

discuss in the follow-up study; two is the limitations of the scale. About green infrastructure of district scale, the main contradiction is not the connectivity, but should consider the fairness of GI elements (such as city park) in space. On this basis, further optimize the research results.

## **BIBLIOGRAPHIC REFERENCES**

- [1] Qing Chang, Xue Li, Xiulan Huang, Jiansheng Wu. A GIS-based Green Infrastructure Planning for Sustainable Urban Land Use and Spatial Development, Paper presented at the 2011 International Conference on Environmental Science and Engineering, Singapore.
- [2] Xi'e Fu. Green Infrastructure Planning and the Enlightenment to Our Country [A]. Urban Development Studies, 2015(4):52-58
- [3] Qiang Zhu, Kongjian Yu, Dihua Li. The Width of Ecological Corridor in Landscape Planning [J]. Acta Ecologica Sinica, 2005, 25(9): 2406-2412.
- [4] Xiaogeng Ren. Research on the Construction of Green Infrastructure Network in Xuzhou (Doctoral dissertation, China University of Mining and Technology, 2013).

# ID 1353 | GREEN INFRASTRUCTURE IN LIMINAL STREETSIDE SPACES: CASES FROM EUROPEAN CITY CORES

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## 1 INTRODUCTION

Human interactions ranging from everyday socialization to celebratory gathering and insurgency are all more or less accommodated along the streets of contemporary Western cities. In the denser quarters of European cities, in particular, the street is the setting along which much of the civic life of urban dwellers is played out. As the pedestrian moves laterally from the roadway curb outwards, a narrow ribbon of quasipublic/private space that emerges from adjacent buildings is usually encountered. In the city core and inner ring suburbs, this transition zone harbours stoops, landings, areaways, pavement gaps at foundation walls, facades, sills and lintels, handrails, stairwells, and other niches that present urban dwellers with tight-butsufficient opportunity for streetside horticulture and related accoutrements. It is this underappreciated transition zone, and the recreational and expressive activities associated with growing plants in it, that is addressed below. I use the term convivial greenstreet to convey an assemblage of features and patterns in a supportive context (street, built form). This setting is enacted by gardeners (residents, merchants, employees) who cultivate plants to a degree sufficient to elicit some sensory appreciation on the part of passers-by and, now and then, to prompt social engagement between cultivators, neighbours, and passers-by who share the street's frontage.

"Convivial greenstreet" as used here is a conceptual umbrella term for a range of greenstreet types that all have in common an emphasis on informal private and quasi-public installations. The ideal convivial greenstreet (hereinafter: CG) accommodates processes and patterns of socially inclusive, uncommodified, and culturally diverse horticulture that is situated in physically interstitial and socially liminal streetside niches in the tight quarters of contemporary cities (Steven, 2007). A proposed—and still evolving—typology with a focus on residential types is provided in Section 3, below.

The convivial greenstreet may be framed within the generally analogous rubric posed by critical urbanists, including Dovey (2008) and Miles (2000). Both scholars trace various kinds of citizen ornamentation and place-making as ways to reclaim urban space and ascertain local identities. Miles (2000, p.203) writes, "An understanding of the architectural everyday contributes to sustainability by emphasizing the specifics of locality...sustainable solutions to urban problems will be found outside the dominant structures of development." And Dovey (2008, p. 175) seems to anticipate a role for CGs in his call for "new ways of



putting roots in place which resist the totalizing retreat in space or time and the paralyzing view that freedom is found in enclosure." The quotidian, open, free-spirited cultivation occurring along the more robust convivial greenstreets may also be viewed as gentle kind of emancipatory 'play', reminiscent of the Situationist's unitary urbanism (Pinder, 2004; Sadler, 1998). However, whether any forms are directly antagonistic of the hegemony of the corporatized city is beyond this paper's scope. But that CGs may in some small way counteract the banal aspects of urban society seems apparent, as demonstrated later in the paper. Finally, as a mostly benign phenomenon that can contribute to local and civil society, I suggest ways that planners and urban designers can provide professional and moral support.

