

# social learning in a verge garden site

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Increasingly, small-scale urban agriculture projects are creating new possibilities for how we feed ourselves in cities like Sydney, where our food is largely grown, stored, packaged, portioned, transported, sold and wasted in thoroughly unsustainable though conventional ways. These projects are leading indicators of a widespread interest in exploring ways of living and working that go against the grain of massive, resource-intensive and embedded systems of supply, like that of industrial food. Small-scale urban agriculture projects involve socio-cultural practices that may be relatively new and fragile, and in need of material and social support. This situation generates new roles for designers and design researchers, in applying their expertise and judgment to support the redirection of work and lifestyles against the momentum of current conventions.<sup>[1]</sup> Mindful of these perspectives, this paper explores the role that conversation mapping could play in both documenting and facilitating the dynamics of social learning in urban agriculture projects. We focus on a modest verge garden in an inner-Sydney suburb, which contests a range of current conventions around food provision, waste, streetscape aesthetics and the delineation of public and private space. The garden is an exemplar of the significant dynamics of 'social learning' that are reconfiguring the relationship between production and consumption on a small scale, while the mapping activity functions as a way of documenting, disclosing and communicating this learning.

## 1. The (re) emergence of urban agriculture

While the history of food production in Sydney is in many ways a story of the impacts of rapid urban expansion, local councils have recently noted renewed interest by neighbourhoods in urban agriculture projects like verge gardens and larger scale community gardens. This can be understood as a promising sign of a cultural preparedness to experiment with alternative forms of food provision in cities. In response, a range of policies and information resources are being developed. These provide some clarity about how local groups should approach councils for planning approvals, and also information about gardening practices. The transformation of interest into action however, throws up a range of potential problems associated with redirecting the use of urban sites for food production, particularly for those who have little experience in growing food. These include: how to appropriately site and manage an edible garden; what to plant; how to manage new site ecologies; issues of soil quality and safety in areas with an industrial history; and issues of land ownership, management and use.<sup>[2]</sup>

The dynamic interactions of learning and decision-making between residents or stakeholders that can either sustain, or hasten the demise of, a verge or community garden once an approval is in place, are not well documented. These are critical issues in the sustainment of urban agriculture particularly as projects take place in often inhospitable contexts. The importance of decision-making, particularly as a community garden grows beyond its initial social circle, is a critical factor in the viability and endurance of community garden sites.<sup>[3]</sup> Consequently, there is a need and opportunity to capture and communicate the dynamic interactions of learning and decision-making in urban agriculture projects.

## 2. Design research process

This research project involved an in-depth, semi-structured interview with two verge gardeners conducted and recorded on the site of their urban verge garden, along with photographic documentation and note-taking. The mapping came later, as a way to re-evaluate the rich conversation as a record of social learning in which the design researchers participated. The process is worth reflecting on, as it reveals insights about approaches to design research and helps to situate the value of conversation mapping in a broader field of social design investigation.

The initial research took place within an industrial design project seeking to explore design interventions that could support domestic scale urban agriculture. This framing disposed the researchers to look and listen for product-based 'interventions' and the analysis of the conversational record was initially approached from this perspective. Yet something else was going on in the on-site interview that thwarted this interest from the beginning; the interview deviated dramatically from the original scripted

questions and the design researchers – contravening research protocol – were enthusiastic participants, generating speculative theories in response to what was being discussed. This was much more like a process of mutual discovery than a case study. So later, the rich data was revisited as researchers found the initial question had treated the material – particularly the on-site conversation – too reductively and had not exhausted what could be learnt from it in terms of design's role in facilitating change in urban food systems. The visual mapping took place as a final stage to further explore some of the valuable nuances of the research material. This helped to delineate a more thorough and detailed thematic analysis and emergent theories (elaborated on in section 5 below) about the value of the site as a record of 'social learning', that is, learning that is demonstrably transformative of the self and sharable with others.[4] Through this process, the value of conversation mapping as a strategic design research method directed towards social engagement and learning started to take shape. We see this as particularly important in light of the significant role of social interaction and collaboration in the sustainment of urban food projects.

