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Embodied connections: sustainability, food systems and community gardens

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Community gardens have been identified as providing a model for promoting sustainable urban living. They can also contribute to individual and community reconnection to the socio-cultural importance of food, thus helping facilitate broader engagement with the food system. Such processes may offer pathways to developing a deep engagement and long-term commitment to sustainable living practices predicated on the development of new forms of environmental or ecological citizenship. However, little attention has been paid to how this can be adequately harnessed. Based on an ethnographic study of community gardeners in the Australian Capital Territory, this article argues that fostering an embodied form of sustainability, which accounts for individual embodied engagement in these collective spaces, may play a critical role in achieving these outcomes.

Keywords: community gardens; embodiment; food systems; urban sustainability

Introduction

Community gardens have been identified as providing a model for the promotion of sustainable urban living (Stocker and Barnett 1998, Ferris *et al.* 2001, Holland 2004). However, attention to how this potential can be most effectively capitalised on has been very limited. The existing literature suggests that this can be best achieved through large-scale policy initiatives (Schmelzkopf 1995, Pothukuchi and Kaufman 1999, Schukoske 2000, Holland 2004, Drescher *et al.* 2006), particularly in relation to urban planning to provide adequate spaces and secure land tenure. Such research also tends to emphasise the communal aspects of the gardens as key to their success. However, there is scant research looking at why people become, and stay, involved in community gardens and their relationships to broader environmental concerns. This is particularly apparent in research that does not look exclusively at individuals who were motivated by a broader "green" agenda, or who were aligned with gardens specifically designed to promote sustainability. If these spaces are to play a key role in the promotion of sustainable urban living, greater attention must be paid to the rationales and motivations driving individual participation and how this impacts on their attitudes and behaviours in relation to broader environmental issues.

This paper is based on participant observation, informal conversations, and in-depth individual interview data gathered from 20 participants from seven community gardens in the Australian Capital Territory (ACT), from late spring to early autumn of 2009/

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2010. The project was designed to encourage gardeners to reflect on their motivations for participation in a community garden. Drawing on this ethnographic data, this article argues that the full potential of community gardens in relation to sustainability can be best realised through recognition and promotion of engagement in embodied practices. The notion of embodiment employed here is grounded in the idea that we know and experience the world through our bodies. In relation to community gardening, engagement in embodied practices is shown to contribute to the development of an embodied form of sustainability whereby participants, through individual engagement and re-creations of place are able to reconnect to the food system and engage with the urban landscape in new, productive, and more sustainable ways. This article suggests that such local food initiatives, which take seriously the role of bodies in our lived experiences, may hold greater potential for promoting long-term commitment to sustainable practices and engagement with forms of environmental and ecological citizenship than broader urban agriculture initiatives which tend to position people as end-product consumers of food.

Sustainability and sustainable practices are terms embedded with an endless array of meanings. For the purposes of this article, sustainability refers specifically to issues focusing on minimising the impact of gardeners on the ecosystem to facilitate productive, long-term use of specific gardening sites. This research aims to produce a "thick" (Geertz 1973), rich, and in-depth description of the issues under investigation based on the lived, everyday experiences of the gardeners involved. Indeed, such knowledge is lacking in the academic literature on community gardens as "a surprisingly small number of published studies actually talked with community gardeners about their experiences" (Wakefield *et al.* 2007, p. 93). This research addresses this gap and also builds on Allon and Sofoulis's (2006) identification that "an understanding of the cultural domain and the complex world of everyday life experience is crucial for understanding resource consumption … and vital to the adoption of more sustainable urban lifestyles" (p. 46). Listening to, and engaging with, the everyday life experiences of community gardeners is vital to understanding the key ways in which these spaces can be used to promote more sustainable urban lifestyles.