This paper builds on an initial examination of such streets in Tamminga (2014) that focused on conceptual reification and situating of the CG phenomenon in the theoretical literature. It observed that:

"In contrast to the generic public streetscape, [the convivial greenstreet] tended to be smaller-scale, walkable, and spatially intimate streets in and around the city core—linear spaces imbued with foliage, flower and fruit, and visibly well-tended. In such places it was readily apparent that pedestrians slowed their pace, curious over a plant or a bit of intriguing green infrastructure, or pausing when met by a waft of fragrance or a serendipitous butterfly. At routine times of day, when inhabitants, shopkeepers, and visitors crossed paths, friendly greetings were expressed. Children actually played in the streets after school. It seemed that both the horticultural activity and the objects of horticulture were serving as pretext for a sort of civic gezelligheid (Dutch) or gemütlichkeit (German)-both terms translate imprecisely as a warm and sociable togetherness. Certain streets in certain cities felt especially verdant, affable, and alive. Some of the more notable examples hinted at a locally expressive kind of neighbourhood sustainability—both in terms of the physicality of the space (ecology, materiality), and in terms of the planterly discourses (verbal, sensory, semiotic) in which sustainability values and practices might be shared and reinforced ... Three key facets of the places observed-the social (conviviality), the material/ecological (greenstreet flora and its infrastructure), and the spatial (street volume)—are captured in the phrase "convivial greenstreet." ...When sufficiently intense, the greenstreet is the active spatial context for a material culture of personalized-yet-interactive horticulture that expresses, demarcates, instructs, appropriates and contests."

The notion of conviviality is an important variable in this conceptual framework. In his seminal critique of industrial society, Ivan Illich (1973, p. 12) criticizes the rise of professionalization, making an appeal to "enlarge the range of each person's competence, control, and initiative, limited only by other individuals' claims to an equal range of power and freedom." Illich would have appreciated the role of CG gardeners on the urban scene. While urbanists debate the ideal of conviviality (e.g., Purdy, 2014), others assert that conviviality in the city is "the very nourishment of civil society itself" (Peattie, 1998, p. 250) and "the essence of urbanity" (Shaftoe, 2008, p. 5). Nowicka and Vertovec (2014, p. 352) observe that even conflicts over "everyday issues such as gardens...are modes of civil interaction." And the renowned urbanist Jane Jacobs (1961, p. 30) wrote, "Sidewalks, their bordering uses, and their users, are active participants in the drama of civilization." At the scale of the metropolis, Lees (2004, p. 3) writes, "This century, even more than the last, will be an urban one in which the city is the measure of the civility and sustainability of society." More than just tolerant civility, however, place-based conviviality in the city connotes a kind of inclusive multi-community neighbourliness that embraces difference and exchange. Drawing on my initial work (2014, p. 4), I note that,

"conviviality and community in this context are not the same things. Communities have members and non-members, with members often making decisions about in- and exclusions. On the other hand, conviviality is contingent and dynamic and sometimes eventfully inclusive of visitors drawn to pause along their way. All the while, the greenstreet performs double duty as a public corridor that also accommodates the passage of others. Yet at its core conviviality draws on community for its cohesion. The spatio-physical environment and adjacent land use activities provide the continuity within which the convivial mood ebbs and flows, peaking now and then during daily events of personal engagement with the greenstreet materiality or inter-personal and intercommunity interactions along the street."



As the scholarship and praxis of urban green infrastructure (GI) develops, the range of green infrastructure components continues to expand to include newly identified tendrils and shards—such as CGs—that contribute to the health and well-being of urban dwellers. The European Commission (2016) contrasts GI with single-purpose, traditional grey infrastructure by noting that "green spaces can perform a variety of very useful functions, often simultaneously and at a fraction of the cost. One of the key attractions of green infrastructure is this multi-functionality." While the Commission asserts that GI is a "planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services," it also acknowledges the contributions of informal environs, stating that GI "includes semi-natural spaces such as parks, private gardens, and hedges" and places that "can be enhanced by individual gestures such as collecting rain water or leaving parts of a garden untouched." Focusing on the city, the Commission states that "green infrastructure can and should be an integral part of urban areas too—particularly in densely populated areas" that "can significantly enhance the health and well-being of urban residents, improving social cohesion and the quality of the living environment."