### 3. Conversational learning and mapping as discursive practice

'Experiential learning', which has roots in the work of Lewin, Piaget and Dewey amongst others, is as described by David Kolb as "the process by which knowledge is created through the transformation of experience".[5] The Experiential Learning Theory (ELT) developed by Baker, Jensen and Kolb informs an understanding of conversation as a creative process of grasping and transforming experience through concrete engagement, abstract conceptualization, reflective observation and active experimentation. Rather than imposing an explanatory discourse, conversation involves speaking and listening, reflection and action. From the speaker's perspective, it is as much about showing as telling. From the listener's perspective it is as much about perceiving as hearing.[6] Engaging in conversation in the field context allows the interplay of these dynamics of knowledge creation to take shape in relation to a tangible location, and for emerging theories to be cultivated.[7]

In the verge garden conversation, as we shall see, the process of articulation itself helped participants to form ideas about the meaning of their experiences, and situate these in a broader historical and social context. The design researchers chipped in their own experiences and generated their own theories about what was being discussed, thereby becoming, as Findeli puts it, 'stakeholders' in the situation. The learning of the design researchers occurred on the ground, within the situation, rather than being imposed from outside or (re)constructed from scratch.[8] The conversation, as Baker, Jensen and Kolb describe it, aspires to holism – it draws others in and lights the environment up in particular ways, as a distinctively bounded, qualitatively situated place.

Mapping shares obvious synergies with the dialectical movement of conversation as it attempts to concretise a dynamic and relational social space composed of biophysical elements as much as observations, sensual experiences, ideas and theories. Del Casino and Hanna comment, maps "ought to be theorised as processes" - as 'spaces' that are "both representations and practices (read performances) simultaneously".[9] Their work suggests consideration of mapping as a discursive set of practices involving a range of actors negotiating knowledge complexity. Perkins highlights the shift towards relational approaches in critical cartography, and Dodge and Kitchin comment on the need to understand the ontogenic potential of maps as unfolding practices that call possible futures into being.[10]

Our case study suggests that what can emerge from conversation mapping is a deeper insight about important processes of participation and social learning, and how places are shaped by particular historical, social, and experiential contexts. The actions of conversation mapping also provide insights into the expressions of personal agency which have become woven into the fabric of the site itself. These forms of knowledge are difficult to quantify, as they are embedded within personal and experiential understandings that have developed through creative engagement with a particular site over time.

In the context of the verge garden, the conversational map discloses a dynamic and relational place that exceeds its visible dimensions. As Pearce comments, narrative mapping has value for representing not only place in a cartographic sense, but relationships between the reader and the content:

In sum, we can represent sense of place without turning away from the map to the painting or photograph by expanding our cartographic language using narrative techniques that strengthen what we already have, just as we search for the right way to describe something in verbal or written language without turning away from the word but by building on our existing language. One key to making this work, I believe, is to focus on narrative and an encoding of the qualities that hold the narrative in place - identity,

betweenness, and intimate connection with the reader.[11] 13]

In the mapping of a conversation as described in this paper, what is being represented is a sense of the intangibility of an oral exchange situated in a particular time and place and translated from one sensory medium (sound) to another (visual form). The visual structure does not bear any direct relationship to the spatially determined 'place'; rather, it seeks to represent affective layers of the conversational exchange. The visual object map is more like a narrative where aspects of the conversation are linked by visual elements and relationships between key sections. This mode of representation includes both realistic and abstract forms woven together in an impressionistic pictorial rendering of the dialogue. This is a map of emotions, personal insights and actions, linked to a specific site history that seeks to engage with the reader in an interpretative exchange.

#### 4. Situating the Verge Garden

The verge garden is five years old and situated in a street of detached and semi-detached homes in an inner city Sydney suburb. It is planted on a site of two beds of approximately four by two meters each, around the base of a bottlebrush street tree. As you approach the site you see it exists in stark contrast to the surrounding verges of mown turf in the streetscape. The resident partners who developed and tend the verge garden are early retirees with professional experience in horticulture, design and ecological consultancy. It is worth noting that this professional expertise might have made it easier for the residents to pursue the verge garden without sanction from the local council, whose policy at that stage did not cover gardens of such small scale. They were also very aware of the value of their project and therefore primed to share their knowledge. The design researchers visited the site twice – once as an introduction and scoping exercise and a second time to conduct an in-depth interview with the residents *in situ*, which focused on the story of the site and the learning it has generated.