Disconnection, local food, and consumers

The capacity for the localisation of food and, in particular, urban agricultural practices such as community gardening, to contribute to the creation of more sustainable cities has been the focus of a growing body of research over recent years. Indeed, alongside the potential for gardens to promote social inclusion and community-building (Glover 2003, Saldivar-Tanaka and Krasny 2004, Kingsley and Townsend 2006, Tan and Neo 2009), research has pointed to their capacity to improve: micro-climatic conditions in urban areas (e.g. reducing heat island effects), waste management (through the provision of spaces in which biodegradable wastes can be composted), and the localisation of food production to reduce food miles (Moskow 1999, Pothukuchi and Kaufman 1999, Drescher *et al.* 2006). For Stocker and Barnett, community gardens have the potential to promote physical, ecological, socio-cultural, and economic sustainability in three key ways:

> First, the local growth of foods, often organic, can provide people with fresh safe foods which are a fundamental product for *physical and ecological* sustainability.
> Second, the making of such a community place provides an opportunity for social and cultural interactions … [that] form a basis for the evolution of *socio-cultural* sustainability. Third, community gardens can also function as research, development, design, demonstration and dissemination sites for community science, horticultural techniques and innovative technologies … in this way they point towards economic sustainability. (1998, pp. 180–81)

Underpinning all of these contributions is the potential to redress the urban disconnect from the food system. The growth in this disconnection is well documented in academic and popular literature and is largely seen to be a response to the international restructuring of agribusiness. Many argue that this process has increasingly positioned food as a commodity and Western urban dwellers as its passive consumers, increasingly alienated from its production (Hendrickson and Heffernan 2002, Morris and Buller 2003, Kirwan 2004, McClintock 2010).

This disconnection arguably contributes to the persistence of a nature/culture divide in urban areas. Indeed, a lack of engagement with food production and, more broadly, of regular engagement with nature in familiar, intimate urban spaces may be an important factor in maintaining this divide. For some, such disconnection is likely to increase in the coming decades given the reduction in size of suburban backyards and the current urban planning focus on densification (Head and Muir 2006, Graham and Connell 2006, Hall 2009). Indeed, exploring the relationships between conceptions of nature and society through an extensive ethnographic study of Australian backyards, Head and Muir note that:

> arguments for urban consolidation routinely invoke the environmental advantages of its reduced urban footprint by comparison with urban sprawl, in which the gardens of suburbia are seen as problematic. Yet if in the process the flawed "social" is quarantined further from nature "out there", the implications for reduced human engagement and empathy with plant and animal others will be considerable. (2006, p. 522)

In relation to food systems, this bracketing off of everyday lives from nature contributes to the growing disconnect between urban consumers and the produce they buy and consume. Increasingly, research is indicating that this disconnect is having adverse effects on local economies, personal and community health, the environment, and social connectedness (Pothukuchi and Kaufman 1999, Kingsley and Townsend 2006). Urban or civic agriculture and, in particular, local food movements, have been championed as ways of bridging this disconnect (Allen *et al.* 2003, Holloway and Kneafsey 2004, Kirwan 2004). However, these initiatives may introduce their own set of problems.

Defining local food is difficult because the concept has been applied in differing ways in a variety of contexts. However, the basic motivation is the revitalisation of local economies and reduction in food miles. Seyfang (2005) identifies the moves towards these "localised food supply chains" as constituting a form of "alternative sustainable consumption" which "aim[s] to strengthen local economies against dependence upon external forces, avoid unnecessary global food transportation (cutting 'food miles') and reconnect local communities with farmers and the landscape" (p. 300). However, the notion that local food necessarily promotes reconnection to people and place simply by virtue of reduced proximity between grower (or provisioner) and consumer requires further analysis. DeLind (2006) suggests that local food movements may, in fact, do the opposite noting that: "[b]y narrowing their focus to the rational and the economic, [local] movement activists tend to overlook (or marginalize) the role of the sensual, the emotional, the expressive for maintaining layered sets of embodied relationships to food and to place" (p. 121). This is largely achieved by positioning citizens as consumers (somewhat passive, at that) of food which perpetuates disembodied relationships to food and place. For DeLind:

