

An aerial photograph of a dry, cracked landscape. The ground is light brown and covered in a complex network of dark, winding cracks that form various shapes, including circles and spirals. A bright, glowing yellow and white streak, resembling a comet or a bright light source, cuts across the landscape from the left side towards the center. The overall scene is desolate and textured.

WIEDERKEHR DER LANDSCHAFT

**RETURN
OF
LANDSCAPE**

DONATA VALENTIEN [HG. | ED.]

jovis

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MIT FOTOGRAFIEN VON
WITH PHOTOGRAPHS BY
ALEX S. MACLEAN

AKADEMIE DER KÜNSTE

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Urban Agricultural Landscapes

Urban agriculture is thriving – at least in the media. Ever since Michelle Obama had the lawn at the White House dug up in order to plant an organic vegetable garden, farming and gardening in cities has been reported on everywhere. The press often reports on residential greenhouses in Holland, window farming in New York, and rare Tomato varieties in Kreuzberg backyards. People are rediscovering farmland on the urban periphery as energy production fields and finding new “urban oases” in what used to be considered bourgeois allotment gardens.

Are cities getting greener? Is rural-based primary production returning to urban areas that have essentially defined themselves as secondary and tertiary economies for the past two hundred years? What lies behind the concept of urban agriculture? What contribution can gardening and farming in urban areas make to the overall sustainability of cities?

First of all, it is important to differentiate between two kinds of urban agriculture:

The first approach focuses on urban dwellers who cultivate food in backyards, empty lots, and allotment gardens. What does the planting of fruit and vegetables actually have to offer urban residents? What opportunities does this open up for urban communities? This “stakeholder-oriented approach” is especially common in development aid (for example *agricultura urbana* in Havana) and in Anglo-American regions (urban agriculture). Michelle Obama’s vegetable garden can, in the broader sense, be put in this category. The second “area-oriented approach” involves agricultural land within the municipal area of a city. What role do these areas have for the economic, social, and aesthetic and ecological development of cities? What value can farmland and pastures add to urban society? Urban planners are continuously confronted with this question, but to date it has not led to a consistent accumulation of knowledge or methods. Agricultural land is often merely seen as land that has not yet been built upon instead of a long-term urban component. Recently, however, individual authors have seized upon the idea of urban agriculture and have begun to introduce it to a broader discourse.ⁱ

Urban agricultural landscapes that are oriented to the needs of urban residents and that also take ecological aspects into consideration represent extremely prudent elements of a sustainable city. This has been recognized and taken advantage of for a long time in developing countries. In wealthy cities in the northern hemisphere the foundering of the classical growth-oriented urban model and the change from fossil fuels to post-fossil fuels has led to fresh interest in urban agriculture. This could be an important impetus for the adaptability (“resilience”) of cities.

The Stakeholder-oriented Approach

The stakeholder-oriented approach has had a long tradition in developing countries. In view of rural flight and the rapid growth of cities, it has become obvious that the classical models of urban development imported from industrial countries no longer function. The megacities of Asia, Africa, and Latin America are faced with a shortage of resources, and the promise of wealth in these cities has not been fulfilled for many of the people moving into them. Immigrants who find no work often manage to stay afloat with small-scale agriculture. A classical “existence” where livelihoods are maintained through professional work is no longer possible for them. They manage to survive by “subsisting” instead. Individual economic performance does not involve the earning of wages, but instead the finding of enough food to eat and the covering one’s own needs.

Until they recognized the favorable effects associated with this kind of agriculture in the city, those involved with development aid initially opposed it as being an indication of poverty. The United Nations Development Program (UNDP) has been promoting urban agriculture since the mid-nineteen-nineties: “Agriculture has an important and beneficial place in the contemporary city.”ⁱⁱ According to the UNDP, urban agriculture is particularly well-suited to promote the sustainability of urban development. It meets social and economic requirements as it provides jobs for lower-income groups, thus helping to fight poverty. The social structure of communities is also improved, neighborhoods are strengthened, and the self-esteem of individuals is increased as a result of a meaningful activity.

In the nineteen-nineties social work in European and American cities adopted this stakeholder-oriented approach. The focus has always been on groups of people who are characterized by migration and precarity.



In this regard, some neighborhoods have developed to the extent that they differ little from cities in the southern hemisphere. With her vegetable garden at the White House Michelle Obama was able to draw on experience she had gained in Chicago in the nineteen-nineties, when she advised the city's mayor about questions of urban development. Chicago was one of the first cities to establish community gardens in which residents could work together to plant vegetables and fruit. The community gardens have been a part of urban social work since then. They are intended to strengthen local communities, promote cooperation, and give unemployed people a perspective and a feeling of responsibility. Some go as far as promoting gardens as a means of preventing vandalism and violence in neighborhoods. Michelle Obama has pointed to the educational value of the gardens: By working in them, children should learn how important healthy nutrition and exercise are.

