



Home Gardens as Living Art: An Aesthetic and Environmental Perspective

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Home gardens occupy a unique and increasingly recognized role at the intersection of aesthetics, ecology and everyday human practice. As intentionally arranged assemblages of living organisms and built elements, home gardens may be interpreted both as works of art and as small-scale ecosystems whose cumulative area and management exert significant environmental effects in urban and rural landscapes. This review synthesizes scholarship from environmental aesthetics, landscape theory, urban ecology, agroforestry and horticultural sciences to examine how treating home garden as “living art” illuminates synergies and tensions between aesthetic values and environmental functions. The review first situates gardens within theoretical debates about the nature of aesthetic experience and environmental perception, then surveys historical and typological variation in home garden forms, presents empirical evidence on biodiversity and ecosystem services supplied by residential gardens, discusses design principles that reconcile beauty with ecological function, and examines socio-cultural drivers, trade-offs and governance implications. The article concludes with research priorities and practical recommendations for designers, planners and householders seeking to maximize both the artistic and ecological value of domestic green space.

Keywords: Home gardens, landscape, agroforestry, biodiversity and ecological function

Introduction

Private gardens and domestic plantings constitute an expansive and often underappreciated component of contemporary landscapes. In many cities and towns the aggregate area of residential gardens rivals or exceeds that of designated public parks and formal green spaces, so that garden management at household scale scales up to produce city-wide ecological outcomes (Loram, *et al.* 2008). This material reality has propelled scholarly interest in gardens as contributors to urban biodiversity networks, ecosystem service provisioning, and human well-being. Yet gardens are not only functional green patches: they are also cultural artifacts fashioned according to aesthetic principles, symbolic meanings and personal or collective identities. The dual character of gardens simultaneously aesthetic ensembles and ecological systems—creates fruitful opportunities for interdisciplinary inquiry. Understanding how aesthetic choices shape ecological function, and conversely how ecological processes can enrich aesthetic experience, is essential for promoting garden

practices that are both beautiful and environmentally beneficial. This review therefore frames domestic gardens as “living art,” a conceptual orientation that foregrounds intentional composition while insisting that ecological processes be legible, supported, and integrated into design.

Theoretical foundations: gardens as art and environmental aesthetics

Philosophical and theoretical treatments of gardens have long explored whether and how gardens belong within the ambit of the arts. Traditional accounts emphasize affinity with the visual arts: gardens involve composition, balance, focalization, rhythm and the orchestration of colour, texture and form across space and time (Hunt, 2000). However, unlike static artworks such as paintings and sculptures, gardens are dynamic: their material constituents grow senesce, reproduce and interact, so that the aesthetic experience of a garden is temporally extended and processual (Ross, 1998). Environmental aesthetics, as a philosophical subfield, extends aesthetic theory by stressing that appreciation of natural and semi-natural environments is conditioned by ecological knowledge and moral orientations; appreciation becomes deeper and more meaningful when it is informed by an understanding of ecological relationships and processes (Carlson, 2000). In this framework, a garden’s visual qualities are inseparable from the ecological dynamics that produce them: the decay of leaves, the presence of pollinators, the seasonal succession of flowers and fruits all can be read aesthetically if observers are attuned to ecological processes.

Complementary theoretical perspectives emphasize the participatory nature of aesthetic engagement with environments. Gardens exemplify this participation because gardeners manipulate soil, water, and plant life and continuously interact with the living composition; their actions and responses are imbued with bodily, temporal and affective dimensions. Philosophical accounts that treat gardens as hybrid constructs neither wholly natural nor wholly artificial—stress that gardens negotiate a balance between human agency and ecological autonomy (Cooper, 2006). This liminality is central to the garden’s intellectual and emotional appeal: it allows gardeners and observers to experience human artistry expressed through living processes, and it invites reflection on themes of temporality, mortality and interdependence. Taken together, these theoretical strands position gardens as living artworks whose full aesthetic value is realized when ecological understanding, ethical reflection and design intention coexist.

