

Reimagining community through living assemblage

The Nova SBE community garden

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ABSTRACT

In this paper, we draw on Deleuze and Guattari's concept of assemblage (1987) as well as the concepts of intentional adaptation (brown, 2017) and affordance (Gibson, 1986) to reflect on the practices enacted in designing and nurturing the Community Garden@ Nova SBE, which emerges at the intersection of university development and local community dynamics. Initiated by the DESIS Lab @Nova SBE and supported by the Municipality of Cascais, the Community Garden @Nova SBE is a living and evolving system within an urban context that transforms an unused plot of land into a vibrant place where people, nature and activities interact and continuously reshape each other. The Community Garden is a complex and dynamic whole, composed of nature, artifacts (beds, tools, etc.) and different human communities. It serves as a living canvas where experimentation, adaptation, and learning happen continuously. This dynamic process, in which we see ourselves as facilitators, invites participants to take ownership, allowing the garden to grow organically and sustainably. This paper reflects on our practice in tending the garden and letting it grow through a circular process, which we conceived as involving three intertwined phases – inviting, listening, and stepping back. The Community Garden illustrates the value of engaging different stakeholders in a creative collaboration to reimagine how to inhabit unused spaces and co-create, with nature and with each other, an environment that nurtures both ecological and social relationships.

KEYWORDS

Community engagement, co-creation, urban green spaces, creative collaboration, experimentation

Introduction

Community gardens have become increasingly popular to tackle social and environmental issues: from improving health to promoting ecological practices and building social ties (Glatron & Granchamp, 2018). Recently, there has been a growing interest in implementing community gardens in universities to provide students with access to greenery, outdoors activities and exposure to sustainable practices (Byrne et al., 2020). They also have the potential to become spaces where students and residents interact while also coming in closer contact with nature.

Community gardens, as socio-ecological systems connecting nature with various human communities as well as physical artifacts (access ramp, tools, etc.) can be conceived as what Deleuze and Guattari (1987) define as assemblages. While assemblages mostly describe existing systems, this paper explores how we can design an assemblage. Yet, designing an assemblage is an oxymoron because it assumes some planning in opposition to the emergent nature of assemblage. With this tension in mind, we reflect on our experience of creating a university community garden and propose a circular process to design for emergence and create the conditions for a living assemblage to grow. This process involves three intertwined practices – inviting, listening and stepping back – where each practice informs and enriches the others. We highlight the importance of fluid, adaptive systems and show how community gardens can be platforms for collaboration and social impact. We propose the concept of a "living assemblage" as a way to shift from top-down design to a more organic, participatory approach when designing for emergence in urban spaces.

Theoretical framework

Assemblages and natural systems

Deleuze and Guattari's concept of assemblage represents a system where various elements, both human and non-human, come together in a dynamic interplay without predetermined roles or hierarchical structures. It allows us to understand how different elements can dynamically interact and create meaning. Deleuze and Guattari's concept of assemblage is inspired by natural ecosystems as illustrated by their use of the rhizome metaphor. The rhizome is a type of root system that grows horizontally and can sprout in any direction, and it serves as a symbolic representation of how assemblages develop and evolve through multiple connections rather than through a central controlling point. Deleuze and Guattari's conceptualization can help us analyze our community garden as a socio-ecological system or living assemblage, where human activity is intertwined with and deeply

connected to the broader natural world. Yet, its rebutting of any form of control and top-down process invites us to analyze our practice and role in creating and tending the garden.

Designing for emergence

While assemblage, with its inspiration in nature, is relevant to conceptualizing our Community Garden, it does not provide directions on how assemblages emerge and how they might be nurtured. Here the work of the social activist adrienne maree brown (2017) is pertinent to our practice because of its inspiration in nature and its focus on creating the conditions for emergence and change. Brown's concept of intentional adaptation offers valuable insights into how small-scale, localized, and iterative actions can accumulate to create systemic change. It aligns closely with assemblage's emphasis on bottom-up emergence while adding a practical dimension to fostering transformation. Central to brown's framework is the idea that change depends on context, and that we must pay close attention to how the physical and cultural environments affect the conditions for transformation.

Gibson's (1986) notion of affordances is a useful complement when thinking about designing environments like urban gardens. Gibson argues that we don't perceive objects or environments as a set of material properties, but we perceive their affordances, i.e. the possibilities for action. We take a relational view on affordances that allows us to conceptualize the relationship between actor and environment as an interpretative act (Fayard and Weeks, 2014). Affordances vary depending on the situation and the individual's culture, needs, and abilities. For example, the ramp we built in the Community Garden not only allows access to the space but has also been used as a slide for a toddler and as a meeting point where a table was set for a shared meal. These uses highlight how physical elements enable multiple interpretations and actions, shaped by the needs and perspectives of those interacting with them. It also points to the fact that what we design might be ignored or misinterpreted, reminding us that our designs are never finished.