AESOP 2017's conference track #5 on Green Infrastructure echoes the Commission's stance: "Green infrastructure should be designed and managed as multifunctional resource capable of delivering a wide range of benefits to humans and ecosystems, such as...biodiversity conservation...enhancing identity, cultural values, and resilience." The work of the Commission and the exploration of GI through the forum of AESOP '17 help suggest that the collective impact of CGs in cities where they are emerging as a distinct GI form is likely to be meaningful in ecological, social and cultural terms, across the breadth of the contemporary urban core. In commenting on accessibility to urban horticulture, Maltby and Nandan (2017) note that "there is substantial research on the positive impact on people's mental state of having living plants be a part of their environment. In addition to the psychological and aesthetic benefits, more plants in our concrete environment will also provide crucial ecosystem services, such as mitigating air pollution and heat island effect, improving stormwater management, and potentially increasing bio-diversity." The relationships between urban environmental quality and human health and well-being are supported by research in environmental psychology, urbanism, and urban ecology, including the work of Hartig et al. (2003), Kaplan (2001), Kuo (2011), Matsuoka & Kaplan (2008), Saümel et al. (2016), Thwaites et al. (2013), and Ulrich et al. (2006), among others.

# 2 METHODOLOGY

Informed by relevant methodologies used in urban landscape analysis and urban ethnography (Foxley, 2010; Krase, 2014; Kusenbach, 2003; Nuvolati, 2014; Ramsden, 2014; Tilley, 2010), the lion's share of data collection activities comprised walking along, and documenting observations within, pre-targeted streets in select European cities (Table 1). My initial research focused on cities in the Netherlands, Rhineland area of German, and Belgium—where it is readily apparent that horticultural proclivities and urban living have co-mingled. Since then other European cities have been, and continue to be, added to the list. Selection criteria included urban spatial density, socio-economic diversity, land use (primarily medium-density residential and commercial) and walkability. Most readily identified CGs were found in historic urban cores, but notable cases do occur in contemporary inner ring suburbs in cities like Amsterdam and Cologne.



	. — — — — — — — — —		
Country / City	Neighbourhood / Quarter	<u>Dates</u>	
Netherlands	1	+1	
Amsterdam	Jordaan, Grachtengordel-West	July 2011, Oct. 2014	
Delft	Binnenstad, Centrum-oost	July 2011, Oct. 2014	
Leiden	Binnenstad-Zuid/Noord, Stationsdistrict	July 2011, Oct. 2014	
Leeuwarden	Centrum	July 2011, Oct. 2014	
Katwijk	Katwijk aan Zee	Oct. 2014	
Germany		71	
Cologue	Ehrenfeld, Altstadt-Süd, Sülz	May, 2013, Sept. 2014	
	Lindenthal, Neustadt-Süd		
Bonn	Altstadt, Zentrum, Südstadt	May, 2013, Sept. 2014	
Frankford	Innenstadt	May 2013	
Aachen	Aachen-Mitte	Sept. 2014	
Andernach	city centre	Oct. 2014	
Rostock	Stadt-mitte, Südstadt	June 2016	
Denmark		$\perp$ $    -$	
Copenhagen	Christianshavn, Indre By, Vesterbro	Aug. 2010, June 2016	
Belgium	/	<u> </u>	
Brussels	Saint-Gilles, Forest, Inelles	Aug. 2011, Sept. 2014	
Ghent	Centrum, Patershol	Sept. 2014	
France	'	+	
Paris	Le Marais, Quartier d'Amerique	Oct. 2014	
	Montmartre, Quartier Latin	[]	
	Gràcia, Eixample, Barceloneta, Horta,	+	
Barcelona	Cuitat Vella	June 2016	
I Title - Down Police		† — — — — — — — — — — — — — — — — — — —	
Lisbon, Prague, Budapest	!	pending, summer 2017	

Table 1 - Research Locales

To select likely neighbourhoods, municipal websites were accessed and key informants (e.g. local planners and urban designers) were asked to provide direction. Virtual walkabouts on Google Street View reinforced the long list of potential greenstreets prior to travelling to each city. Once in situ, target neighbourhoods were crisscrossed by foot to locate those streets exhibiting relatively high densities of greenstreet artefacts. Selected streets were then inventoried for CG features through field notes, site measurement, and photo-documentation (Tamminga, 2014).