> If local food (however local is defined), represents little more than another delightful, and possibly guilt assuaging, choice made by people who see themselves as wise consumers, then it will not withstand market forces. Without an emotional, a spiritual, and a physical glue to create

> loyalty, not to a product, but to layered sets of embodied relationships, local will have no holding power. (2006, pp. 125–26)

Here the potential for embodied relationships is seen to be elided by the very commodification of food, and as DeLind extrapolates, of citizens them(our)selves (indeed, DeLind (2006) notes that: "if 'we are what we eat', then we too are in the process of becoming commodities" (p. 125). For McClintock (2010), the dominance of market logic threatens the very socio-cultural meaning of food, noting "[t]he socio-cultural significance of food and agriculture rarely factors into calculations of profit margins; certain social relations woven into the agri-food system – for example agricultural and culinary knowledge and its cultural significance – are impossible to quantify and either resist commodification or are erased by a commodified agri-food system" (p. 200). Any form of embodied engagement with the food system requires recognition of the importance of the socio-cultural aspects of food; its production, preparation, and consumption. This article argues that such embodied relationships, including the relationships between bodies and place (what DeLind (2006) refers to as "cultural understandings of people in place" (p. 126) – linked, in this paper, to the notion of belonging, may provide an important foundation for the development of more sustainable urban living practices.

Recognition of the importance of the socio-cultural aspects of food has a long history within the disciplines of sociology and anthropology where aspects of food and their relationship to our cultural organisation, conceptions of self, and bodies are explored (Douglas 1966, Levi-Strauss 1969a, 1969b, Bourdieu 1984, de Certeau *et al.* 1998). Indeed, the French sociologist Michel de Certeau (1998) contends that food practices are "culturalised" and "historicised", noting that "[e]ating, in fact serves not only to maintain the biological machinery of the body, but to make concrete one of the specific modes of relation between a person and the world, thus forming one of the fundamental landmarks in space time . . ." (p. 183). His collaborator in later work, Luce Giard builds on this foundation by noting that "[h]umans do not nourish themselves from natural nutrients nor from dietary principles, but from cultured food-stuffs, chosen and prepared according to laws of compatibility and rules of propriety unique to each cultural area. . ." (in de Certeau *et al.* 1998, p. 168). However, these relationships (which are, of course, ever-changing) are threatened by our increasing disconnection from the food system facilitated by the process of commodification. This may not only be true in relation to global restructuring, but also in relation to local food movements which locate themselves within these broader political-economic discourses and maintain a focus on acts of consumption.

The notion of ethical and/or sustainable consumption is a growing and contentious area in discussions of environmental and ecological citizenship and broader engagement with sustainable living practices (Jelin 2000, Seyfang 2005, 2007, Jagers 2009, Gabrielson and Parady 2010). The debate largely revolves around whether practices of consumption provide an effective base for promoting behavioural and attitudinal change in individuals sufficient enough to promote more far-reaching and long-term sustainable living practices. Through her focus on initiatives in the UK, Seyfang (2005) contends that mainstream policy approaches to promoting sustainable consumption are largely ineffective, partially because they remain tied to traditional market-based logic. However, she sees these as a possible stepping stone to a "new economics" or "deep green" alternative approach in which practices of sustainable consumption are more closely tied to notions of ecological citizenship. Within this category, citizens "challenge the commercial, political and legal forces which currently favour commodification to produce instead locally significant social economies, where collective ownership and co-production take precedence"

(Seyfang 2005, p. 300). To promote broader sustainable practices, governments must provide an appropriate social and economic context that supports these individual efforts.