Urban Agriculture as a Social Strategy

What contribution does the stakeholder-oriented approach make to the development of sustainable cities? In southern cities it provides a forward-looking urban development tool—if for nothing else because of the large number of stakeholders—and should be further strengthened. Agriculture in cities should not be considered a shortcoming or a sign of poverty, but rather as a legitimate right of citizens. Holding fast to planning based on the myth of wealthy cities merely hinders the development of realistic strategies for fighting poverty.

The same applies for cities in industrialized countries. Subsistence has been the exception up to now. At first glance the provision of food and energy appears to be secure. A closer look, however, reveals a situation that is quite precarious due to the fact that long and costly transport cannot be continued because of increasing energy costs and the problem of CO₂ production. The future viability of cities therefore depends on the ability to prevent good adjacent land from being built on. Urban agriculture can contribute to the securing of a city's livelihood wherever an insufficient supply or defects within the welfare system occur. This can be observed in Eastern European cities, where many people reverted to living in subsistence economies after industrial work disappeared.

Urban agriculture safeguards another asset as well, namely the participation in urban life, as illustrated by the community gardens, which were primarily created in poorer neighborhoods. These gardens make it clear that urban agriculture not only produces calories, but social stability and urban culture as well.

The Area-oriented Approach

Let's look beyond the community gardens and the vegetable garden at the White House, zoom out of the backyards and roof gardens and take a look at the city as a whole, embedded in the surrounding landscape. Here we discover another form of urban agriculture: fields and pastures in transition from residential and commercial areas to a rural environment, wedged in between the city's giant supply lines, i.e. roads, rail lines, and canals, and cut up and interfused by power lines, transformer stations, and water treatment plants. Farmers and gardeners earn their livings here and through their professions have an influence on large areas of the city structure.

In order to strengthen the sustainability of cities, these agrarian areas have to be integrated into urban planning concepts. Even Wolfgang Haber suggested a close link be made between urban-industrial uses and intensively used agricultural areas in order to preserve the "stability" of the ecosystem in conurbations.ⁱⁱⁱ

Shanghai has shown how this can be done. According to the UNDP^{iv}, as early as the nineteen-nineties the city converted ninety percent of its waste into fertilizer and then used it within the surrounding region. Using this principle, the transport of waste and supplies can be avoided and soil and water pollution reduced. With the aid of agriculture, a city-related form of recycling can be developed that reduces both the demand for raw materials and the production of waste.

Andre Fleury and Paule Moustier^v see additional prospects for metropolitan agricultural land and describe it as a new "infrastructure" for sustainable cities. In their opinion, urban agriculture promotes healthy nutrition and social stability, helps to maintain green corridors important to a city's environment and structure in a cost-effective way, and encourages environmental education.



Urban Agriculture as Sustainable Infrastructure

Urban agricultural land's great potential has been largely overlooked to date, by both those involved with cities as well as with agriculture. In the peripheral zones surrounding growing cities, farm fields and open space serves as a reserve of land for building upon, and speculation obstructs the development of long-term concepts. In its own self-image, agriculture focuses on rural areas with their potential for large-scale production. The German Federal Ministry of Food, Agriculture and Consumer Protection and the German Association of Farmers both conceive "agriculture" as being in the same category as "rural areas." As agricultural subsidies are increasingly redirected into structural funds, the European Union has also given little thought to urban agriculture, and has developed no grant programs in support of it. In doing so the EU is neglecting the fact that the contact zone between the majority of people who live in cities and agriculture on the outskirts is being lost. These areas are where the image of agriculture is actually shaped, and this is where the biggest opportunity to develop sustainable forms of agriculture exists.

In order to take advantage of this opportunity several paradigm shifts are necessary, as can be illustrated in the substitution of agricultural land for designed green corridors. Green corridors are vegetated ribbons used to divide and structure developed areas. They prevent detrimental building densities and provide cities with fresh, cool air and recreational space. In the past agricultural areas were often transformed into parks or natural areas. What at first appeared to be a benefit increasingly proved to be a mistake: large parks cannot be properly maintained and residents do not always accept wilderness. Using these corridors for agriculture would allow for them to be economically maintained and they could be further enhanced through additional offers (direct marketing, horseback riding, pick your own flowers, etc.). Thus, agriculture should not be replaced but instead used to fulfill urban needs.

