
SPRINGS

THE RACHEL CARSON CENTER REVIEW

Issue #3 | 2023

May



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ROOTS THROUGH ASPHALT: A CONVERSATION WITH
SONJA DÜMPELMANN

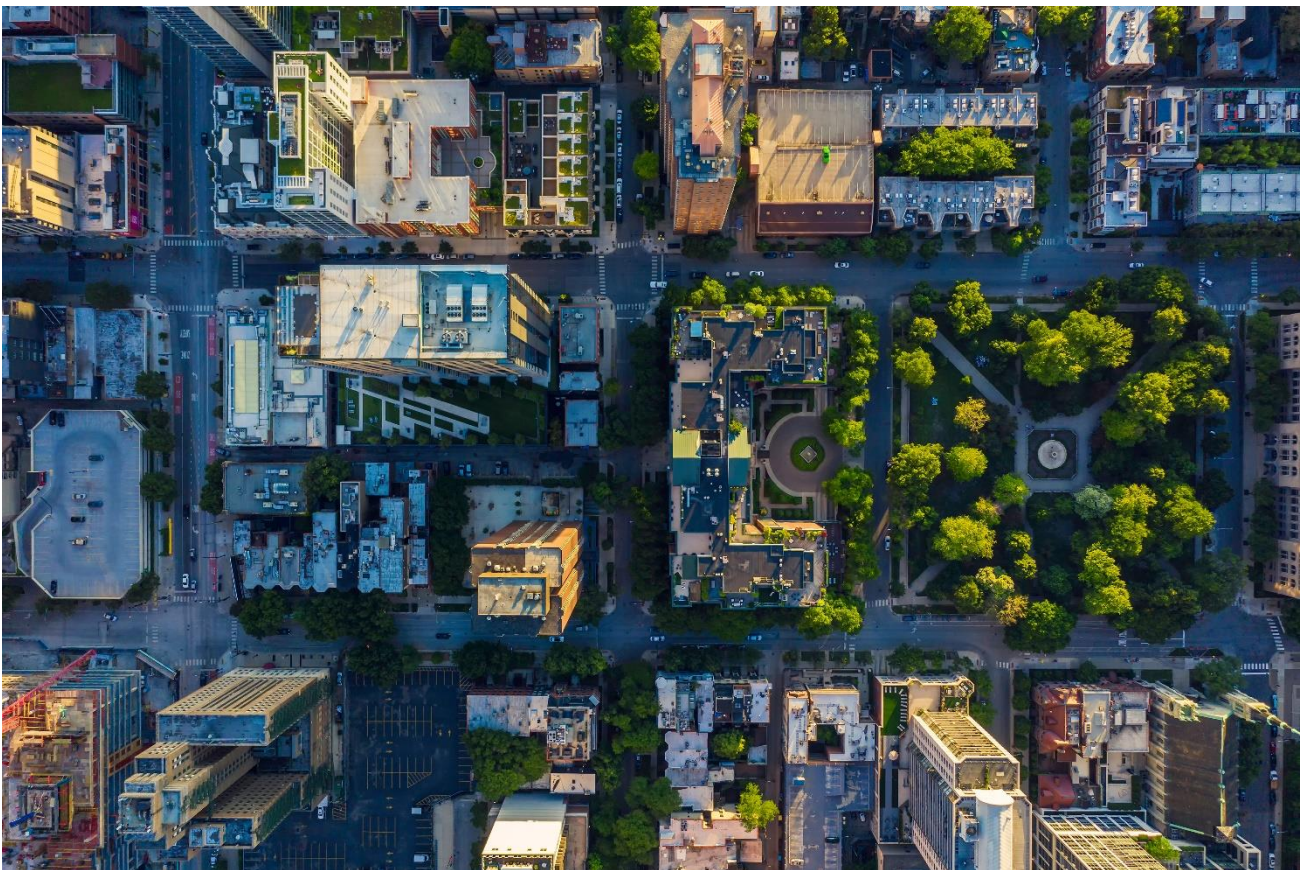
Sonja Dümpelmann and Pauline Kargruber

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*Sonja Dümpelmann is a landscape historian who is currently working on how grass species have transformed the world, and the history and political implications of window gardening in Philadelphia. During the pandemic, she began growing avocado plants, aspiring to turn her office into a grove. Her most recent publications include an authored monograph, *Seeing Trees: A History of Street Trees in New York City and Berlin* (Yale University Press, 2019), and an edited volume, *Landscapes for Sport: Histories of Physical Exercise, Sport, and Health* (Dumbarton Oaks Research Library and Collection, 2022). Pauline Kargruber is a literary scholar and editor at the Rachel Carson Center. She has a raised garden bed under her kitchen window, where she currently grows radishes, spinach, peas, and marigolds. Below, Sonja and Pauline talk plants in urban environments.*



Aerial view of Chicago's downtown. © marchello74 on iStock. All rights reserved.

PAULINE KARGRUBER: Your book, *Seeing Trees*, narrates what you called “the nature-culture of trees” in a [lecture at Weitzman School of Design](#). When I think of street trees, their roots breaking up the pavement come to mind. Echoing a nineteenth-century argument, cities seem to be a hostile environment for trees and their requirements for a healthy life. And still, as you argue, we need trees in urban areas. But what does it mean for a tree to live in the city?

SONJA DÜMPELMANN: Urban trees need to be able to resist many pressures, be it the lack of space for their roots or for the tree canopy, or the lack of light. Due to stormwater running into urban storm drains rather than infiltrating into soils, and soils often being too compact, trees in cities can lack water. The heat-island effect means that temperatures in cities are generally higher

than in surrounding areas. More than outside of urban environments, trees are therefore threatened by heat and drought as well as air and soil pollution. Furthermore, mechanical injuries by automobiles and bicycles are common, and trees suffer from dog urine. Plants cannot move in the way in which most animals can, so that trees are more dependent on, as well as affected by, the site conditions where they grow.

I like to talk about “plant-friendly urbanism” to elevate the idea that designing cities with and for plants is possible without sacrificing urban density.