Figure 1. Verge garden site

#### 5. Mapping Themes: Conversation as Graphic Narrative

The mapping traces a series of flows and themes in the recorded conversation between the residents and two design researchers. Their dialogue shifts across specific instances and experiences of place, to reflective comments and asides. The interactions between the participants are a form of exchange of ideas and perspectives. The conversation was initially mapped as a graphic narrative (see Figure 2), and then broken into four key themes composed of interconnected ideas. The four thematic sections of the map include details about the garden's private/public status, the productive capacity of the site, the history of the street, the systems that underpin the process and the ways that these have impacted on the everyday lives of the residents. Photographs, speculative ideas and theories generated by the researchers, augment the map and are described below.



Figure 2: the narrative conversational map and linked theme sections

### Theme 1: site of public negotiation

The first theme emerged from the impact of the garden on the street community and the inter-relationship between public and private zones of habitation that have taken place over time. The recorded conversation begins with reference to a sign attached to the street tree in the centre of the garden beds, which reads, "If you want parsley, or any other herbs please ask us!" A homeless woman, who took a crop of broad beans, prompted the placement of the sign as a public statement about the rules of engagement with the edible garden. The sign invites sharing but effectively qualifies the nature of this sharing. A rocket plant going to flower and seed prompts the residents to tell another story about a young neighbour who placed a note on the sign asking if they were interested in receiving leek seeds for their rocket seeds.

The conversation then turns to the neatly mown verges on each side of the garden. The residents tell us about a neighbour a few doors down who loves to mow – he objected to the 'messy' garden initially, but has now gotten used to it. There are traces of 'whipper-snipper' around the edges of the verge garden. We asked how council workers treat the garden and are told that while at first they were unsure how to react, they now treat it carefully and with respect.

They tell us that local children call this the 'lady bird garden' as they stop to look at the spectacle:

pests particularly like the white lily, they'll prefer it over anything else ... in the meantime you can still eat it because its edible and even when its being attacked it looks amazing with every pest under the sun on it - and because ladybirds are scavengers they'll come and eat the pests on it.



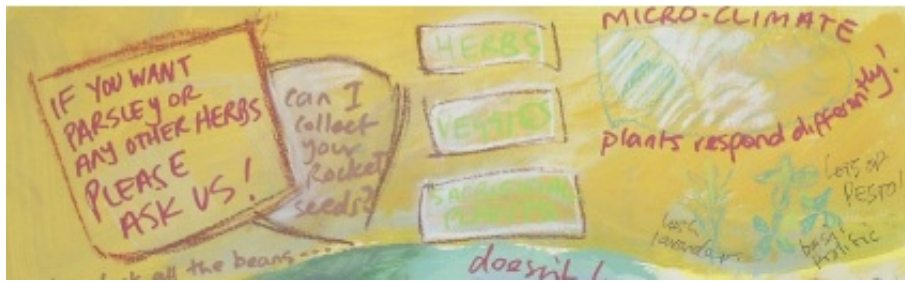


Figure 3: the garden as a locus of relationships

We know people that we would otherwise not have met at all through the garden, quite a lot, and up until this we knew the people in the street but we've since got to know them a lot better, and we've got to know people further afield, this has become a community hub, a reaching out point.

*Emerging theory: The verge exists in an informal zone of sharing and co-habitation – this is where people place items for council collection or to give away, and recognize each other's parking spaces. The verge is where neighbourliness is negotiated! Only the barest degree of commonality is required for new community configurations to take shape.*



Figure 4: the garden as a locus of social interaction

## Theme 2: site of experimentation and demonstration

The conversation shifts to site productivity and the material conditions that are important; the types of food being grown, and how the garden's 'microclimate' impacts on different edible produce. The residents describe the plantings – what they are, how they have performed over time, and their relation to other plants. They tell us what they have tried out, what has and hasn't been successful and why. There is a responsive creativity in their experimentation that the conversation helps to bring out. They relate discoveries:

I've learnt a lot from this – ... in this environment, (the capsicum and eggplant) are smaller than you expect, but they have a better flavour. The other thing I've learnt is that each bed has its own the micro or nanoclimate. The basil in the sunny bed is tougher, smaller and more pungent than the basil in the shady bed, which is much sweeter, with larger, softer leaves and a different flavour – it's the same variety of basil but it's just adapted.