The management of green corridors via agriculture also requires a change of thinking regarding aesthetic categories. Planning has long neglected urban agriculture because modern industrial methods of cultivation have little to do with today's popular ideals of an ideal landscape or unspoiled nature. If people manage to free themselves of these ideals, however, they will discover a wealth of design potential in urban open space. The areas surrounding many European cities are characterized by small-scale horticulture that has unquestionably led to the development of attractive and vital cultural landscapes, for example the "*Viermarschlande*" near Hamburg or the "*Knoblauchsland*" near Nuremberg. In order to preserve and further develop these qualities it is important to recognize urban agriculture as an urban element and not as a rural relic. Special measures for adapting urban agriculture, i.e., the respective agrarian character, the process of specialization and diversification, or the increasing service orientation, must be at the center of any improvement efforts.^{vi}

More and more communities and regions are adopting this conceptual understanding of urban agriculture. Emscher Landscape Park, for instance, has reformulated its relationship with agriculture, and put an emphasis on cooperation and accelerated adaptation instead of reducing the size of the area or changing the type of land use.^{vii} Cities such as Berlin, Cologne, and Zurich are also looking for methods of site development that do not replace agriculture but instead focus on its use.^{viii} At its core this involves an old element of garden design, namely to "combine the beautiful with the utilitarian" as illustrated by Prince Franz of Anhalt-Dessau's aspirations at the Garden Kingdom of Dessau-Wörlitz over two hundred years ago. The prince also used his park to test "modern" agricultural methods (including the cultivation of a clover-grass mixture, fruit growing, and silkworm breeding). For many, Wörlitz is therefore proof that agricultural land and parks cross-fertilize one another and that both can be part of a common idea of landscape design.

Urban Agriculture and the Resilience of Cities

Both the stakeholder-oriented approach and the area-oriented approach imply sharp criticism of the traditional growth-based western model of cities. In this context, Hans Joachim Hermann^{ix} asked the question of what "normal" is in the long term: a subsistence-based economy and a close link between informal work in agriculture and the city (the informal city), which is similar to the one we know in developing countries, or a city oriented to modernity and the division of labor (the formal city)? Isn't the latter an exceptional situation based on continuous economic growth and a large supply of fossil fuels, i.e. a model that cannot be perpetuated?

It is not possible to predict whether the decoupling of individual forms of living from the production of food in industrial countries will be sustainable. It is already clear, however, that cities can no longer rely on a global supply



of provisions in the post-peak oil period that we have now entered, but instead must increasingly fall back on their own resources. In this context, urban land will become increasingly important for the production of food and energy for local consumers. Thus, new tasks will arise for urban agriculture and, among other things, the paradigm of the extensification of agriculture will be questioned. In addition, due to climate change the basic conditions of primary production will also change.

These expected upheavals, the extent and effects of which are unknown, require us to be especially vigilant. Cities need to improve upon their adaptability and their resistance, i.e. their "resilience," so that they are able to react quickly and appropriately to the coming changes. To this end, urban agriculture can also be taken advantage of. First of all, as the informalization of the economy proceeds and precarious living conditions increase, conditions for the self-sufficiency and self-organization of neighborhoods through the allocation of land and professional assistance should be strengthened. And secondly, there is a theoretical aspect as well, as the debate about urban agriculture reveals the correlation between urban development and the availability of resources. Urban planning can thus free itself of entrenched ways of thinking about growing and functioning cities and open themselves up to new urban forms that can be experimented with.

Production and the Urban Image

Urban agriculture is a means of loosening up the relationship modern urbanites have concerning work. Urban prosperity is based on work, and yet in urban culture this always plays but a subordinate roll. Culture occurs after the working day has ended, in the streets and cafes, museums and opera houses. Work, particularly that done by hand, is hidden behind windowless façades and in commercial buildings. This is the after-effect of generations of factory workers who experienced first-hand how industrial labor deformed both body and spirit. Those who managed to leave the factory behind wanted nothing more to do with work, whether it be in the household or in the city. The public park or green around the corner was simply supposed to be beautiful, and gardeners went from being creators of beauty to disruptive elements. Urban planners acknowledged this effect of industrial work and hereafter separated work from recreation.

There was no place in the city for agriculture. It was considered a sign of backwardness, and represented a life in the country that had been left behind, if not always overcome. The unstable urban identity was strengthened by ornamental greenery and the absence of agricultural elements: vegetable gardens were turned into lawns and fields of grain on the periphery into parks.

The cost of the modern city's identity is an alienation from work in general and from primary production in particular. In creating the sustainable city, this alienation has to be overcome in a variety of ways.

