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### **Seed balls as method**

Enthusiasm for plants in cities is on the rise. Some new gardeners discovered plants during the 2020 Covid19 pandemic, seasoned gardeners marvelled at empty shelves in nurseries and apartment dwellers became indoor plants parents. There are waiting lists for community gardens, schools with established edible yards, and a buzz for 'forest bathing' (Sherwood 2019). There are YouTube channels, blogs, Instagram and Twitter accounts, Facebook groups dedicated to plants. And yet scholarly attention to plants that establish everyday local ecologies remains limited.

As design researchers, we are curious about the role of designers in these planty worlds. In this essay, we start from the premise that there is a correlation between how people see, sense and perceive the environment and how they treat it. We propose that to guide city dwellers to relate to urban ecologies, designed objects and processes are needed to generate visceral, intimate and embodied connections.



Figure 1: Mapping Edges, Materials of seed ball workshop, 2019. Digital photograph, © Karina Glasby

We start this essay reflecting on the current success of plants as companion species and continue introducing the notion of plant blindness, or the inability to see plants in our urban environment. As a counterpoint, we present a project we researched and developed in 2019 in Sydney to make present the recombinant ecologies of the urban precinct around the university where we work: *The Planty Atlas of UTS*. About 80 people participated in the project over 6 months. Some participants came to multiple events: researchers and lecturers, undergraduate and postgraduate students (both domestic and international), staff from the marketing, sustainability and IT departments, operations managers, curators, and librarians. We draw on our field notes and photo documentation to describe the project's different components. To accentuate the impressions prompted by *The Planty Atlas of UTS*, we punctuate our narrative with the concerns, aspirations and discoveries emerging in the responses to a participant survey.

The analysis of the project suggests that making and distributing seed balls was a robust process to form connections with the environment around our university. To explain how seed balls functioned as a method to generate embodied, visceral and intimate connections, this essay leans on Sara Ahmed's notion of 'impression' (2004) as a key to understanding the entanglement of cognition, perception and emotions. This essay also builds on Guy Julier's definition of campaigning artefact as objects that have a function and that politicise through a process of intensification (2013a and 2013b).

### **Plant blindness**

Plants are popular. In Australia, the news reported that at the beginning of the COVID-19 pandemic, people emptied the shelves of gardens centres and nurseries in search of lockdown projects and the illusion of a self-sustainable lifestyle (Briscoe and Carbonell 2020). People spent more time in natural settings during the pandemic and craved nature more (Remember the Wild 2020: 2). Plants offered 'beauty and proof that life could still flourish in the darkest times' (Carabelli 2020).

Even before the pandemic forced people to seek solace among indoor plants and city parks, market research conducted by the plant growers industry shows that plants intersect with megatrends in consumer culture. Engagement with 'experiential products', a renewed interest in self and house care, wellbeing and a desire to have less impact on the environment lead to plant appreciation (Roberts 2019).

And yet, the flourishing of plant love and plant representations only makes some plants visible while marginalising the many plants and connections between plants in our everyday lives as well as the role of seeds, water, and weather in planty worlds. As an example, according to our field notes, visual documentation and survey responses, the ubiquity of certain types of plants in the precinct around the university (the site of our proposition) generates a 'corporate landscape'



populated by healthy, mature plants on display. On the one hand, this planting uniformity leads to plant blandness and blindness: people just stop seeing plants. On the other hand, it marginalises spontaneous plants' exuberance growing in interstices, along edges, on walls and plants in varying states of life, such as germination and decay.



Figure 3: Ultimo, about 10 minutes walk from campus, 2019. Digital photograph, © Mapping Edges.