While coming from very different intellectual traditions and disciplinary fields, Gibson's notion of affordance and brown's notion of intentional adaptation both emphasize how carefully designed physical spaces can foster specific actions and connections while remaining open to unexpected interactions. They remind us that while we cannot directly design emergence, we can thoughtfully create conditions that invite and support it. In this paper, we discuss the Community Garden as an assemblage, where physical elements and social interactions are carefully designed to encourage emergence and connection, creating a space that evolves organically over time.

The Nova SBE community garden

Evolution and implementation

The Nova SBE Community Garden is situated in Carcavelos, Cascais, a suburban area undergoing rapid urbanization. While fostering economic growth and infrastructural development, this transformation has also amplified challenges such as social inequality and mobility issues. As part of the larger Cascais municipality, Carcavelos embodies a dual narrative: one of opportunity through expansion, yet also of complexity in balancing growth with local needs. The Nova SBE campus, completed in 2018, stands as a symbol of this transformation. Designed with the goal to be integrated within the local community, the campus' presence has nonetheless reshaped the surrounding dynamics. In particular, the Quinta de São Gonçalo neighborhood has benefited from increased activity and accessibility but also faced disruptions that highlight the delicate balance between urban development and the preservation of local culture and ways of living.

The idea of a community garden emerged in Spring 2022 as a students' project at Nova SBE. At this early stage, the idea did not specifically target social inequalities. Instead, it sought to bring greenery to the campus and explore outdoor gardening to enhance the university's commitment to sustainability. Though the idea sparked interest, its first iteration faltered. A small plot was designated for prototyping, but due to various challenges, the project stopped.

When the DESIS Lab @Nova SBE revisited the idea, a larger plot of land was identified that was imagined as a living space that could bridge diverse groups—students, faculty, staff, and residents. This shift marked a transformation from a simple gardening initiative to a broader vision of creating spaces that foster well-being and connections across communities. The garden was a space not only for cultivating the earth, but also relationships. In fall 2023, a master's student explored the community's needs and aspirations in her thesis. Through interactive design research, interviews with residents, students, and faculty, and rapid prototyping of activities, she found that the garden could serve as a connector for meaningful community exchanges.

This process marked the transition from idea to action, with the DESIS Lab assuming project leadership in collaboration with a partner consultant since 2024. First, we focused on exploring the needs and interests of the surrounding communities. Insights from co-creation workshops, alongside activities such as yoga sessions and gardening with local schoolchildren, informed the design of an interactive program aimed to foster engagement. In the Fall of 2024, the program included diverse engagement touchpoints, from hands-on gardening

to cultural celebrations and educational workshops. For instance, in October 2024, a collaborative event with Forest Impact blended wellness (yoga), environmental stewardship (Miawaki Forest cleaning), and community building (treasure hunt and picnic). This created multiple entry points for people to find their own connections with the space. A key moment was the Winter Solstice celebration in December 2024, where participants planted new guilds, shared homemade food and created personalized wooden plaques that stayed in the garden as a token. Each plaque, inscribed with a name and message, symbolized a shared connection with the space and with one another.

Tending the garden and letting grow

At the core of this project, there is a tension between our attempt to design (i.e. to create the conditions for) and our desire to be non-intrusive (i.e. to let things emerge). On the one hand, we are tending the garden as we try to create a living assemblage by bringing together a physical space composed of non-human elements – living (grass, plants, etc.) and material (a ramp, sitting areas, etc.) – and various human groups with the intention to trigger new behaviors and social interactions. On the other hand, we want to let it grow. We do not want to become the “leaders” - decision makers and implementers, who control and impose certain paths. However, as the project evolved, we also realized that we needed to be engaged on the ground, get our hands dirty, to allow the community garden to become something more than “an idea that everyone likes”.

As we reflected on our work, three Intertwined practices surfaced: inviting, listening and stepping back. Each of these practices informed our work at several levels: both when designing the overall program, and when designing each activity. While we discuss these practices independently for analytic convenience, in practice, they do not operate independently. On the contrary, they overlap and interact in supporting the nurturing to the living assemblage. Although they might appear sequential at first glance, these practices are deeply intertwined, as illustrated in Figure 1, where each practice branches out and flows into the others, creating pathways both within the garden's activities and with the broader environment that surrounds and shapes interactions.