The number and type of convivial greenstreets examined to date vary widely from city to city. Typically, all cities visited contained examples of at least partially-formed CGs. Certain remarkable neighbourhoods, such as Binnenstad in Delft and the Hoefstraat area of Leiden (both in the Netherlands), exhibited street clusters where well-formed and fully functional CGs were close to becoming the convention. In other cities, neighbourhoods such as the very compact traditional communities of Gràcia and Barceloneta in Barcelona displayed only one or two horticultural components: façade-mounted floral baskets and sill planters in an architectonic streetscape otherwise devoid of greenery. Overall, the majority of the cities investigated had at least 2 to 3 cases of streetscapes that showed sufficient diversity and intensity of horticultural installations to be considered CGs, based the typology shown in Section 3 below.

Building heights and building height-to-street width ratios were estimated to give a sense of the spatial volumes that might accommodate streetside gardening. Vegetation apparently cultivated by residents and commercial employees (that is, not municipal workers) were assigned to basic plant form categories, along with container type and position and installation technology. Supportive accourtements such as pottery, art, and bird houses, and private-sector accommodations that seemed available for pedestrian use such as benches and bicycle rails were noted. Any temporary accompanying installations that seemed integral to the identity or functioning of the CG were noted—for example, signs, notes and graffiti that suggested semiotic intents such as territorial marking, sponsorship, and interpretive messages for passers-by. Public streetscape installations (e.g. street trees, lighting and banners) were also documented. Case study streets were classified as to land use, and any indicator of socio-economic and cultural characteristics were noted. Both during and after inventorying, activities and social interactions along the street that appeared to be associated with streetside horticultural were observed and noted.

All data on streets displaying significant CG characteristics were then compiled and sorted to develop the typologies presented in the following section. Analysis of the steadily growing corpus of CG photos, maps, and field notes, as well as tie-in with literature in several disciplines, has continued to date.



## 3 TYPOLOGY AND CONCEPTUALIZATION

Field investigations and analysis of photo-documentation indicate 4 main types of convivial greenstreet in the cities visited. Note that it is quite possible that more categories will emerge as other European cities are studied (Prague, Budapest and Lisbon are scheduled for summer 2017). For each of the types shown in Table 2, land use, number of storeys along street frontage, building height-to-street width ratio, key actors along the street, and cadence, or rhythm, of horticultural and associated convivial activity is noted.

Type 1 Residential emerged as the most common and diverse type of CGs in the cities studied. This was expected for several reasons: i) by definition streetside horticulture installations are private or quasiprivate ii) residents are the most likely agents to engage in such activities on the daily basis required to grow plants successfully, and iii) horticultural diversity tends to mirror the diversity of cultures and sub-cultures common in the core sectors of European cities, while plants and their orchestration serve as an effective medium for individual expression.

As noted previously, residential sector convivial greenstreets are characterized by compact urban conditions with a dearth of private yard garden plots; thus, the only available space for gardening is within a narrow horizontal and vertical corridor along the street frontage where traffic activity is either inherently moderate or otherwise controlled by permit or regulation. Consistently, the richest examples of residential CGs were to be found on streets with 'human-scale' spatial volumes: narrow streets and 2–4 storey attached dwellings.