This dynamic contributes to the neglect of other plants that are key to local ecologies. This neglect has been given a name by Wandersee and Schlusser, 'plant blindness' as the inability to see, notice and appreciate plants in one's environment and the anthropocentric ranking of plants as inferior to animals (Wandersee & Schussler 1999: 84). Those affected by plant blindness, they continue, only see plants as a backdrop; fail to notice plants in their daily lives; have no plant literacy or experience; are unable to understand their local ecologies; fail to appreciate the aesthetic qualities of plants; lack awareness that plants are central to a critical bio-chemical cycle-the carbon cycle (Wandersee and Schlusser 1999: 85).

Plant blindness is a crucial problem when put in the context of the current climate breakdown, loss of biodiversity, and even food security. Plants sustain human life, and as Atchison and Head warn, 'human-plant futures are mutually concerned in a way that has no historical precedent' (Atchison and Head, 2017: 178). For instance, in Sydney, where we live and work, the abundance of recombinant ecologies make the city more liveable, providing shelter from the heat, filtering pollution, and supplying much-needed green. But these ecologies are often overlooked in favour of designated green spaces or more recognisable forms of gardening (Vanni and Crosby 2020). This is a problem.

### **A design proposition to make local ecologies present**

*I've been thinking a lot about sustainable gardening and how I can grow a garden with minimal water. Also have been thinking about native plants and edibles for my garden.*

- *Walkshop participant, 2019*

Given the urgency and importance of finding new modes of engagement to see and understand plants and their role in city ecologies, we ask: what can we, as design researchers do to shift perceptions of plants in urban environments? One answer is to document, analyse and amplify existing initiatives (Vanni and Crosby 2019). Another is to address the cultural inability to perceive and understand local plantiness and ecologies as a design problem (Vanni and Crosby 2020).

As an example of the latter, we present a design proposition in the central Sydney neighbourhood of Ultimo, hosted by the Creative in Residence Program at the University of Technology Sydney, where we both work. The precinct in question is often understood as a creative and education hub, a space of urban regeneration and architectural excellence (Crosby and Vanni forthcoming). The project, called *The Planty Atlas of UTS*, comprised an installation, a series of



curated walks and a workshop on seed balls. This section introduces the project to concentrate on analysing seed balls as campaigning artefacts.



Figure 4: The Planty Atlas of UTS installed in the stairwell at UTS Library, 2019. Digital photograph, © Karina Glasby.

*'Thank you for transforming our stairwell and making coming to work enjoyable - through that space and the current take over of the office with plants.'*  
- UTS Librarian

Housed in the cavernous entrance to the (old) UTS Library, the Planty Atlas installation (September-December 2019) created a shared green space. Students and workers were able to stop, sit in a mini greenhouse with plants, and select books on plants from various disciplines, from photography to Traditional Chinese Medicine, from environmental sciences to history.

The aims were two-fold: the first was to introduce plants to reimagine and reinvent the library as a place to stop, sit and immerse oneself in an environment generally not associated with plants. The design of this plantiness was intended to create surprise and delight. The second aim was to show the relevance of plants in different epistemological perspectives, not limited to scientific disciplines, and to entice people walking by to stop, browse and borrow books. 'Books' one participant enthused, 'were inspiring' (Mapping Edges 2019b). Making books

available in a different configuration prompted library staff and users to stop, browse, and read, as one noted: 'Several books led me to look into the historical, scientific discoveries around Australia and the Pacific particularly to do with plants and flowers.' (Mapping Edges 2019b) Books were borrowed and replaced with other titles during the installation period. A digital bookshelf of articles and books available for download supplemented the hard copies on display and were made available to supplement curricula of courses. With books, visitors also took cuttings: an unexpected but welcomed outcome of the installation, demonstrating that plants are excellent and desirable. During the installation period, the Library relocated to a new building, and the installation moved with it, creating a continuity of place between the two locations.



# The Planty Atlas of UTS

UTS Library 2019 Creative in  
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studio **Mapping Edges**.