They also explain how the verge garden acts as a demonstration site to help others in the neighbourhood learn how to grow food without pesticides – they show us how they have planted not in uniform rows but in clumps that confuse insects as they tend to

eat in lines. They tell us that marigolds have an insect-detering aroma and how mustard and edible white lily act as 'sacrificial plants' to attract insects away from other edible plants.

*Emerging theory: In addition to the public site, the small-scale of the verge garden makes it accessible as a site of experimentation and learning that can sustain failure.*



Figure 5: the garden as a productive site

### **Theme 3: site of ecological management**

This thread of conversation leads into questions about soil quality, the impacts of historical residues of lead and heavy metals, and the history of the street itself. The residents tell us this has never been a heavy industrial area – we are standing on what used to be a route for horse-pulled drays to local brickworks, which explains the wide street frontage. The residents share their knowledge about raising the root system to avoid metal residues. More recent history addresses the lack of an integrated approach to streetscape plantings, which leads into a discussion about garden composting, worm farms and watering. They dig into the soil of the verge to expose its richness, and point out the health of the street tree. The residents explain how they use tank water supplemented with manual collection of grey water from the bathroom and kitchen. During dry times, they need to negotiate what plantings they will sustain with potable water supply and what they will allow to die off.

*Emerging theory: a great deal of discovery learning happens here, in working out the 'nitty gritty' of how the site can be ecologically managed. The small-scale site generates its own ecology (with its own 'ecological indicators'), which links resource use in the private home to the verge site.*



Figure 6: the garden as site of ecological management



Figure 7: the system backyard composting

#### **Theme 4: site of domestic production and consumption**

The fourth theme emerges from a discussion about the impact of the garden on the lives of these two residents – their diet and their everyday routines of managing kitchen waste in a systematic way. The residents eat little dairy or meat, as these are hard to take up within their domestic system.

“We find dairy is not good for the worm farm, so we rarely waste cheese because we don’t eat a lot of it.”

It has also affected their meal portion sizes, and caused them to notice the oversized portions usually on offer:

“Restaurant portions are always huge, they are way out of proportion; we often find we order a meal we can share between us”

This leads the conversation back into the residents’ back yard, a private space that has been given over to small scale production of compost using an ingenious system of containers to break down the food scraps, that is intimately customized for inner city living.



Figure 8: Citrus waste system

The residents collect grass clippings from the local park for the compost, 'cleaning up' the park in the process. Again, a series of discoveries are related, including a way to manage the variable breakdown time of composting citrus, and how the acid liquid can be reused. This sparks a powerful insight for one of the design researchers, who goes on to address the problematic design of compost bins on the market that do not allow for variable breakdown times.

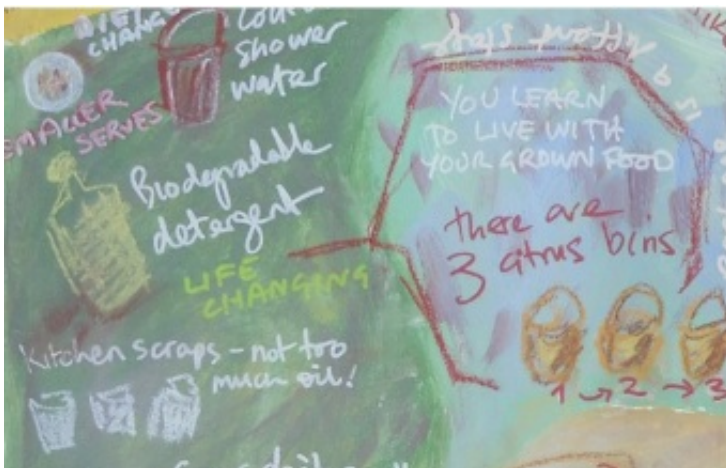


Figure 9: Citrus and water waste management systems

Overall, the conversational mapping reveals the verge garden as an assemblage of interconnected relationships, situated agency, transformation and contestation as personal and public concepts about space are worked out and stabilized. The involvement of the design researchers in the conversation extended the scope of social learning enabled by the site, which was further consolidated through the graphic mapping process. This form of visual mapping offers a rich means for unpacking multiple thoughts and relationships between concepts and ideas explored through the conversational dialogue, which frame how agency is realized and enacted in a particular community setting.