However, even within these conceptualisations there is a lack of direct engagement with how the socio-cultural significance of food for different citizens could be incorporated into a "locally significant social economy". Moreover, the work is built on the assumption that acts of consumption can produce an ecological citizen. In more recent work, Seyfang analyses a specific local organic food initiative in the UK noting that, while people did attempt to consume according to their values (related to local, organic, and fair-trade foods), this was not always consistent. Indeed, "for most people, food provisioning systems are not an all-or-nothing choice, but rather a plurality of approaches and systems reflecting perhaps the trade-offs between affordability, accessibility and ethics" (Seyfang 2007, p. 130). The issue being raised in this article is how such trade-offs can be best mitigated. DeLind (2002) contends that consumption alone does not provide an adequate pathway to promote significant behavioural changes for it to be the basis for a rethinking or retooling of the conception of citizenship. She is particularly wary of the notions of individualisation which underpin processes of consumption. Indeed, she notes that "[w]e need to move beyond the creation of lifestyles through consumption and challenge ourselves to create places through acts of physical engagement and cultural identification" (DeLind 2006, p. 143). For her, it is these types of initiatives that may best promote long-term attitudinal and behavioural change in relation to food, and broader sustainable living practices. The engagement DeLind alludes to is a rather romanticised vision of interaction with nature and living systems more broadly. However, if we are to take efforts to promote sustainable urban living seriously, we must consider such arguments. We must develop ways to move beyond the disembodied citizen-consumer to embrace embodied forms of sustainable urban living. Deeper engagement with individual, local food producing in community gardens may be one way of meeting this challenge.

Socio-cultural sustainability, community, and individuals

Community gardens may have a significant role in facilitating the development of embodied and embedded relationships to place, the food system and, consequently, in promoting sustainable urban living practices. Stocker and Barnett (1998) highlight the potential for this type of community action to facilitate "the evolution of *socio-cultural* sustainability" (p. 181). Holland (2004), through her investigation of UK community gardens, is also enthusiastic about the potential of community gardens to promote "local sustainability" due to their communal nature and thus expression of communal will and desire. She notes that while "late 20th-century urbanisation has removed the possibility of widespread farm ownership, and city life discourages activities that re-engage humans and nature what city life can promote, though, is a sense of community, and it can encourage structures that allow this to develop" (2004, pp. 289–290). The potential for reconnection with nature and the food system more specifically is, for Holland, largely a question of whether "policy makers take the example of community gardens as a model for improved sustainable development strategy" (2004, p. 304). However, while the potential of these spaces is identified here, there remains little discussion about the ways in which the deeper relationships DeLind alludes to can be best realised for current and future participants. Here there is a need to problematise the explicit focus on community in order to look towards the role of the individual and her/his attachment to place.

The overwhelming focus on community, as opposed to individual gardeners, as a key way of determining/measuring the success of community gardens is more problematic

than it might at first appear. Nonetheless, the literature on community gardens enthuses about their communal benefits, for reasons ranging from social inclusion to health. And, indeed, the socio-cultural element of sustainability, as promoted through communal pursuits, can be important in the promotion of substantial initiatives to encourage sustainable urban living. However, my research into the attitudes and behaviours of ACT gardeners suggests that any further development of the role community gardens can play in urban sustainability must also factor in the individual and their motivations and desires, not just those of an imagined broader collective. Indeed, the communal aspect of the gardens was not found to be the key motivational element for any of the participants in the ACT. For all but one interviewee, it was an added benefit, but it did not encourage participation, nor did it necessarily lead to engagement with more sustainable gardening and, more broadly, living practices. An embodied connection to place may well be facilitated for some through communal strategies, but for others, a deeper connection necessary for behavioural and attitudinal change may need greater attention paid to the individual.

The participants in this research found it difficult to pinpoint and articulate why they gardened as it seemed to be related to an internal drive over which many felt they had no control. As one participant noted "… it's an urge that you feel you need to satisfy or something. Sometime ago you think well, 'there's time in my life. I should be providing myself with some food or something', some sort of urge to actually produce, yes". For others, the process was articulated as a way of connecting to the broader life world that brought with it many health benefits, both physically and mentally, as one participant commented, "it's lovely to be part of the growing process and it's quite healing … it really gives you a connection again". This was emphasised by another gardener who declared that she "love[d] the whole business of watching things grow. It's an absolute joy". These spaces also provide opportunities to engage people with broader environmental issues, as exemplified by one participant who noted that gardening was important "because you can learn so much about sustainability [talking specifically about seasonal growing and eating] and how to grow organically and things like that".