The exemplar of Trompetstraat in the Binnenstad quarter of Delft, the Netherlands, is shown in Figures 1 and 2. While this street dates back to the 1600s, there are some modern-era residential infill units that fit their context well. Referring to the keyed 'anatomy' in Figure 2, the street itself is narrow [A], and clad in permeable brick pavers. Only permitted vehicles allowed. The building height-to-street width ratio is about 1.5:1, with a human-scaled 2–2.5 stories of building frontage. Potted perennials on the stoop [B] and annuals sprouting from gaps along the foundation [C] mark the visually-important transition from horizontal to vertical. A domestic artefact doubles as a planter [D], and the adjacent entryway is framed by a well-tended vine [E]. Further into the vignette, a homeowner's bench [F] is offered to neighbours and passers-by.

CG type	Adjacent land use	Building height/ street width; # storeys	Key interacting agents/actors	CG activity cadence
Type 1. <u>Residential</u> Type 1a.	entirely Residential	2:1-1:2 2-4 storeys	resident-resident; resident-passers-by	home day-time, pre- workday, noon, evening
Type 1b.	mostly Residential; some small-scale Commercial and Institutional	2:1–1:2 2. 5–4 storeys	resident-resident; resident-merchant; resident-passers-by	overlapped business hours, home day-time
Type 2. <u>Mixed</u> <u>Commercial</u> Type 2a.	smaller-scale Commercial; interspersed Residential	2:1-1:3 3-5 storeys	merchants-passers-by merchant-resident passers-by-passers-by	business hours; minor pre/post-business
Type 2b.	larger-scale Commercial and Institutional	varies	passers-by-passers-by employee-passers-by	business hours, festivals
Type 3. Celebratory	varies	varies	varies: participants, consumers	varies; reflects celebration / ritual itinerary

Table 2 - Typological Framework (adapted from Tamminga, 2014)

Another potted plant [G] and a deciduous shrub [H] mark a front door. Sconce-hung potted geraniums, large [I] and small [J], add interest to facades. A simple but period-appropriate lamp [K] complements the plantings and contributes, along with the "eyes on the street" (Jacobs, 1961) that typify CGs, to enhanced night-time security. A ledge along the upper cornice of one residence provides a high perch for more flowers [L], drawing the eye upward and forward. Doorways [M] along greenstreets vie with plants in terms of colour and gracious materiality as they, too, are subject to the aesthetic impulses of residents.



As with most narrow CGs in the Netherlands, Denmark, Belgium and Germany, bicyclists [N] and pedestrians co-inhabit the street with little difficulty, while low landings [F, G] provide a plinth for pedestrians or sitters when needed. When a rare side yard does occur [O], a tree is often allowed to overtop and shade the street—in this case a linden. Overall, the individual parts work with the spatial volume and bounding facades as a whole to create a harmonious setting that appeals to the senses and invites neighbourliness. Part of the success of the street must be attributable to community cohesiveness—parents and children engage in life on the street. Residents have their own Trompetstraat Facebook page, and colourful street graphics reminding inhabitants of events or services are posted at key points.

Although it is difficult to capture the entirety of the assemblage of greenstreet elements—much less its full ambience—in singular photographs, the Trompetstraat images do provide a useful cataloguing of what comprises archetypal Type 1a and 1b greenstreets. Compared to Type 2 and 3 greenstreets, Type 1 streets embrace a much larger range of horticultural forms and artefacts:



Figure 1 - Scene Along Trompetstraat, Delft, the Netherlands

Figure 2 - Anatomy of a Type 1a Street, Trompetstraat, Delft, the Netherlands

at least 11 sub-classes of CG elements were identified during field work, ranging from doorstep/stoop potted plants to trellised dwarf fruit trees to façade-mounted sconce planters to the ubiquitous



spontaneous-then-tended associated with interstitial gaps along the street. Such gaps often persist from historic street or infrastructure misalignments, providing opportunities for animated and engaging 'greenshards' and tended by adjacent planted residents. An excellent case is that of the Sustainable Quarters Contracts program Saint-Gilles on the southwest perimeter of Brussels (Commune de Saint-Gilles, 2016). Figure 3 shows one of its collaborations along Chaussée de Forest.