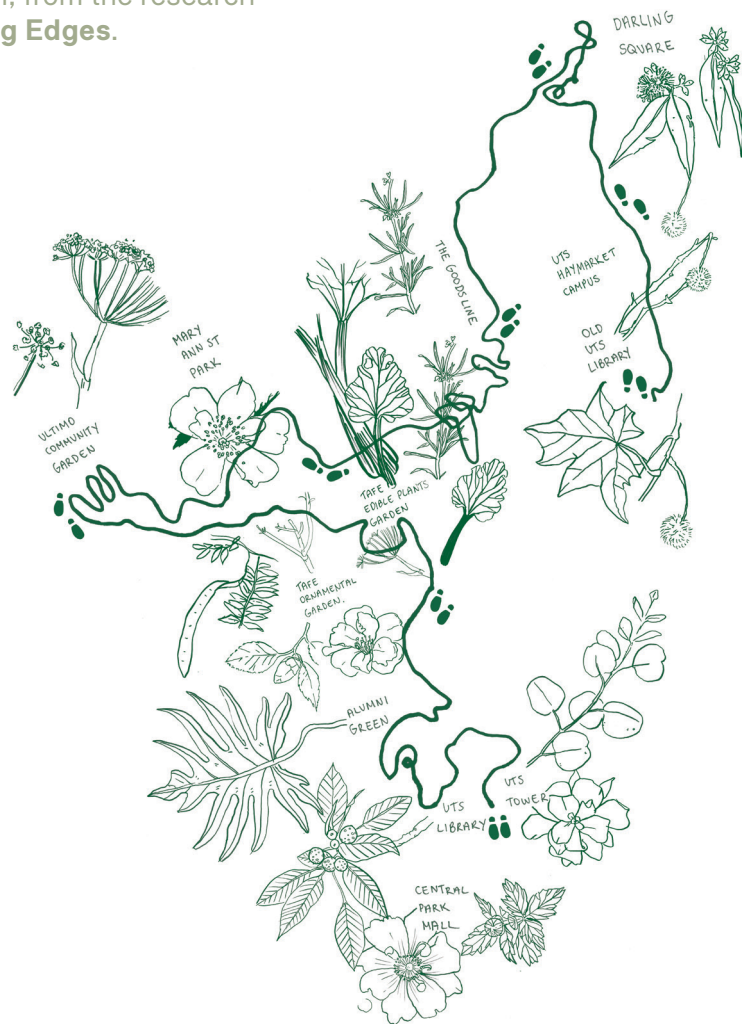


Figure 5: cover of special edition booklet, designed by Ella Cutler and Megan Wong for Mapping Edges, Map, *The Planty Atlas of UTS*, 2019.

The second element of our design proposition was a series of walks, or 'walkshops'. Walks followed the same route around the neighbourhood, starting

in front of the Library's original location and finishing in front of the new area of the Library.

As a resistance to bland blindness, permaculture principles (Holmgren 2016) inspired each walk, including: 'observe and interact', value the marginal and use edges', 'apply self-regulation and receive feedback', 'use and value diversity', and 'use small and slow solutions'. The first walk, for instance, was about observing the ecologies and ecosystems encountered in our route, taking care of looking at edges and the diversity of plant lives in the precinct and finding out pockets along these edges with resources such as water and sunlight for plants to grow. This first walk functioned, in brief, as a preliminary site analysis.



Figure 6: observing the plants thriving on The Goods Line between the Museum of Applied Arts and Sciences and the University of Technology Sydney during walk 1, 2019. Digital photograph, © Karina Glasby

After this first walk, we organised a seed ball workshop, and we dispersed seed balls along our route in the second walk. After a month from the first, the third and final walk was to receive feedback and observe if our seed balls had germinated or not. As reported by many participants, walking together generated a sense of community: 'I did enjoy meeting others across the campus and felt a sense of community during the walk.' In other words, the walks functioned as an affinity space where people from different university silos met around shared concerns. Participants reported: 'I enjoyed doing 'plant things' with other staff and students',

'Most people on the walk I had never met before, I was only familiar with the facilitators.' 'I met many people - both on the walk and in the 'hands on' seed ball workshop.' Walking also prompted an interruption of everyday sociality and shifted being with colleagues from 'being at work' to meeting around shared interests: 'I met people in the Library who share the same interest in plants and who perhaps I wouldn't have connected with otherwise. We now have a 'green group' that takes responsibility for plants in the Library.'