The most oft-cited motivation for participation in the seven ACT community gardens that formed part of this research, revolved around individual desires for independence. Participants expressed the wish to grow foods that are difficult, if not impossible, to source through supermarkets and even local markets (both farmers and others). For some, this was explicitly identified as an assertion of social values and ideals at an economic level, responding to a rejection of the control major supermarkets have exercised over the types of food many urban people consume. Indeed, one interviewee described his community gardening practice as "giving the finger to the supermarket duopoly [Coles and Woolworths]". This was not only seen to be a bid for economic independence, but also for freedom of choice; the freedom to exert power over what you consume. This was reinforced by another gardener when he commented: "I think the whole gardening thing is a bid to be independent and different from the mainstream. To grow what you want to grow, varieties that you want". This was common among the gardeners, many of whom sought out heirloom varieties, or varieties uncommon in Australia, which they remembered from their childhood (usually memories of helping their parents or grandparents grow them). The articulation of such motivations echoes the findings of Gaynor's (2006) study into suburban food growing in Australia which identifies notions of "independence" as significant factors for gardeners. In her work on backyard gardeners, she notes that "[t]hose producing their own fruit, vegetables, and eggs also gained satisfaction from identifying with production rather than consumption" (2006, p. 177). Such notions reflect the engaged bodily efforts

of citizens to forge some form of reconnection and participation in the food system above and beyond monetary transactions.

This was supported in the ACT study by all interviewees who sought out seed or plants that were not mainstream, or readily available, in Australia. The reasons for this are quite varied. For some, it is linked to their cultural background, for others it is about health, or simply about experimenting with types of food and ways of growing that were not common. Indeed, one interviewee enthused that "[i]t's fun to grow things you don't know about". Embedded in the way these participants discuss their various motivations is a connection to broader social, economic, and health issues. These community gardening spaces are being articulated into places and embodied in multiple ways through the varied ways these people act in, with and on these spaces. However, at the heart of this is an overwhelming desire to produce food for one's own (and immediate family's) consumption. This is often expressed as part of an effort to be more engaged with the food system, at a physical and economic level. Significantly, this was always expressed as an individual, rather than a communal, motivation. To most effectively harness the potential of these spaces (and the participants within them) as models of sustainability, individuals, and their particular relationships to place must be factored in. Recognition of the role individual embodied practices play is integral to this.

Embodied sustainability: bodies, belonging, and place

The potential for community gardens to enhance sustainable living practices (in relation to food systems) in urban areas may be most effectively realised by focusing on how to engage individual bodies in these communal spaces. Such an approach, however, is less about the economic and political benefits of community gardening (and local food initiatives more broadly) and more about what DeLind (2006) refers to as "the emotive, the cultural, the spiritual (collectively termed the nonrational, the embedded, the vernacular, or the embodied) in support of local food" (p. 127). The notion of embodied sustainability developed here draws on the idea that our everyday engagement with the world is a bodily experience. Existing research into the promotion of sustainable living tends to focus on ascertaining the attitudes and values of people and their corresponding decisions to act (or not) on these. This functions to privilege the mind over the body and, in many ways, perpetuates the nature/culture dualism. One notable exception here is the work of Gabrielson and Parady (2010) which develops the concept of corporeal citizenship "by making an ontological shift that emphasises the body and materiality" (p. 386). The notion of embodied sustainability presented in this article is premised on similar notions – notably, the use of Grosz's conception of the body. As in the work of Gabrielson and Parady, the ideas articulated in this article build on academic literature which destabilises the privileging of the role of the mind over the materiality of the body. This includes issues of resource consumption and sustainable living practices.