Figure 3 - 'Greenshard' Along Type 1b Street, Chaussée de Forest, Saint-Gilles, Belgium

Residential installations, in fact, far exceeded Type 2 Mixed Commercial installations (discussed below) in terms of expressiveness, ingenuity, and diversity of form and patterns. Interestingly, there were cases in most cities where residents and merchants alike appeared to have at least the implicit permission of local authorities to remove several sidewalk pavers along their foundation wall to allow excavation, followed by backfilling with growing media and plant installation (Figure 4). Or perhaps some of these installations are evidence of a mild-mannered form of the public space insurgency discussed by Hou (2010).



Socio-economically, it is not the case that CGs are necessarily associated with enclaves of affluent urbanites, as might be expected. In fact, robust greenstreets were found in a wide variety of social and cultural contexts. There were, however, links evident between sub-communities and the kind of horticultural taking place on the street—whether artistically expressive or politically or ecologically dogmatic. Figure 5 shows an edible micro-ecology installation on an eye-height windowsill in the Altstadt neighbourhood of Bonn, Germany. The little signs loosely translate as, "Edible wild plants from the countryside." In fact, edible plants are common to almost every Type 1 CG in the western European cities visited: tomatoes, peppers, gourds, vine fruits, and more are offered free-for-the-picking. Another good example is the slot rowhouse complex along Rodelijvekensstraat in Ghent, Belgium (Figure 6), an ornamental and culinary plant smorgasbord communally cultivated by the mixed Turkish—student community.





Figure 4 - Removed Paver with Fruit Tree Espalier, Altstadt Süd, Cologne, Germany

Figure 5 - Streetside Edibles, Altstadt, Bonn, Germany

Still, the vast majority of greenstreet installations serve to simply brighten up the street frontage and



provide an outlet for outdoor gardening. Clearly, the daily tending of flowers and vines—sometimes unapologetically overlapping on public rights-of-way—contributes to the quotidian life of the street. I often observed resident plant-tenders chatting with neighbours who were taking their dogs for a walk. It seemed to me then that the public acts of streetside cultivation and dog-walking alike were as much pretences to socialize as they were about simply accomplishing the tasks at hand.

Figure 6 - Slot Street Along Rodelijvekensstraat, Ghent, Belgium

For reasons that have yet to be closely examined, certain residential streets exhibit much more horticultural activity than others, and certain neighbourhoods accommodate a higher density of greenstreets than others. It may be that horticulturally-inclined cultural groups tend to live in close proximity. Or it is possible that some streets harbour one or several trend-setting gardener-activists, after which 'communities of practice' develop (Wenger, 1998). Anecdotally, when I asked several residents along greenstreets in Amsterdam and Leiden about their horticultural learning, they were quick to acknowledge the valued presence of a local master gardener. At the larger scale, The Netherlands, northern Belgium, and western Germany are the three countries where there appears to be a strong correlation between regional horticultural tradition and translation to, or reinterpretation of, urban CGs.

Type 2 Mixed Commercial greenstreets are of two sub-types. Type 2a greenstreets tend to be associated with smaller and specialty retail, green grocers, and restaurant establishments in finer-grained commercial



'main street' located in close proximity to core area and inner ring residential districts. Streetscape spatial volumes are moderately larger scale than Type 1, with open volumes associated with wider commercial arterial streets. A key Type 2a variable is that vehicular traffic is in some way moderated; wide sidewalks, bump-out planters, and various regulatory traffic restrictions result in less pedestrian/traffic interaction. This situation, in turn, presents two-fold opportunity: merchants find space along the frontage and out to the curb line to install plants, benches and related paraphernalia, and pedestrians feel sufficiently buffered from traffic to enjoy the installations tended by store personnel. Overlapping jurisdictions are quite common, and seem to be either ignored or tolerated by local authorities, or actively embraced through partnerships and support programs.

Figure 7 shows an example in the Cologne inner ring suburb of Ehrenfeld, where commercial streetside gardening is encouraged through the Engaged in Ehrenfeld program (eva eV, 2017). Such initiatives involve non-profit/municipal partnerships that provide infrastructure, plants, and materials (soil, mulch, etc.) that are installed and maintained by adjacent proprietors and their employees. In other cases, there is simply agreement that maintenance of public installations is the responsibility of the adjacent storeowner.