The route we had designed for the project crossed a variety of examples of urban green, and during the walkshops, we drew attention to elements in the landscape designed not only by humans but also by plants. Walking along busy streets, pedestrian areas, parks, gardens and laneways made present the precinct environment and shifted participants' perception of the university's surroundings. Often people stopped, drew close to plants, observed them and exchanged information or told stories about them. While the weather conditions influenced what people sensed, as we explain later, the slow pace and close-ups contributed to an unexpected landscape. The accidental discoveries reported by some participants point out 'unruly edges unconfined by the formality of a garden'. Others saw 'how many plants are growing and being cultivated in the most unlikely places, tucked away and ready to be found', 'that there are more plants than the corporate plants' and 'plants on the margins, bees, the sound of heat on the dry earth'.

### **Seed balls: making, distributing, failing**

As anticipated above, we designed our walks around a campaigning artefact: seed balls. Seed balls are made by mixing seeds, compost, soil, clay, and water rolled into balls. Also known as seed pellets, seed bombs or clay dumplings, they are an agricultural method to propagate plants without tilling the soil popularised by the natural farmer and writer Masanobu Fukuoka (c1978). Seed balls contain all elements a seed needs to germinate, remaining dormant until water activates them. For this reason, they are a simple way to disseminate seeds, including in areas difficult to reach. As a result, permaculture practitioners, home and guerrilla gardeners, and regenerative agriculture adopted seed balling as a technique.