Embodied sustainability, as employed in this article, is premised on the notion that "[b]odies have all the explanatory power of minds" (Grosz 1994, p. vii). If, as Grosz (1994) argues, "all the effects of subjectivity, all the significant facets and complexities of subjects, can be adequately explained using the subject's corporeality as a framework", (p. vii) then bodies are not passive. They are discursively produced but they also contain internal drives and desires enabling them to be actors in and on the world. Indeed, we know and produce the world through our bodies. This seems to be particularly apparent in relation to food which performs multiple roles in shaping and sustaining bodies – physiologically and socio-culturally. Notions of place-making as a form of belonging are

also practices which occur through bodies. Community gardens provide the opportunity to bring together these aspects of food, place-making and belonging. As such, the everyday experiences of gardeners in these spaces largely happen through the body, or through bodily practices/engagement. To adequately harness the potential of community gardens to promote sustainable urban living, this article argues that these embodied practices need to be recognised. These practices can be conceptualised in two key ways: in terms of bodily labour, the investment of time and physical effort in food production intimately linked to place; and, secondly, in terms of bodily nourishment, that is, feeding the body on that which was produced through its labour. Through both of these components of embodied practices, bodies are intimately linked to place.

In community gardens in Canberra, place-making practices are well entrenched. People speak of a sense of "belonging" and feel "violated" and incredibly sad when gardens are vandalised or produce is stolen by intruders. For many, the disappointment comes from what is articulated as disrespect for their hardwork, a direct reference to the importance ascribed to bodily labour by people working to create these places. Early in 16 of the interviews, participants outlined the extensive bodily efforts put into developing their gardens (usually their own, but, in one case, a gardener employed someone to undertake the initial preparations to ready her plot for planting. She had subsequently invested significant amounts of her energy and effort in this process, not only in her plot but also in the communal areas of the garden). Many of the plots had never been cultivated and there was a great deal of energy expended in mattocking hard ground covered in weed and wheelbarrowing in loads of organic matter to improve poor soil (in one-case, the base is an old tennis court). One retired gardener emphasised this exhausting work, noting that "…we [her husband and herself] rotary hoed it, and then we still had to dig it with a fork. And each fork load, you have to sort of bang through the fork, and then bend and pull out all the runners, which you had neatly cut up with the rotary hoer". The necessity of this bodily work and engagement was ongoing due to the continual need to feed and work with the soil. The act of making compost was one such practice which one participant, who identified as a "biodynamic gardener", noted "is hard work because you've gotta go out and gather materials". It is an investment not only in time, but also in bodily effort and energy.

Through these processes bodies become embedded in place. As indicated above, all participants in this study spoke at length about their relationship to their soil and how they feed, nurture and work with it. When discussing the future of the plots, one participant noted that she "couldn't leave" her soil, another said he "would have to die" before he left his. The soil provides a connection to place – a place the gardeners have invested their time and energy in to create. It is a connection which underpins a broader sense of belonging. One participant, who had put a considerable amount of effort to improving his soil was surprised by the resulting relationship noting "[i]t's great to get down and dig and feel the consistency of it [the soil] now and the worms in it. It's something that really strikes you. I never thought that I would be quite turned on by putting my hand in the soil and looking at it. I guess the older you get different things appeal". The soil for most of the gardeners was considered to be a valued non-human element which gardeners needed, and enjoyed, actively engaging with. One gardener who had tended the same plot for 18 years claimed to "know every grain of soil … personally".

These gardeners identified the soil as an active partner in the growing process. Indeed, despite recognising she had been allocated a plot with poor soil, one new gardener stated, "[y]ou can't be too precious about some things, and I think the land and the soil, sort of, they always come to the fore, to the party". This seems to illustrate DeLind's suggestion that "[c]ivic agriculture must be about soil and building soil, not only as a medium

within which to grow good food, but also as a medium and marker of sacred places – places that tie us to our past, our present, and our future". The link to the past was well represented in this research by the efforts of people to grow food they remembered from their childhood. Nine of the participants spoke about the importance the gardens played in securing healthy food, not only for themselves, but also for their children and/or grandchildren, linking it to the future. Furthermore, all but two of the participants spoke of the importance, or a potential positive impact, of the gardens on the surrounding community. This was exemplified by one participant who noted: "At a very organic real level, for sure. Good things happen out of this [community gardening]. Good feelings come out of it. You know, it doesn't bother anyone at all. You know? And I just believe that at a deeper level – you know, not everyone believes these things – but I think there's a real sort of hidden benefit that we don't see that comes from these things. They're just. . . there's this innate goodness in them that just flows out into the community, you know?". Such feelings indicate the importance some gardeners ascribe to these places, above and beyond its tangible outputs and outcomes.