Inviting

Inviting is about creating opportunities for both human and non-human elements to enter in and interact with the system, while also recognizing that participants can choose to not interact. It's the act of making space for new participants, materials, and ideas to emerge. This can be seen as an intentional act of bringing together diverse elements to spark new



Figure 1 – The intertwined practices of nurturing a community garden, symbolized by a leaf’s organic branching patterns.

interactions and collaborations. The practice of inviting affords growth (i.e. the expansion of the garden as a natural and social system) thus contributing to an evolving and transformative system.

At the program level, inviting means thinking about creating opportunities that resonate with different groups and make sense within their context. It’s about designing programs that are accessible, relevant, and open to a wide range of participants (see Figure 2). For example, our open call for volunteers attracted many students who were passionate about green spaces to join the project. At the activity level, inviting is more immediate and tangible. It starts by involving design events where diverse elements (people, plants, tools...) can come together to create new interactions. The physical space itself also plays a role in affording participation, with features such as ramps and seating areas designed to encourage social connections and accessibility.

Listening

Listening is a dynamic process of attuning ourselves to the different elements of the system through our different senses. This means not only hearing but also seeing and feeling what’s happening around us. Through this sensory connection to the environment, we aim to better understand what the plants, the soil, and the garden ecosystem need to thrive. Figure 3 shows various activities that



Figure 2 – Community-driven activities (play, planting, and exploration) that invite diverse participants into the garden ecosystem.



Figure 3 – Practices of Listening and Sensory Engagement. Through observation, nature walks and plants identification, yoga, and stillness for storytelling, participants connect with the environment and one another.

foster a deeper understanding of the garden’s rhythms and needs, informing responsive and adaptive design. We also pay attention to human participants through their verbal feedback and non-verbal cues, adapting and evolving the project to serve both the garden’s health and the community’s needs.

At the program level, listening is an ongoing practice of seeking input from the community through surveys, interviews, and informal conversations. Observing how different groups engage with the space helps us refine the broader design of the program, ensuring that our initiatives remain aligned with the needs and interests of the participants. This practice extends to the other living elements of the garden, allowing us to find a balance that meets the needs of the non-human species inhabiting the space and to invite new elements even.

At the activity level, listening goes beyond verbal feedback. It includes paying attention to the physical environment and how materials interact with both the space and the participants. For example, if a plant is not yet ready to be planted, we adjust the activity accordingly. Similarly, if participants provide feedback on a particular method or tool, we adapt the process to better suit their needs and the environment.

Stepping back

Stepping back is a central, yet paradoxical practice in tending the garden: it involves giving space for the garden to evolve naturally, while still providing some level of guidance. This process focuses on allowing new ideas, relationships, and possibilities to emerge. After inviting participants and listening to their needs and wishes, stepping back means allowing them to take an active role in shaping the garden's growth, trusting the system to develop on its own terms, and relinquishing control.

At the program level, stepping back initially involved encouraging students to share their early ideas. We offered a small garden plot to a group of students interested in planting, but little progress was made despite students expressing an interest in creating a green space. We realized we needed to engage more actively and therefore invited Johanna Pfeffer, a student interested in university community garden, to take the lead. Hence, Johanna dedicated her Master's thesis to the development of a first blueprint for the garden's programming and governance. After Johanna's graduation, it became clear that the garden was still in its early stages and required more structured coordination. We therefore decided to take a more active role in facilitating the garden's next steps while looking for ways to engage participants in the program's next phase. Inspired by brown's emphasis on small-scale, localized actions, we continue working at the activity level to inspire program-level engagement.

At the activity level, stepping back seems easier as participants have accepted our invitation. It still requires listening: a person who seems particularly keen to engage or has a specific question ("could we do ...?") becomes an invitation for us to step back. During workshops or planting activities, we step aside and allow participants to take ownership. By



Figure 4 – Making Space for Emergence: Co-Creation and Student-Led Exploration. Moments where community garden volunteers and participants took initiative: brainstorming about the first structures that should be built in the space, bringing the project to be discussed and iterated in a Design Jam or previous volunteers teaching others how to plant guilds.

creating space for them to lead, we give them the opportunity to shape the project in ways that feel more meaningful and personal. It also creates a safe space for experimentation where success and failure coexist in a positive way.

The three practices – inviting, listening and stepping back – work together to create the conditions for a living assemblage to grow and thrive. By listening to the environment that shapes our garden, we invite new supportive elements that offer fresh insights, which in turn create the space to step back and allow new voices and components to emerge and contribute. Simultaneously, stepping back creates opportunities for renewed invitations, as participants took ownership and new possibilities arose. The three practices connect in a fluid and overlapping way: Each informs and enriches the others, ensuring the system remains dynamic, responsive, and purposeful. This iterative interplay between inviting, listening, and stepping back reflects the essence of what we conceive as a living assemblage.