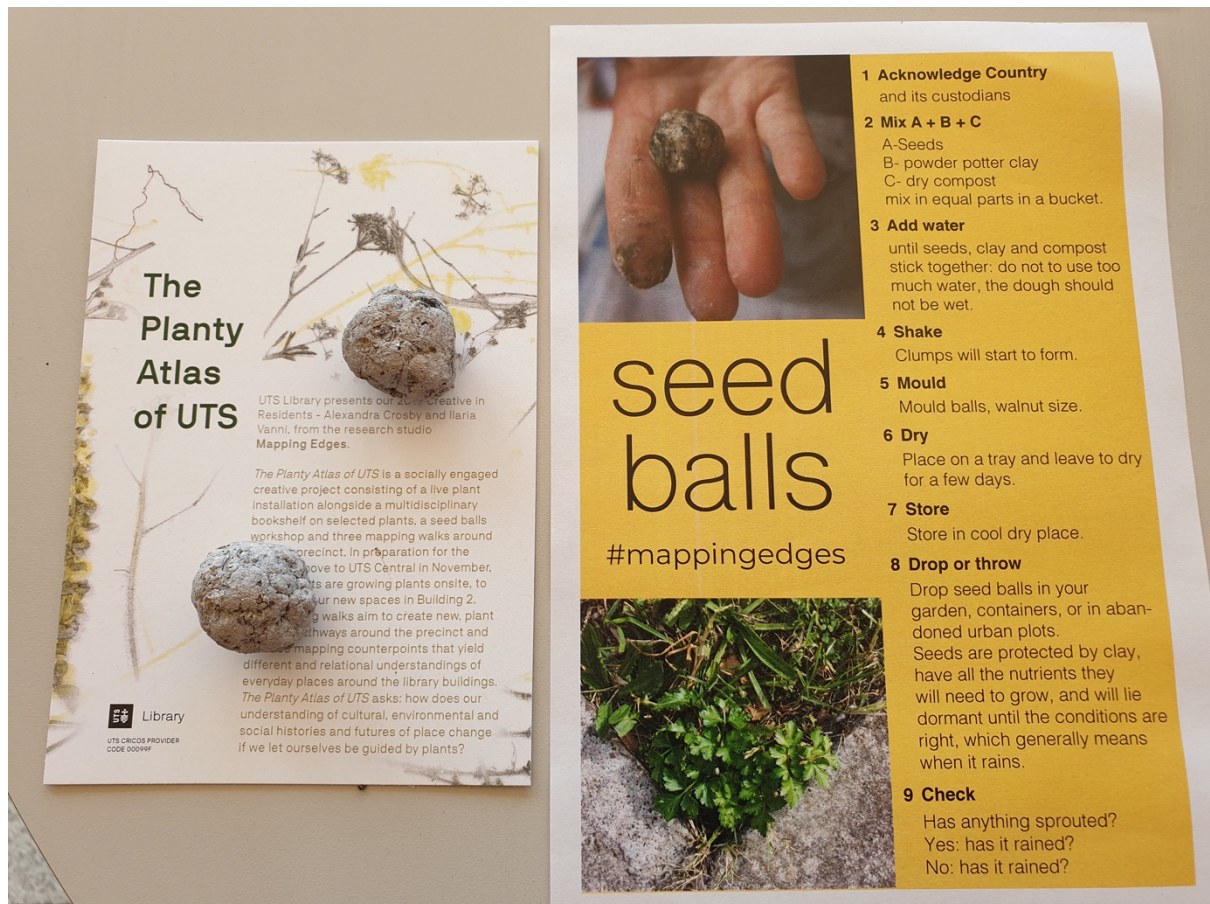


Figure 7: Step by step guide on making seed balls, 2019. Digital photograph, © Mapping Edges.

For us, making seed balls was a way to involve people in the lives of plants beyond the corporate landscape. We made seed balls in a workshop held in the winter garden of the UTS library. About 35 people attended, including librarians, students, researchers, and staff from different university sections. Participants arrived with a wide range of reasons, from curiosity about the delivery of the workshop to wanting to learn a new craft, to wanting to green the precinct (Mapping Edges 2019b). We distributed a step by step guide on how to make seed balls, organised eight seed balls making tables with seeds, buckets of soil, compost, clay and water, and explained the process.

One participant noted during the workshop that people 'were engaged and enjoyed the event', and another sensed 'joy and excitement by participants'. The incongruity of mixing elements generally out of place in a university library, such as soil, compost, seeds, water, and meeting people in a new context, led to a minor disruption of habitual activities. This interruption, in turn, oriented participants towards a more embodied experience, as emerges from the photo documentation and comments: 'It was excellent to spend time with colleagues doing work that stimulated different senses outside the usual daily routine'.



Making together created a relationship of intimacy between individuals and their seed balls and among participants. People, for instance, were able to have conversations about their environmental concerns. The variety in skills, expertise and experiences meant that participants shared knowledge, prompted by discussions on different requirements and characteristics of seeds and grown plants.



Figure 8: Mixing materials for seed balls, 2019. Digital photograph, © Karina Glasby.



Figure 9: Rolling the materials into balls, 2019. Digital photograph, © Karina Glasby.

We produced hundreds of seed balls in different shapes and styles in less than an hour. Some smooth and round, some rougher and bigger, some (from design students) shaped like cubes and pyramids. The seed balls were then left to dry.





Figure 10: Laying the seed balls out for drying, 2019. Digital photograph, © Karina Glasby.



Figure 11: Seed balls drying, 2019. Digital photograph, © Karina Glasby.

After one week, we distributed the dried seed balls along our walk route. The connection established in the workshop between participants and participants and their seed balls continued: 'I was surprised by how energised and excited people were to distribute the seed balls. It changed the way we all interacted with quite inert public spaces.'



Figure 13: Distributing seed balls, 2019. Digital photograph, © Mapping Edges.





Figure 14: Finding the correct position for a seed ball, 2019. Digital photograph, © Mapping Edges.





Figure 15: Working with cracks, 2019. Digital photograph, © Mapping Edges.