## 6. Concluding remarks

There is a tendency to romanticize the role urban agriculture can play in building community - one need only consider the horticultural metaphors that pervade local government literature.<sup>[12]</sup> However while there does appear to be a strong relation between practices like community gardening and more sociable, sharing communities, it is by no means clear that there is a natural progression from one to the other. The dynamic interactions of learning and decision-making between residents or



stakeholders in urban agricultural projects are not well documented. In addition, we can see that each urban agriculture project involves negotiating the issues associated with a particular site, which makes the development of uniform guidelines difficult. The complexity of redirecting existing urban environments and how we live in them, implies a need to critically reflect on our own practices, expectations and habits of thinking as well as our dependency on embedded and large scale systems, like that of industrial food.

Conversation mapping as we have described it in this paper attempts to document this negotiation as a necessary social learning process, and, we hypothesise, it could be used to more deliberately support the dynamic interactions of learning and decision-making between residents or stakeholders in a community garden site. Design researchers can play an interpretative role that can help push along the speculative thinking in the conversation. In this case, conversation mapping rendered the verge garden as a much more significant intervention than its modest biophysical boundaries would suggest; the verge garden highlights the contested space between the existing culture and the coming culture; it lights up the environment in ways that help us to see the possibility of imminent change. The experience of this project has helped us to see a role for using conversation mapping to investigate and support the particular social dynamics of community garden projects, as well as disclosing the complexity of adaptive cultural change more broadly.

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[1] Tony Fry, *Design Futuring: sustainability, ethics and new practice*, New York: Berg, 2009.

[2] One of the authors was on a review committee for guidelines being developed by Sydney City and Wollongong Councils to help community gardeners and council staff select appropriate sites for urban food projects. Some of the complex questions to which answers were sought include: if you live near a freeway or industrial site, what do you need to test for before growing an edible garden? Is rainwater harvested in the middle of the city suitable for watering edible crops? Do plants absorb air pollutants and contaminants in the soil? What role does site/soil history play? And most importantly, what form should appropriate guidelines arrive in? At the time of writing, the guidelines had been shelved, partly because of the complexity of the issues and the difficulty of creating a uniform response to them.

[3] Russ Grayson, *Evaluating Sydney's Community Gardens*, available from: <http://communitygarden.org.au/evaluation>

[4] Mark S. Reed, Anna C. Evelyn, Georgina Cundill, Ioan Fazey, Jayne Glass, Adele Laing, Jens Newig, Brad Parrish, Christina Prell, Chris Raymond and Lindsay C. Stringer, 'What is social learning?' *Ecology and Society* 15:4; Available from: <http://www.ecologyandsociety.org/vol15/iss4/resp1/>

[5] Ann C. Baker, Patricia Jensen and David Kolb, *Conversation as Experiential Learning in Conversational learning: an experiential approach to knowledge creation*. London: Quorum Books, 2002.

[6] *ibid*

[7] Van Mannen cited in Baker et al., 2002.

[8] Alain Findeli, 'Rethinking Design Education for the 21<sup>st</sup> century: theoretical, methodological and ethical discussion' *Design Issues* 17:1 pp. 5-17, 2001.

[9] Vincent Del Casino and Stephen Hanna, *op.cit.* p.36

[10] Martin Dodge, Chris Perkins & Rob Kitchin, 'Mapping modes, methods and moments: manifesto for map studies' in Martin Dodge, Rob Kitchin & Chris Perkins, C. (eds), *Rethinking maps: new frontiers in cartographic theory*. Routledge: London, 2009, pp. 220-243; Chris

Perkins, (2008). Cultures of map use. *The Cartographic Journal*, 45(2), 150-158.

[11] Nicola Best designed a wedge vermicomposting system with a modular citrus composter for her Industrial Design Honours project at the University of Western Sydney. She identified alternative end uses for citric acid waste

[12] Environmental historian Anna Bramwell tells us that after World War 1, in Germany and elsewhere, yearning for a rural utopia hardened into a belief in the socially regenerative capacity of direct contact with the land. Peter Hay, *Main Currents in Western Environmental Thought*, Sydney:UNSW Press, 2002, p.183.