Connecting theory and practice

Reflections on the living assemblage

For Deleuze and Guattari (1987), an assemblage is a network made up of different elements (people, objects, ideas, and actions) that come together and interact for a purpose. Similarly, in a collage in art various materials such as paper, fabric, or photos, are arranged to form a whole. The strength of an assemblage lies in how these diverse components form fluid, evolving relationships, adapting and

shifting in response to each other, creating a system that doesn't have a pre-defined fixed structure and transforms according to its elements relationships. The beauty of an assemblage is its flexibility: it can change as its parts shift and grow. But what if we viewed an assemblage as more than a flexible network; as something that organically grows, evolves, and adapts through intentional interactions?

This is what we're exploring with the concept of a "living assemblage" in the context of a community garden. Imagine a performance where the actors and the audience engage in a constant exchange creating a dynamic system that evolves in response to the needs, desires and challenges of both the actors and the audience. Similarly, the garden transforms and creates new ways for people to engage and grow together, much like how a performance shifts through the unique interactions enacted in each show.

A living assemblage adds an essential layer of intentionality to the concept of assemblage, while refusing a controlling view of design. Just as the gardener can never predict exactly how the plant will grow or how much effort will be needed each time, they remain flexible, adapting, by listening, to how the plant shifts and changes. The living assemblage reflects this same dynamic of purposeful interactions balanced with the unpredictability of growth. The "living" aspect reflects how the system grows over time, in reaction to external pressures as well as through intentional actions and emergent behaviors and interactions from within. Intentional adaptation and affordance work together in a living assemblage and in this case, in our Community Garden. As participants interact with the garden, they reshape it, which in turn creates new possibilities for action. As emergent interactions take place, new affordances and adaptations emerge, leading to unanticipated opportunities for action and engagement. The result is a community garden that becomes a living, evolving system that is dynamic, flexible and purposeful.

The community garden illustrates how while we cannot design an assemblage because it will go against the principle of emergence (which, by definition, one cannot design), we can design for emergence – design

an environment that affords emergence. Designing for emergence within a living assemblage requires a delicate balance between inviting, listening, and stepping back. As highlighted earlier, the practices we describe are all interconnected, and one can enter the circular process at any point. Hence, one does not need to start by inviting. One in fact might start by listening or even stepping back. The original idea came from listening to the first student project, and this led us to invite a student to explore what a community garden might look like. We then stepped back, while supporting her when needed, to allow her to explore freely. Recently, a student studying urban beekeeping for pollination expressed interest in using the Community Garden as experimental ground. This illustrates how stepping back can become an invitation that creates a space affording personal growth and exploration. Regardless of whether the integration of bees into our urban garden proves viable, the idea has already introduced new knowledge and interactions that contribute to the system's evolution. This circular process recognizes the needs for intentional adaptation (brown, 2017) instead of a linear process which predefines the start and the end.

Among the three practices, stepping back often proves to be the most challenging. While the intent is to create an organic space for new ideas and relationships, stepping back involves a persistent fear of failure. A fear that without our direct intervention, the system might weaken, stagnate, or even collapse, creating tension between guiding the system and allowing unpredictable evolution. The fear of stepping back also arises because of the unpredictability produced by the dynamics of a living assemblage. As Deleuze and Guattari suggest, an assemblage thrives on the fluid, evolving relationships among its elements, and a living assemblage amplifies this complexity by incorporating deliberate growth and adaptation. In practice, this means we need to renounce to some degree of control to allow participants to shape the system in ways that align with their vision. Such a renouncement involves a choice to trust the process of emergence and to see failure not as an endpoint but as a generative moment for learning and rethinking. As brown reminds us “organizing takes humility and selflessness and patience and rhythm” (2017, p159). Through our reflection, we came to see stepping back not as a withdrawal but as a dynamic process of cultivating affordances while recognizing that affordances might not be perceived or activated and maintaining the flexibility to adapt. Stepping back is intentional: not only an intention enacted on our end, but also an intention that must be interpreted and felt by participants as an invitation to take ownership and agency. The way we facilitate activities, therefore, becomes crucial in communicating this intention and ensuring that stepping back is recognized as a deliberate gesture of trust and encouragement. The paradoxical nature of stepping back echoes the

intrinsic duality of our role as both participants in the garden's daily life and facilitators of its ongoing evolution, with each aspect of our involvement enhancing the other.

Community gardens as living assemblages – places of connection and learning between different human actors (in our case university members and residents), artifacts and living organisms – invite us to engage in transformative and collaborative approaches to re-imagine our relationships to nature and each other.

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