Historical and typological perspectives on home gardens

The forms and functions of home gardens are deeply historically and culturally embedded. Across world regions garden typologies range from ornamental, highly formalised parterres and terraces to multi-layered tropical home gardens highly integrated with subsistence practices. In many tropical regions traditional home gardens combine trees, shrubs, herbs, tuberous crops and medicinal plants in vertically stratified poly cultures that resemble forest structure and deliver multiple household benefits—food, medicine, fuel wood, shade and biodiversity conservation (Kumar & Nair, 2004). In temperate contexts a suite of historical movements—formal Renaissance gardens, picturesque and English landscape traditions, cottage gardens, and modernist minimalism has produced diverse aesthetic repertoires that shape contemporary homeowner preferences and professional landscape practice. In recent decades hybrid forms have proliferated: edible landscapes and “foodscaping” integrate productive plantings with ornamental composition; pollinator gardens emphasize flower continuity and habitat features; permaculture and regenerative designs foreground closed-loop systems; and xeriscaping adapts aesthetic choices to water-scarce climates. The heterogeneity of garden typologies is consequential for environmental outcomes because plant selection, spatial structure and management regimes vary widely across these forms.

Biodiversity in home gardens: evidence and mechanisms

Empirical research indicates that individual private gardens and aggregated collections of gardens can be important reservoirs of biodiversity within urban and peri-urban landscapes.

Gardens can increase local plant species richness and provide resources for pollinators, birds, and small mammals when they host a diversity of plant species and structural complexity (Goddard, et al. 2010). Studies demonstrate those gardens rich in vertical layering—trees, shrubs, herbaceous layers—and those that incorporate native species tend to support higher abundances and diversity of native fauna (Lerman & Warren, 2011). Pollinator studies across landscapes have shown that urban gardens and green spaces can rival farmland and nature reserves in terms of flower-visitor abundance and richness under certain conditions, underscoring the conservation importance of urban domestic plantings (Baldock *et al.* 2015). At the same time, the species composition of gardens often includes many non-native ornamental species, and the degree to which gardens support specialist or rare species depends on the regional context and connectivity to larger habitat patches. Mechanistically, gardens enhance biodiversity by providing floral resources across seasons, nesting sites, microhabitats (e.g., log piles, leaf litter), and refugia in otherwise developed landscapes; their cumulative spatial configuration influences meta-community dynamics and movement of organisms across urban matrices (Goddard et al., 2010).

Ecosystem services supplied by home gardens

Home gardens provide a constellation of ecosystem services that encompass provisioning, regulating, cultural and supporting services. Provisioning services include fruits, vegetables, herbs and sometimes small livestock products, which contribute directly to household nutrition and food security in many regions. Regulating services provided by gardens are significant at local scales: vegetation and shade reduce surface temperature and ameliorate urban heat islands, permeable soils and plant cover enhance stormwater infiltration and reduce runoff, and perennial plantings and soil organic matter sequester carbon and improve soil stability (Armson, et al. 2013). Cultural services derive from gardens' aesthetic, recreational and therapeutic roles; engagement with gardening has demonstrable psychological benefits, including stress reduction and improved mental health (Van Den Berg and Custers, 2011). Supporting services such as pollination and nutrient cycling undergird many of the other benefits and are performed by diverse invertebrate and microbial communities enhanced by garden heterogeneity (Barrios, 2007). Quantitative assessments indicate that the multifunctionality per unit area of home gardens can be high compared to monocultural urban surfaces because gardens often combine vertical structure and floristic diversity within small footprints (Cameron et al., 2012).