Installations are often customized, taking on the local flair and perhaps even personalities of their caretakers.

While marketing tactics are likely also at play, in comparison with formal streetscapes and corporate installations, Type 2a greenstreets impart a sense of authenticity and convivial generosity.

Type 2b greenstreets are associated with larger-scale urban developments along major arterials.

Traffic impacts and the coarse-grained pattern of businesses along the frontage often combine to undermine the intents of streetside gardening. Large hotels and restaurants are frequent contributors, often installing rather formal and costly installations in the context of streetside cafés operated along the sidewalk by permit.

An aura of corporatist control can permeate Type 2b environs, although clients and passers-by alike seem to tolerate the lack of colloquial charm while they appreciate the shade, screening and sensory qualities afforded by the plant assemblages.

Type 3 Celebratory greenstreets are less common than Type 1 and 2 versions. Typically, they include plant installations associated with holidays or special events. A good example is the maibaum ("May tree") tradition in some western German cities, during which 4 to 8 meter tall birches are harvested and distributed as part of May Day activities. At night, the trees are clandestinely strapped by secret admirers



to building facades or utility posts near the residence of the focus of their affection. The trees are often festooned with colourful streamers and red paper heart cutouts. On some streets in Bonn and Cologne, the number and density of maibaum are such that they have a major, albeit short-lived, visual impact on the street. Conviviality often ensues as suitors, families, and friends take to the streets to celebrate the coming of spring and the possibility of new relationships.

Figure 7 - Type 2a Installation, Venloerstrasse, Ehrenfeld, Germany



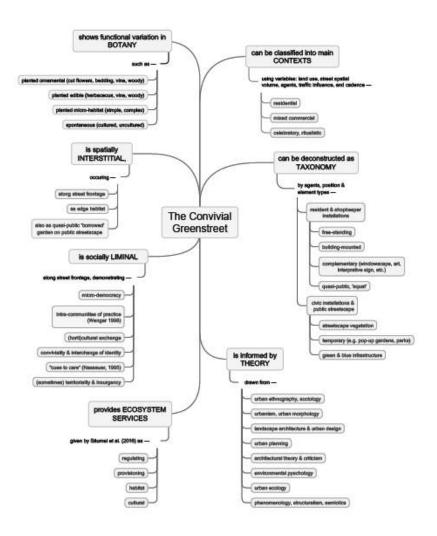


Figure 8 - Concept Map

With a working typology in place, and having conducted wide-ranging field studies and several cycles of literature review, it is now possible to construct a conceptual model that frames the essential components of both the idea and the physical reality of the convivial greenstreet. The Figure 8 concept map above shows multiple perspectives from which CGs can be considered. These include spatio-physical contexts, interstitial and liminal characteristics, functional variation in botany, taxonomic structure, ecosystem services provided, and paths by which the convivial greenstreet notion can be informed by the literature. As more cities have yet to be studied, the model should not be considered exhaustive.

## **4 CONCLUSION AND RECOMMENDATIONS**

Convivial greenstreets of all kinds, and the myriad of elements and activities that go into their collective making, contribute to the vitality and inclusiveness in these European cities. We have seen that CGs are at their most expressive, diverse and genuine in the spatially constrained residential precincts in and around the urban core. In these contexts, the ostensible lack of gardening space becomes the impetus to plant and tend, rather than an excuse not to. While underlying sociological or anthropological questions remain, the careful cataloguing of greenstreet materiality and phenomena in the field since 2010 across 16 cities in 6 countries has resulted in a working typology and a corpus of many hundreds of streetside particularities that, taken together, help to build a picture of this small but special part of the urban morphology of contemporary European cities. In 2014 (p. 18), I wrote that, "Streetside gardening is at its core a bridging system, a lingua franca between the diverse actors along the street. From that standpoint, greenstreets are a hopeful phenomenon—a desire that city dwellers have to emerge; to freely engage their neighbors and the diverse life of the street; to both confront and embrace its possibilities and complexities." Further and ongoing studies since then have helped affirm this stance.