The original idea behind seed balls is to use them as means of less labour-intensive agriculture, and in the contemporary guerrilla gardening incarnation, as a way to reach patches of land difficult to reach. However, we found that participants were mindful and caring of their seed balls. Rather than seed bombing, they cradled seed balls, scoped out the street edges for niches away from foot traffic and dog noses, found patches reached by water and sunlight.





Figure 16: Placing seed balls in position, 2019. Digital photograph, © Mapping Edges.



We left the seed balls to settle and germinate for six weeks. Then we organised the third walk to check how the experiment went. It had not rained for weeks. The bushfire season had started early, and as we walked, a thick blanket of smoke that cut out the sun and greyed the sky covered the city. The soil was thin and parched. Soon we found out that nothing had grown, but for one seed ball of parsley seeds that somehow had managed to germinate and survive in a shady spot. Some of the seed balls were still intact.



Figure 17: No germination, 2019. Digital photograph, © Mapping Edges.

This was not how we had imagined the conclusion of our project. We had dreamt up a profusion of pollinator-friendly flowers and parsley sprouting in abandoned edges and introducing variety and colour amidst the formal planting of inner



Sydney public spaces. We had aimed at abundance to demonstrate how easy it is to green city spaces. Instead, gloom and foreboding grew as we walked, counting our failed attempts. The conversation, which in other walks had revolved around sharing knowledge about plants, turned to discussions on why the seeds had not sprouted. The care and hope that participants had placed in making and distributing seed balls mutated into disappointment, despondency, and grief for lost plant life and potential.

And something compelling happened with the realisation that 'not many seed balls sprouted as no rain fell after the walk. Climate breakdown, a shared matter of concern among all participants, became an intimate matter suddenly. The connection between seed balls and their makers, followed by the sense of loss provoked by the seeds' missed germination, allowed an embodied understanding of climate breakdown. One participant summed up the many conversations that had animated our third walk in a sentence 'I am usually very aware of the climate, but the walk did make the experience physically tangible'.

Seed balls, in other words, failed as guerrilla gardening tools but succeeded as campaigning artefacts.



Figure 18: One successful seed ball becomes a parsley plant, 2019. Digital photograph, © Karina Glasby.

### **Seed balls as a method for radical intimacy**

A reflection on the failure of our project as a guerrilla gardening operation is due. As explained above, the seed balls failed to germinate into plants: this was the failure of the end results of our project, but did the process fail? Did this failure result mean the project was a succession of gestures that changed nothing at all?

We did not consider creating a lasting organising platform but rather a temporal reorientation of practices towards the possibilities of more meaningful connections with plants in the local environment. We argued that making and distributing seed balls is a design method that uses material engagements with seeds to expand and enhance critical reflections on local socio-environmental issues, such as 'plant blindness'. In this sense, the process did not fail. Seed balling revealed itself as a form of critical making that enables a more evenly distributed level of participation and an opening up of imagination in relation to local environments. The process fosters modes of collaboration, cooperation and knowledge sharing that extend individual capacity by networking it with others with different skills. Making, walking and talking about seeds and plants functions as a public pedagogy that redistributes plant literacy, showing a practical DIY method to city greening.

Seed balls, in brief, are not simply a tool in urban activist repertoires. Instead, they are a method for radical intimacies. Seed balls as a method are radical because the process we described earlier transforms an accessible and low tech gardening technique into a practice to inspire critical connections and actions within local environments. In doing so, this approach organised people around a matter of concern. It also reoriented narratives about urban ecologies and who has the right and authority to green the city by making it available to everyday greening actions.

But seed balls also engendered forms of intimate care for seeds, plants, urban ecologies and, as we discovered from the failure, for the environment in the face of climate breakdown. The materiality of seed balls, as we described above, generated intimacy among participants, between participants, soil, compost, seeds; and between participants and local ecologies. This intimacy, in turn, produced a form of 'passionate immersion in the lives of nonhumans' (Tsing 2011) that mobilised a public.