PK: You used to work as a landscape designer in Switzerland. How should and can urban planners address the needs of trees in cities?

SD: That’s a long time ago, but I have been educating future landscape architects and other designers for 18 years now. Urban planners can design with trees, and plants more generally, in mind. This means they need to take into account trees’ various needs both above- and belowground, where the root systems can easily conflict with gas, sewer, and water lines, for example. Aboveground as well, trees need space to unfold their canopies, which are vital for the processes of photosynthesis. The provision of pervious surfaces, big enough tree pits, and the selection of appropriate soil substrates are just some of the many things that matter when it comes to accommodating plant life in cities. I like to talk about “plant-friendly urbanism” to elevate the idea that designing cities with and for plants (besides human and nonhuman animals) is possible without sacrificing urban density, which is so important for urban life and culture. In recent years, more attention has been paid to the fact that not only humans inhabit cities, but other organisms do as well. The recognition that plants (and animals) have agency and that we all coproduce our living environment draws attention to the fact that making space for other-than-humans can lead to the creation of a more just and comfortable living environment.

PK: Which tree species are particularly well-suited for a life in the city?

SD: Given that every city is built and structured differently, has different microclimates in different locations, and sits in a specific climate zone with distinct character traits, it is impossible to give a blanket answer when it comes to tree species and cultivars. However, many cities are testing new species and varieties and have been doing so for a while. Their objective is to adapt the species selection to the changing climate. For example, the German Conference of Directors of Parks and Recreation (Gartenamtsleiterkonferenz [GALK] beim Deutschen Städtetag) now recommends planting Montpellier maple (*Acer monspessulanum*) and southern catalpa (*Catalpa bignonioides*), species from northern Persia, southern Europe, and the southeastern United States. These species were not on the first street-tree list established in Germany in 1901, and they were also not suggested in 1975 when GALK founded its urban tree working group in West Germany. However, due to climate change, today these species appear to be increasingly well adapted even in central and northern European urban climates.



(Left) Montpellier maple (*Acer monspessulanum*). Photo by [Uzi Paz](#). [CC BY 2.5](#). (Right) Southern catalpa (*Catalpa bignonioides*). © M. Schuppich on Adobe Stock.