My hope is that this paper will prompt AESOP '17 attendees to take up further convivial greenstreet questions as scholars, or to advocate for greenstreets as practitioners in their own places. If we have some consensus that convivial greenstreets are a largely positive force in the civil realm, then there's much work to do to ensure that they flourish and develop. As an outgrowth from what has become a longitudinal research project, I would suggest 3 frames of actions for urban policy-makers and designers to consider, as follows:

- 1. Walk. Become personally acquainted with convivial greenstreets—even just their nascent forms—in your own cities. Be on the street during the active times when horticulture (and GC culture) is taking place, both on weekdays and weekends. Observe, photograph, draw, map and otherwise document the phenomenon where it occurs.
- 2. Converse. Ask questions, both on the street and in the public forum. Listen to and acknowledge the benefits of streetside gardening and its myriad micro-installations, as well as contributions being made to the larger life of the city. Initiate conversation and gather stories from residents, merchants and visitors who are willing to share. Assure them that policy-makers and designers are ready to accommodate and support their beneficial greenstreet activities, whether ongoing or contemplated.
- 3. Support. Share your applicable knowledge, or leverage the knowledge of colleagues, in support of convivial greenstreets. Initiate programs, such as Bonn's Lehrpfad Stadtökologie ("city ecology educational trail") program that collaborates with communities on a range of greenstreet installations. Advocate for streetside gardeners who are trying to strike the sometimes precarious balance between free expression and responsible citizenry. Work with neighborhood leaders, master gardeners, and plant nursery suppliers to encourage sustainable, inspiring, and culturally diverse CG networks. Conduct workshops. Build intra-and inter-neighborhood communities of practice. Finally, ensure space for streetside gardening; if policies and codes are counter-productive or outdated, revise them. Provide accessible reference material as to best-practices that are tailored to local, evolving situations. Encourage respectful, inclusive creativity and healthy productivity through the act of planting and tending.

## **BIBLIOGRAPHIC REFERENCES**

Association of European Schools of Planning (AESOP). (2017). The forms and functions of green infrastructure. AESOP Annual Congress '17. Retrieved from http://ec.europa.eu/environment/nature/ecosystems/benefits/index\_en.htm

Commune de Saint-Gilles. (2016). Sustainable Quarters Contracts in Saint-Gilles, Extensive urban renewal programs. Retrieved from https://contratsdequartiers1060.wordpress.com/

Dovey, K. (2008). Framing places: Mediating power in built form. New York, NY: Routledge.

European Commission. (2016). The forms and functions of green infrastructure. Environment. Retrieved from http://ec.europa.eu/environment/nature/ecosystems/benefits/index\_en.htm

eva e.V. (2017). Engaged in Ehrenfeld. Retrieved from http://www.evaggmbh.de/eva-ev/home/

Foxley, A. (2010). Walking, thinking and making landscape. Zurich, Switzerland: Lars Müller Publishers.

Hartig, T, Evans, G., Jamner, L., Davis D., & Gärling, T. (2003). Tracking restoration in natural and urban field settings. Journal of Environmental Psychology, 23, 109–123.

Hou, J. (2010). (Not) your everyday public space. In J. Hou (Ed.), Insurgent public space: Guerrilla urbanism and the remaking of contemporary cities (pp. 1–17). London, UK: Routledge.

Illich, I. (1973). Tools for conviviality. New York, NY: Harper & Row.

Jacobs, J. (1961). The death and life of great American cities. New York, NY: Vintage Books.

Kaplan, R. (2001). The nature of the view from home: Psychological benefits. Environment and Behavior, 33(4),507–542.

Krase, J. (2014.) Walking in search of migrants in European cities. In T. Shortell & E. Brown (Eds.), Walking in the European city: Quotidian mobility and urban ethnography (pp. 153–171). Surrey, UK: Ashgate Publishing.