Aesthetic practices that support ecology: integrating beauty and function

Framing gardens as living art suggests design strategies in which aesthetic composition and ecological function are mutually reinforcing rather than mutually exclusive. Several practical design principles emerge from the literature and practice. Compositional diversity—variation of colour, form, texture and phenology can be achieved using a range of plant species that also provide complementary ecological niches; thus, visual richness and ecological heterogeneity commonly coincide. Structural layering that includes canopy trees, mid-story shrubs and herbaceous under plantings generates spatial depth and seasonal dynamism while offering habitat for birds, invertebrates and other taxa. Incorporating native and locally adapted species frequently reduces maintenance inputs, increases support for native fauna and fosters ecosystem resilience; where ornamental non-native taxa are used, careful screening for invasive potential minimizes ecological risk (Reichard & White, 2001). Embracing “dynamic aesthetics” reframes seasonal senescence, seedheads and leaf litter as aesthetic assets rather than defects, which encourages practices that favor biodiversity—such as leaving seedheads for winter birds or maintaining log and rock piles for invertebrates (Nassauer, 1995). Microhabitat creation—small ponds, deadwood, wildflower patches, and layered plantings—adds artistic focal points that simultaneously expand habitat heterogeneity. These strategies illustrate that design choices can render ecological processes visible and aesthetically compelling, thereby cultivating both beauty and biodiversity.

Socio-cultural drivers: norms, identity and governance

Garden aesthetics and management choices are conditioned by social norms, cultural identity and institutional frameworks. Sociological and ethnographic research shows that preferences for lawned, tidy front yards are reinforced by neighborhood expectations, homeowner associations, municipal codes and perceptions of property value and safety (Nassauer, 1995). Governance frameworks influence the extent to which ecological gardening practices are adopted: policies that incentivize tree planting, encourage permeable surfaces, or relax ordinances that penalize non-traditional front yard plantings create enabling conditions for ecologically beneficial aesthetics (Cameron *et al.*, 2012). Community education, demonstration gardens and participatory design processes can shift norms by exposing neighbors to attractive models of biodiverse and well-framed garden aesthetics that align ecological value with perceived care.

Trade-offs, risks and unintended consequences

While gardens supply many environmental benefits, scholarly attention has also focused on trade-offs and potential harms. The horticultural trade has historically been a major pathway for the introduction and spread of invasive species; some widely planted ornamentals escape cultivation and negatively affect native ecosystems (Reichard & White, 2001). The intensive use of chemical fertilizers and pesticides in some gardens creates non-point sources of pollution with adverse effects on soil health, aquatic systems and non-target organisms such as pollinators (Goulson, 2013). The replacement of permeable planting surfaces with paving or artificial turf reduces infiltration, increases runoff and contributes to urban heating; water-intensive ornamental choices can aggravate scarcity in arid regions. Furthermore, embodied environmental costs—including peat extraction for horticulture, imported nursery stock and single-use plastics for containers create life-cycle impacts that complicate simple assessments of garden sustainability. Consequently, recommendations for ecologically informed garden design emphasize native plantings, organic management, reduced turf and permeable materials as ways to minimize negative externalities.

Empirical case studies across regions

Comparative studies illustrate both shared patterns and regional specificity in how home gardens function ecologically and culturally. In tropical regions such as South and Southeast Asia, homegarden systems remain critical sources of food, medicine and agrobiodiversity; their complex vertical structure and polycultural composition confer high species richness and resilience (Kumar & Nair, 2004). In many low and middle-income countries, kitchen gardens are central to household nutrition and livelihood strategies, with women often playing key roles in garden management and knowledge transmission (Galhena *et al.*, 2013). Cross-site comparisons also point to equity issues: front yard greening and garden improvements are often more accessible to wealthier households, while low-income neighborhoods may lack resources for biodiverse plantings, highlighting the need for targeted public programs to address distributive gaps.