PK: Your work highlights the immaterial value of plants, and trees more specifically—their beauty, the stories they tell, and the psychological effects they can have on humans. What kinds of psychological effects are you referring to?

SD: In the last decades, more and more studies have shown that plants and the spaces they create have a soothing, relaxing effect on humans. As a result, hospital designers, for example, increasingly plan with plants. However, empirical observations and subjective perceptions have long suggested plants' beneficial effects. Recent studies are therefore only confirming what people have intuitively felt, experienced, and "known" for millennia. For example, the Romans claimed that vegetation and its green color had a soothing effect, especially on eyesight. The observation that plants emit oxygen, enabling life on earth, has since the late eighteenth century supported the idea that trees produce healthy air and prevent "bad air" (*mal aria*). Although the latter idea was based upon the miasma theory and proposed that trees formed physical obstacles against the distribution of "bad air" thought to emanate from organic decay, trees in many places did help drain the breeding grounds of mosquitos, the vectors of disease. Trees could therefore contribute to eradicating the parasite that caused malarial fever, even if this occurred in different ways than people knew at the time. Trees filter the air and, through evapotranspiration and shade, often also create pleasant microclimates, especially in hot regions. Given that many trees grow older than humans, they create a sense of permanence despite their own temporality, changeability, and malleability. We humans have long relied on both trees and their wood for shelter.



Clinic for Neurohabilitation and Paraplegiology, Basel, Switzerland. © Katalin Déer. All rights reserved.

PK: In your research, you repeatedly address the intersections of power and plant cultivation. As you write in the edited volume *A Cultural History of Gardens in the Age of Empire* (Bloomsbury, 2013), nineteenth and twentieth-century rulers constructed parks and gardens as symbols of power. What was it about the gardens that impressed and conveyed such power?

SD: Power can be expressed as much by the use of particular plant species as it can through a particular physical design. For example, shortly after the Fascists came to power in Italy, many roadside elm trees were replaced with pine trees. The Fascists declared *Pinus pinea* to be the quintessential Italian tree, although it had only been planted in greater numbers in Rome and its environs beginning in the nineteenth century. Through the practice of planting pines, the Fascists created a visual rhetoric tied to their ideology of “italianness” (*italianità*) and “romanness” (*romanità*), which could also be described as an “invented tradition,” to use Eric Hobsbawm’s term.



Pine trees in Rome, planted to replace other tree species in the 1920s and '30s. © Photo Beto on iStock. All rights reserved.

PK: Which ideological connotations accompany the designs of parks and public gardens today?

SD: The design of our built environment, which includes open spaces of various types, including private gardens, allotment gardens, public parks, plant nurseries, streets, parking lots, and plazas, both reflects and shapes power relationships. This has always been the case and still holds true today. Which ideologies or ideas are guiding depends on time and place, of course, and on the respective political, social, and cultural context. One idea that has been gaining traction in parts of Europe and North America is the recognition of the value of spontaneous vegetation. Concerns about climate change and biodiversity loss, on the one hand, and budget cuts to departments of parks and recreation, which result from the neoliberalization of urban economies, on the other, are rendering the idea of a wilderness aesthetic more popular in some urban areas. Notable examples for designs that have worked with spontaneous plant growth are Berlin's Park am Gleisdreieck and Parc Henri Matisse in Lille.



Design, Parc Henri Matisse, Lille. © Agence Empreinte, Lille. All rights reserved. This image has been cropped.



Parc Henri Matisse, Lille. © Agence Empreinte, Lille. All rights reserved.

PK: When it comes to state ideologies and the values and beliefs that have been manifest in greening projects, we are facing a double-edged sword: in the past, nationalist beliefs were expressed through “natural” gardens that would promote “wild” plants. What do you make of this ideological heritage?