Looking Closely–Looking Back–Looking Forward

Targeted research should be undertaken in order to sharpen our image of urban agriculture. Hardly any systematic analyses have been undertaken in industrial countries and none at all in the international context since the OECD^x investigated a series of case studies involving "peri-urban agriculture" in the nineteen-seventies. We do not have sufficient knowledge of the subject we are talking about. An "*Atlas of Urban Agriculture*" could explore the phenomenon, make it more visible, and help prepare any planning efforts.

A closer look at the history of cities should make it clear just how closely linked agriculture and cities are. Until the industrial revolution cities were only able to develop in locations where the surrounding area produced a surplus of food. Until well into the eighteenth century many cities and towns functioned only as farming communities. Open space in cities was mainly used for food production. Municipal forests served as sources of building materials and energy. Modern agriculture also began on the edge of cities. Not until cities had a surplus of food were farmers allowed to give up the labor-intensive cultivation of fields and raising of livestock in favor of more profitable specialized methods of farming.

The industrialization of the city was a radical departure from this type of "tandem development," but simultaneously created new forms of urban agriculture, as illustrated by the garden city and allotment garden movements. Urban planners adopted this mindset and incorporated it in their models. For many it may come as a surprise that Le Corbusier^{xi} provided the same degree of self-sufficiency in his *Ville Contemporaine* that Frank Lloyd Wright^{xiii} did in his model of *Broadacre City*, which was presented during the great depression.



The farmer was to be “extremely welcome,” his premises should be “[...] the most attractive of all the buildings in this new and free city of the future [...].”

Looking back at the city and how it was planned reveals an enormous body of knowledge that should be taken advantage of in the continued development of urban agriculture. New forms of urban agriculture should be experimented with, including the planting of trees. From a historical perspective, today’s strict separation of field crops and forests is a relatively new practice. Until the nineteenth century a shortage of resources often led to mixed forms of cultivation. In “wood pastures” pigs were fattened, on heathlands and common pastures firewood was harvested. The *Haubergswirtschaft*, a common woodland management system used in the Siegerland region of Germany involves a unique production cycle beginning and ending with oak forests, which alternate with rye fields and grazing pastures. A reactivation of these kinds of multiple-use activities in post-fossil fuel cities would appear to be wise in light of a scarcity of resources. Cuttings gathered as a result of the maintenance of roadside trees and shrubs could be used as fuel. Farm fields on the edge of cities can be used in agroforestry systems to produce both food and timber. Old industrial areas can be turned into productive green areas through the planting of short rotational plantations, as has been done in Gelsenkirchen.^{xiii} The initiators of this concept plan to regenerate the maltreated industrial soils by planting wood fuel plantations (poplars and willows). Through good design and activities for citizens such plantations should take on the character of a park. What these methods have in common is their attempt to rid the urban environment of individual sectors of a city that only have separate functions, and to cultivate multiple-use open space that, when possible, is accessible to the public.

Not only will more CO₂ be bound where new forests grow, but added value will be created and new aesthetic and social activities developed. Examples show that urban agriculture does not have to confine itself to being a repair workshop for cities that are heading toward various crises. On the contrary, it should be viewed as a building block of sustainable urban development that aims to create prosperity for the general population. As this process unfolds, urban planners should not think of themselves as merely being administrators or enforcers, but must instead look ahead as they design and create the future. A willingness to experiment and make mistakes is part of this process. This is the only way urban society will acquire the necessary practical knowledge and flexibility to properly deal with upcoming changes, which are often unpredictable. Urban agriculture can make an important contribution to this.

Translated from German to English by David Skogley

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born in 1964, studied landscape management at the TU Hanover, worked in a variety of planning offices, and was the 1990 winner of the Peter Joseph Lenné Award. In 1994 he became an assistant at the Institute for Landscape Planning and Ecology at the Universität Stuttgart’s Faculty of Architecture and Urban Planning. In 2001 he received his doctorate after writing a dissertation entitled *Urban Agriculture as a Subject of Urban Planning and Open Space Planning*. In 2002 he founded the office *stadtlandschaftsarchitektur*, which focuses on the landscape architecture of regional open space. The office has worked on projects for the Emscher Landschaftspark (Masterplan 2010), the Regionalpark Saar and the Regionale 2010 Cologne/Bonn. From 2002 to 2003 he was a visiting professor for landscape history and aesthetics at the University of Kassel. In 2009 he became a member of the German Academy for Urban and Regional Spatial Planning and was appointed to the chair of landscape architecture at the RWTH Aachen University.

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