Methodological approaches and evidence gaps

Interdisciplinary methods ecological surveys, biodiversity monitoring, GIS and remote sensing of urban land cover, ethnographic interviews and participatory action research—have advanced understanding of garden systems. Remote sensing and household surveys have been used to estimate garden area and composition across cities, while controlled experiments and citizen-science initiatives have tested the effects of particular design elements on pollinators and bird communities (Baldock *et al.*, 2015). Nevertheless, several knowledge gaps remain salient. Longitudinal studies documenting garden trajectories over decades are scarce, limiting insight into resilience under climate change and socio-economic shifts. Integrated socio-ecological studies that simultaneously measure biodiversity, ecosystem service provisioning, maintenance costs and household perceptions are still relatively rare. Research from many regions of the Global South remains under-represented

in the literature despite the centrality of homegardens to rural and peri-urban livelihoods, so efforts to redress geographic imbalances are important. Finally, evaluations of policy interventions (subsidies, ordinances, demonstration programs) that aim to change garden practice at scale require robust experimental or quasi-experimental designs.

Governance, planning and policy implications

If home gardens are to be harnessed as components of urban green infrastructure and rural resilience, governance must move beyond exclusive focus on public parks and formalized green space. Municipal policies can enable garden-scale contributions by offering incentives for tree planting, financial or material support for rain gardens and native plant programs, and by reforming ordinances that unduly penalize non-traditional front yard habitats. Extension services, non-profits and community groups play vital roles in delivering technical assistance and demonstration projects that reframe aesthetic norms. Importantly, policy design must attend to equity: wealthier households tend to have more land and financial capacity to invest in biodiverse gardens, so public investments in community gardens, allotments, and targeted subsidies are needed to ensure broad access to garden benefits. Collaborative governance models that engage citizens, municipal agencies and academic institutions have shown promise in several cities for piloting garden-based sustainability initiatives and scaling up learning.

Recommendations for practice: design, education and participation

Operationalizing a “living art” approach involves combining high aesthetic standards with explicit ecological objectives. Practitioners should prioritize plant palettes that deliver multi-seasonal interest while supporting local fauna, adopt structural layering and microhabitat features, and use design devices that communicate care (edging, paths, focal plantings) to increase social acceptability of biodiverse elements (Nassauer, 1995). Education programs—workshops, demonstration gardens, online toolkits and citizen-science monitoring—can raise ecological literacy and provide attractive exemplars. Participatory design processes engage householders’ cultural preferences and practical needs, increasing the likelihood of ongoing stewardship. For municipal planners, integrating garden incentives within broader urban greening strategies and offering technical assistance can catalyze widespread change while attending to equity concerns.

Future research directions

Two categories of research priorities emerge as particularly urgent. First, longitudinal, integrated socio-ecological research is needed to track garden outcomes over time, assess resilience to climate extremes, and evaluate the permanence of biodiversity and service gains under varying management regimes. Second, policy and program evaluation research should test which instruments (grants, technical assistance, regulatory reform) are most effective for changing garden practices at scale and for different social groups. Methodologically, leveraging high-resolution remote sensing, network analysis of garden spatial configurations, and citizen-science biodiversity data offers opportunities for scaling ecological assessment while maintaining household-level social research. Cross-regional comparative studies—especially including underrepresented Global South contexts—will strengthen generalizability and expand practical knowledge about culturally appropriate design strategies.

Conclusion

Home gardens are simultaneously intimate artworks and functional ecosystems. Recognizing them as “living art” encourages design practices that celebrate seasonal process, structural complexity and ecological legibility while meeting aesthetic expectations and cultural meanings. The scholarly literature demonstrates that gardens can substantially contribute to urban biodiversity, ecosystem services and human well-being when designed and managed with ecological principles in mind. Yet realizing this potential requires attention to trade-offs, cultural norms, and governance arrangements that can either enable or inhibit ecological

gardening. Interdisciplinary research and collaborative policy efforts that combine aesthetic sensibility with ecological science hold the greatest promise for fostering domestic landscapes that are beautiful, biodiverse and socially inclusive.

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