, Micheline. 2014. *The working man's green space. Allotment Gardens in England, France and Germany, 1870-1919*. The University of Virginia Press.

O'Callaghan, Cian and Lawton, Philip. 2016. Temporary solutions? Vacant space policy and strategies for re-use in Dublin. *Irish Geography* 48(1), 69-87.

Prasad, Leonie and Nazareth, Bernadette. 2000. Contamination of allotment soil with lead: managing potential risks to health. *Journal of Public Health* 22(4), 525-30.

Pudup, Mary Beth. 2008. It takes a garden: Cultivating citizen-subjects in organized garden projects. *Geoforum* 39 (3), 1228–1240.

Purcell, Mark and Tyman, Shannon K. 2015. Cultivating food as a right to the city. *Local Environment* 20 (10), 1132-1147.

Ranasinghe, Thilak T. 2009. *Manual of low/no-space agriculture cum family business gardens*, RUAF Fondation.

Reyburn, Stefan. 2002. Le cadre de vie et les jardins potagers communautaires à Montréal, *VertigO* 3 (2). URL : http://vertigo.revues.org/3794

Reynolds, Kristin. 2015. Disparity despite diversity: Social injustice in New York City's urban agriculture system. *Antipode* 47 (1), 240-259.

Riboulot-Chetrit, Mathilde. 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. Online: http://articulo.revues.org/2696

Ripoll, Fabrice. 2005. S'approprier l'espace… ou contester son appropriation ? *Norois* 195, 29-42.

Rosol, Marit. 2012. Community Volunteering as Neoliberal Strategy? Green Space Production in Berlin. *Antipode* 44 (1), 239–257.

Samangooei, Mina, Sassi, Paola and Lack, Andrew. 2016. Soil-less systems vs. Soil-based systems for cultivating edible plants on buildings in relation to the contribution towards sustainable cities. *Future of Food: Journal of Food, Agriculture and Society*, 4 (2), 24 - 39

Schmelzkopf, Karen. 2002. Incommensurability, land use, and the right to space: community gardens in New York City. *Urban Geography* 23 (4), 323–343.

Schwartz, Christophe. 2013. Les sols de jardins, supports d'une agriculture urbaine intensive. *VertigO (Hors-série 15)*, URL : http://vertigo.revues.org/12858

Staeheli, Lynn A., Mitchell, Don and Gibson, Kristina. 2002. Conflicting rights to the city in New York's community gardens. *GeoJournal* 58 (2/3), 197–205.

Thomaier, Susanne, Specht, Kathrin, Henckel, Dietrich, Dierich, Axel, Siebert, Rosemarie, Freisinger, Ulf B. and Sawicka, Magdalena. 2015. Farming in and on urban buildings: Present practice and specific novelties of Zero-Acreage Farming (ZFarming). *Renewable Agriculture and Food Systems* 30 (1), 43 – 54.

Tornaghi, Chiara. 2014. Critical geography of urban agriculture. *Progress in Human Geography* 38 (4), 551-567.

Vick, John W. and Poe, Joshua. 2011. *Safe Container Gardening Practice Guide #28*. Louisville: University of Louisville.

Viljoen, André, Bohn, Katrin and Howe, Joe (ed.). 2005. *CPULs, Continuous productive urban landscapes, Designing urban agriculture for sustainable cities*. Architectural Press.

Weber, Florence. 1998. *L'honneur des jardiniers : les potagers dans la France du XXe siècle*, Paris : Belin.

Weber, Rachel, 2002. Extracting Value from the City: Neoliberalism and Urban Redevelopment. *Antipode* 34 (3), 519–540

Wekerle, Gerda R. and Classens, Michael. 2015. Food production in the city: (re)negotiating land, food and property. *Local Environment* 20 (10), 1175-1193.

Wiltshire, Richard and Azuma, Ren. 2000. Rewriting the Plot: sustaining allotments in the UK and Japan. *Local Environment* 5 (2), 139-151.

Wirskerke, Johannes S.C. and Viljoen, André. 2012. Sustainable Urban food provisioning: challenges for scientists, policymakers, planners and designers. In Viljoen André & Wirskerke Johannes S.C. (eds.), *Sustainable Food planning, evolving theory and practice*. The Netherlands: Wageningen Academic Publishers, pp. 19-36.