While the act of gardening has traditionally been represented as an attempt to impose order on nature which is represented as "a passive 'other' that is malleable according to human needs and wants" (Power 2005, p. 40), this is not the attitude, nor bodily experiences, expressed by community gardeners who are engaged in a partnership with the soil, nature, and broader lifeworlds. This seems to give expression to what DeLind refers to as the "nonrational elements" which will best facilitate active engagement with, and sustainability of, local food systems. These gardeners are engaged in a process which moves them beyond passive consumers, to those actively "creat[ing] places through acts of physical engagement and cultural identification" (DeLind 2006, p. 143). However, we must interrogate the extent to which these connections to place are not only linked to specific geographical locations (the gardens themselves), but can also be transportable notions of place-making which generate broader expressions of environmental concern. It is these deeper connections with the food system they may best promote effective engagement with sustainable living practices in urban areas.

For many, the health benefits of organic community gardening are key to promoting a deeper connection to the food system. People talked extensively about wanting to know what goes into their bodies and the gardens enabled them to have this knowledge and, for some, peace of mind. Indeed, this interest in and concern for bodily nourishment, represents the second key way in which these gardening practices are embodied by participants. This was exemplified by one gardener when he noted "there's no better whole food than the food you grow yourself knowing what input you've applied, or not . . . I mean, it doesn't get any better than that". The act of organic gardening was, once again, articulated as a partnership with the natural world. One gardener, who practised what he referred to as "homeopathic gardening", had noticed a significantly positive impact on his health and that of his partner: ". . . this last winter we didn't get sick or anything, you know? I mean you just feel it – you just feel kind of stronger, you know? It's just quite subtle but I can definitely notice something in my immune system is just getting, yeah more tenacious. You know?" Through this embodied engagement with nature and place, this participant identifies a deeper connection to the food system. For some, this bodily experience, and this form of bodily nourishment, is embedded within a growing awareness of broader environmental sustainability debates revolving around the issues of organic, seasonal gardening, carbon footprints, and food miles: "Yeah, we prefer to, I guess, garden in a way that naturally strengthens the plant immune system and then, therefore, it's healthier for us as well to eat what's in season, rather than eating things which have travelled a hundred kilometres and been sprayed with whatever". Another noted that people were increasingly

motivated to grow their own food, not only to avoid chemicals, but also by a desire to do "this carbon sequestering by us all doing our own compost and things like that". Here, the intimate partnership between soil and gardener in small plots in suburban Canberra are linked, not only to a particular form of bodily nourishment or practice of care, but also to global concerns. So whilst the bodily practice of gardening is firmly grounded and engaged in place, it may hold significant potential for promoting broader understanding of key environmental issues and ways of living sustainably. Community gardens can provide an important pathway to realising this.

However, this research indicates that such a connection to these well-defined communal spaces does not necessarily translate into a broader commitment to local food and/or sustainable living practices. For many, gardening is a vital component of their lives which some indicate they would have difficulty surviving without. But, gardening can still be bracketed off from other areas of their lives. Indeed, despite all interviewees expressing a strong commitment to growing their own organic produce in the community garden, this did not necessarily translate to a strident commitment to growing organically at home (indeed, of the 14 people who also gardened at home, only 6 strictly adhered to organic practices in their home gardens) nor to buying organic food or shopping locally at farmers markets. Even for those who expressed a deep commitment to organic gardening, they did not necessarily translate their passion for organics to the food they purchased. Only three interviewees actively sought out organic products (with only one doing so consistently). While three participants were very much opposed to shopping at large supermarket chains, the majority were motivated by price, quality, and access in their shopping habits, rather than organic credentials or food miles. One participant stated that, "I don't necessarily make a conscious decision to specifically buy organic. . .if you see this sad organic carrot, and it really is a very sad organic carrot, why would you buy it?". Another, who expressed a deep commitment and long history of organic gardening, when asked about buying organic foods, declared "I'm not that precious". So, while the practice of community gardening can promote embodied engagement with nature, and this can provide a foundation for broader engagement with sustainable practices, this does not occur for all participants. Indeed, within these garden spaces, the notion of what is sustainable is contested.