SD: The nationalist “nature,” “home,” “wild,” and “prairie” garden paradigms belong to a particular time and to specific geographies: the late nineteenth and early twentieth centuries in Germany, the Netherlands, Britain, and the United States. The curation of plant associations that appear to be naturally occurring was bolstered by new knowledge gained in plant ecology, and it was used to foster national and nationalist ideologies. It later regained currency and uncritical adaptation during the environmental movement in the 1970s and 1980s. At the time, it was accompanied by a movement of eco-design that condemned all design that did not visually emulate natural systems. In contrast, for many of today’s designers, spontaneous plant growth and carefully curated designs are not mutually exclusive. Many landscape architects take a differentiated point of view that seeks to accommodate natural systems while at the same time addressing questions of human spatial experience, comfort, and culture.

At various moments in time, trees have become a means and method to (re-)claim public space and civil rights.

PK: You are not only interested in the state ideological connotations of urban greenery but also in its correlation with social concerns. Can you expand a little on the convergence of greening cities and social justice? In what ways and to what extent have greening projects been entangled with issues of empowerment and resistance throughout history—up until today?

SD: One aspect discussed increasingly in the United States in these last years is the threat of green gentrification as well as the uneven distribution of access to parks and urban nature in US cities. The latter is the result of discriminatory practices that denied ethnic minorities and their neighborhoods various services, including mortgages, a practice that in the 1930s was formalized by the federal government as “redlining.” However, the uneven distribution of street trees, for example, is not unique to the United States. Despite urban planning ideals in the late nineteenth and early twentieth centuries, which included equal access to urban nature, this is rarely the case anywhere. Take the city of Berlin, for example. Along with a difference in street-tree density between East and West Berlin during the Cold War, there were also differences between the various districts in West Berlin. Neukölln and Kreuzberg had fewer trees per street kilometer than the wealthier districts of Wilmersdorf and Charlottenburg. Given these inequalities, people have founded

grassroots movements to plant more trees in cities, to protect trees, and they have organized around tree care. At various moments in time, trees have become a means and method to (re-)claim public space and civil rights. A notable example are the grassroots tree-planting initiatives by African American citizens during the civil rights movement in the United States.

PK: What about the role of women?

SD: Women have played an important role in all aspects related to plants. For example, they instigated Philadelphia's grassroots window-gardening campaigns that I am currently researching and writing about. I show how plants and by extension plant care, on the one hand, forged social ties and contact across color lines, while on the other, they further promoted residential segregation and white supremacist planning policies.¹ Women were also instrumental in the first street-tree planting campaigns in US cities. In German cities during the First World War, they took over from men. Now women were not only lobbying for trees, but they were also planting them. Trees were a material and method to transgress the separation between the private and public spheres.



(Left) Community gardens, Philadelphia, 2004. (Right) Window boxes, Philadelphia. © Sonja Dümpelmann. All rights reserved.

PK: Last year, I attended a [lecture by Dr. Diego Molina](#), who works on urban nature in tropical cities. Someone in the audience asked about his impression of Munich's urban nature—a city that is often considered to be very green in comparison to other German urban environments. He replied that Munich is a desert compared to Colombian cities when it comes to the number of plants and the diversity of species it is home to. What can we learn from urban planning in the Global South?

SD: The American continents have a greater diversity of naturally occurring tree species. The tropical and subtropical climate zones also produce a different plant aesthetic, which appears very lush and rich. Ideas of diversifying the urban tree canopy in European and US cities go back to the late nineteenth century. Aesthetic concerns and the threat of losing all trees of one species to disease led some city foresters to argue against monotonous "corridor planting" along streets. They experimented with alternating tree species along streets, an idea that some landscape architects have taken up again in more recent times (without realizing there is a history of this!). Cities in Germany and other European countries are aware that they need to diversify their tree canopy, and lists, like the ones mentioned above, today include many species formerly not widely planted in central European cities. Looking at the ways of planting, incorporating, and accommodating spontaneous plant growth in different cities across the world draws attention to the importance of understanding the respective site conditions, be they environmental, cultural, social, or political.



Medellin, Colombia, Poblado Avenue, a green corridor in the city. © camaralucida on Adobe Stock. All rights reserved.

PK: The inevitable and somewhat provocative question: would you say there is a value hierarchy between plants and animals with respect to their worthiness of moral consideration?