To expand on the idea of seed balls as a method for radical intimacy, we turn to concepts circulating in design studies and cultural theory and concentrate mainly on the materiality of seed balls as campaigning artefacts. Guy Julier (2013a, 2013b) writes that when it comes to design activism, campaigning artefacts have one main trait: they are both functional and political. By this, Julier means that in addition to generating forms of political awareness or communities (for instance, political graphic design), campaigning artefacts also have a practical use. One of

the ways in which objects are both political and useful is through the process of 'intensification'. Through intensification, Julier continues, 'Forms make political statements, but they also engage bodily dispositions and human emotions' (2013b: 229). Because of this bodily and sensory engagement, campaigning artefacts may lead to new forms of cognition, new practices, and political subjectivities. Julier further outlines how these objects:

Also, try to create new relationships and marry interests by engaging existing but untapped, interests, political concerns, everyday preoccupations and ethical surplus... The design and its material outcome give focus to wider concerns that might be articulated in general rhetorical terms ... But it also provides something through which these concerns may be acted upon. (2013b: 229).

The seed balls of The Planty Atlas of UTS produced moments of intensification. Making and distributing seed balls were high energy, collaborative activities. Working with clay, seeds, soil, compost, and each other, participants remixed conversations, shared experiences, and concerns about the local ecologies. These observations and interests were magnified by walking together. The workshop and walks created relationships by building on shared interests; they engaged bodily dispositions by making and distributing campaigning artefacts; they articulated and focused on existing concerns about the precinct environment, urban greening and eventually climate change.

Seed balls, as campaigning artefacts, provided means to act upon these concerns (Julier 2013). In other words, the material making of seed balls gathered people. It showed as Noortje Marres (2015) argues, how objects (seed balls in this case), through their materiality, can assemble publics because they generate the opportunity of intervention in complex problems. The publics assembled by seed balls delved, literally, into the material. During the making of seed balls, people mixed - soil, compost, water, seeds, stories-, squashed, moulded, talked, rolled, examined, laughed, stroked, commented, refined, admired, and laid their final product to dry in preparation for the seed balls distribution. During the seed balls distribution, participants cradled, patted, walked, talked, voiced opinions, scanned the landscape with attention to minute details to find the best possible niche to give their seed balls the best chance to germinate.

But how exactly did the materiality and design of seed balls give focus to concerns and provide the means to act upon them?

To answer this question, we lean on feminist philosopher Sara Ahmed (2004a, 2004b) and her work on objects and affect, emotions as collective feelings, and 'impression' as the capacity of things to impress and leave an impression upon us. Emotions, Ahmed tells us, are not private matters that follow a trajectory from one individual towards others. Instead, they are mediators



between individual and collectives, the psychic and the social (2004: 26-27). Emotions are at the same time sticky because they create attachments, and moving because they move and they move us, literally and figuratively: 'What moves us, what makes us feel, is also that which holds us in place, or gives us a dwelling place. Or what attaches us, what connects us to this or that place, or to this or that other (2004: 27).' Ahmed continues that since emotions are directed towards an object or others, they 'are precisely about the intimacy of the 'with'. They are about the intimate relationship between selves, objects and others (2004: 28). Objects become 'stickier and stickier, laden with meaning and potent with feelings.' (Feigenbaum 2014: 17) Things, in turn, move us through their materiality and their location and timing.