SD: There would be no life on earth without plants, and yet they are mostly taken for granted, neglected, and often unrecognized. In 2001, scholars of education Elisabeth E. Schussler and James H. Wandersee called attention to “plant blindness” in large parts of Western society. They described it as “the inability to recognize the importance of plants in the biosphere, and in human affairs”; “the inability to appreciate [plants’] aesthetic and unique biological features”; and “the misguided, anthropocentric ranking of plants as inferior to animals.”² In the past, humankind in the West has acted upon a clear value hierarchy with humans at the top, followed by nonhuman animals, and then by plants. However, recently, scientists and philosophers have argued for the sentient life of plants and for plant intelligence. The analogies drawn between animal and plant intelligence and behavior have helped to re-center plants in many scholarly discussions. This also helps to see the “unseen,” the “other,” the marginalized, whether this be plants, lichen, bacteria, fungi, or humans. Seeing plants can promote more nuanced and pluralistic points of view, countering any form of hegemony.

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PK: Parts of your research focus on human-plant relationships in urban spaces in the nineteenth and twentieth centuries. The intersections of plants with human culture is what the up-and-coming interdisciplinary field plant humanities engages with. Where would you position yourself within this field? And which potential areas for future research are you most excited about?

SD: I'm very interested in centering plants in my own research³ and am doing this in a number of projects. I recently wrote some articles (another one is forthcoming) on the role of plants in the design of our built environment, and the difficult and politically charged relationship that even a profession like landscape architecture,⁴ whose primary building material is plants, has with these organisms. One of the things that I hope to bring to the field of plant humanities is not only new stories about the relationship between plants and people, but how these stories play out in space and time.

Notes

¹ Sonja recently presented an invited lecture on "Planting Inside-Out: Window Gardening and Civil Rights in Twentieth-Century Philadelphia" (University of Copenhagen, 21 April 2023).

² James H. Wandersee and Elisabeth E. Schussler, "Toward a Theory of Plant Blindness," *Plant Science Bulletin* 47, no. 1 (2001): 2-9.

³ See, for example, "Green Is Hope, and Grass the Future," *Places Journal*, April 2021, <https://placesjournal.org/article/in-berlin-green-is-hope-and-grass-the-future/>.

⁴ See, for example, "It's Not Easy Bein' Green," *LA+ Interdisciplinary Journal of Landscape Architecture*, no. 15 (Spring 2022): 36-45, <https://lajournal.com/15-GREEN>; "Plants," in *The Landscape Project*, ed. Richard Weller and Tatum Hands (Pennsylvania: Weitzman School of Design, 2022), 52-68, <https://appliedresearchanddesign.com/product/the-landscape-project>; and the forthcoming "Plant(s) Matter: On the Dichotomy and Duplicity of Green Walls and Grass Pavements," in *Bio/Matter/Technics/Synthetics: Design Futures for the More Than Human*, eds. Franca Trubiano, Susan Kolber, Marta Llor, María José Fuente, and Amber Farrow (Barcelona: Actar).



Sonja Dümpelmann is a tenured full professor at the University of Pennsylvania Stuart Weitzman School of Design. In July 2023, she will join the Rachel Carson Center as co-director and as the new chair of the environmental humanities at LMU Munich. Sonja served as Senior Fellow of Garden and Landscape Studies at the Dumbarton Oaks Research Library and Collection (2014-20), and as president of the Landscape History Chapter of the Society of Architectural Historians (2013-16). She has held associate and assistant professorships at Harvard University, the University of Maryland, and Auburn University.



Pauline Kargruber holds an MA in English studies from LMU Munich. Her research has focused on human-nonhuman relationships, political economy, literature as propaganda, and precarity in twentieth- and twenty-first-century fiction. When she is not editing texts for *Springs* and *Arcadia: Explorations in Environmental History*, she concentrates her efforts on writing fiction.



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Cite this article

Dümpelmann, Sonja, and Pauline Kargruber. "Roots through Asphalt: A Conversation with Sonja Dümpelmann." *Springs: The Rachel Carson Center Review*, no. 3 (May 2023). <https://doi.org/10.5282/rcc-springs-3964>.

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ISSN 2751-9317

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