For the argument of this essay, we want to stress how Ahmed describes emotions as building intimacies between selves, others and objects. Emotions in this project both shaped and were shaped by seed balls, and in this process generated intimacies between participants, objects, and the environment. Ahmed offers us a reflection on 'impression' as a way to understand how these intimacies emerge as an entanglement of cognition, perception and emotions:

To form an impression might involve acts of perception and cognition as well as an emotion. But forming an impression also depends on how objects impress upon us. An impression can be an effect on the subject's feelings ('she made an impression'). It can be a belief ('to be under an impression'). It can be an imitation or an image ('to create an impression'). Or it can be a mark on the surface ('to leave an impression'). We need to remember the 'press' in an impression. It allows us to associate the experience of having an emotion with the very affect of one surface upon another, an affect that leaves its mark or trace. So not only do I have an impression of others, but they also leave me with an impression; they impress me, and impress upon me. (2004b: 6)

The argument that impressions depend on how objects impress selves and others by associating emotions to the pressing of a surface upon another - literally the 'press' of impression - and leaving a trace or mark, resonates with seed balls making and distribution. Concerns about the environment, the sparseness and rigidity of the 'corporate green' around the university, the Australian government inaction on climate change unfolded in conversations during workshops and walkshops and infused seed balls. But making, distributing and finally checking seed balls' germination also 'formed an impression' by provoking a shift in perception of the precinct's plantiness, encouraging conversations on seeds, plants, and matters of concerns on the environment. In other words, seed balls affected bodily dispositions and made participants more alert to their surroundings.

A cognate idea, 'learning to be affected' (Latour 2004), is defined as an ethical process in which bodies and worlds are co-constituted (Gibson-Graham and Roelvink 2010: 323). Learning to be affected also helps understand how bodies become more attuned with their world (Cameron, Manhood and Pomfret 2011). Extending on this idea, the authors propose to harness the power of non-human agents (as in the case of The Planty Atlas of UTS with seed balls, seeds or plants). These alliances can help shape 'the world and the ways humans and non-humans might live together' (404) and change how we can be in a world of climate breakdown. Being affected by planty worlds, as they suggest with the example of gardening, 'might be one activity through which a climate changing world registers more and more strongly and might thereby prompt changes in actions' (495).

### **Impressions (Conclusion)**

This essay set out to analyse a design proposition to generate connections between people and the ecologies they meet in their everyday lives around their place of study or work. It started with a thick description of the three components of the projects: an installation of books about plants and plants; a series of curated walks in the precinct around the University of Technology Sydney; and seed balls making workshop. Several themes and concerns emerge in this description, as it is captured in one of the responses to the survey we distributed:

'The project introduced me to ideas of feminism and gardening - i.e. it supported connection making; in this sense, it opened my eyes to perceptions previously not articulated. For example: Looking for the micro in the landscape alongside footpath edges in the cityscape. Green spaces are vital in cities - I am still growing plants from the seed balls made during the workshop.' (Mapping Edges 2019b)

It calls attention to four key emerging themes from the project: first, it generated forms of knowledge sharing and learning; second, it provided opportunities to connect, with the environment and with other people, sparking a sense of community; third, it made present the plantiness of the precinct and enlivened its surroundings; fourth it prompted small changes in everyday practices. This participant could not attend the last walk, in which we checked the progress of seed balls we had previously distributed and discovered that all but one had failed to germinate. Here unexpected and remarkable fifth theme emerged: the seed balls' failure as the result of drought inspired discussions on climate change and its articulation as a lived and embodied experience.

These five findings, in turn, compelled us to think about seed balls as campaigning artefacts, 'forms make political statements, but they also engage bodily dispositions and human emotions.' (2013b: 229) To understand how seed

balls mobilise emotions and bodily dispositions we turned to Sara Ahmed's work on objects and emotions as collective feelings, and on 'impression' as the mutual capacity of people and objects to impress and leave an impression.

Our impressions gathered from the responses to the project's survey, our field notes and the photo documentation of the project, reveal how making seed balls and walking together created new relationships, activated existing and untapped interests, articulated concerns, and provided a way to act upon concerns around the environment (as Julier defines campaigning artefacts, 2013b: 229). The failure of seed balls to sprout after a dry and smoky spring prompted embodied, visceral insights on climate breakdown. We think of this power of seed balls to move, provoke, shift perception, and create new relations between people and their environment as the power to generate radical intimacies between humans and plants.



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