The two key ways in which engagement in Canberra community gardens promotes a more sustainable approach to resource consumption and urban living is through growing awareness of seasonal eating (and, consequently, a growing understanding of issues of food miles) and of the need to minimise water consumption and improve the water-holding capacity of the soil. An increased focus on seasonal eating, or eating food they had preserved, was referred to by all but two of the interviewees. One gardener, having just completed her first growing season in the plot stated that "I'm really now trying to enjoy seasonal things . . . I know that the French have their apple season; they have lots of lovely apple tarts, apple cakes. And then they have a rest from it. And I think, well our bodies need a rest. We get a bit sick of the same all the time . . . . And so I'm really into seasonal things too". Here the notion of sustainability in relation to issues of production and consumption is not simply about far-removed environmental concerns. It is articulated as intimately linked to the health of the body. This was reinforced by a more experienced gardener who talked about the importance of eating seasonally to warm up or cool down your body: "I don't see why you should eat grapes from America in the middle of winter. They cool you down". The individual body is implicated in these practices of growing and consuming to the extent that certain foods are felt to produce significant and immediate impacts on bodies. Moreover, the practice of seasonal eating is seen to

have broader environmental benefits. The body nourished by organic produce grown in community gardens is implicated in global environmental issues.

The issue of sustainability and water, however, was more vexed. This is in line with other research into Australian urban residents who have been found to express a strong conservation ethic in relation to water use. However, it has been shown that the current demand management strategies employed by governments and water utilities are unable to satisfactorily encourage and support a significant reduction in the way people use water in and around their homes (Strang 2004, Allon and Sofoulis 2006, Gilg and Barr 2006, Po *et al.* 2007). Allon and Sofoulis (2006) point out that "efforts to simply persuade or 'demand' that people use less water, take fewer, shorter showers, or rip up their lawns and plant natives, are unlikely to succeed on their own" (p. 54). This is largely because "[t]he social and cultural values underscoring the importance of the daily shower or the lawn as a contemporary sign of identity are likely to simply work against and ultimately override the need for change" (2006, p. 54). While these social and cultural values relate to personal normative beliefs, there is a need to acknowledge the embodied nature of the relationship many people have with water. This is particularly apparent in community gardens, where personal beliefs and practices are available to public scrutiny.

At the time of the interviews, there was a significant amount of tension related to water use evident in the gardens. However, as one participant who had been gardening in his plot for around 10 years noted there had been a significant shift in watering practices over this time in response to the drought, introduction of water restrictions, and a growing awareness of issues related to water. He noted that "[w]hen we started off people would run sprinklers and that's all gone now. A lot of people now have drip systems and I think next year I might put in a drip system. So people are a lot more conscious and they water less frequently and they use a darn sight more mulch that they used to".

Many of the interviews for this research were carried out over a long-hot summer and the issue of water use was one that was of increasing of concern to COGS, the organisation overseeing the gardens. An extensive article on how much water each plot was entitled to and the number of litres different watering strategies utilised was run in the summer edition of the COGS magazine and an e-mail circulated to the convenors of each garden. Gardeners seemed to respond to this in two different ways: one group, who thought their watering was minimal realised their efficiency could be improved and altered their practices. This was exemplified by one gardener who stated "I think there's an educative process … I was arguing [prior to the e-mail] you know I don't water all that much, dah di dah, but looking at the numbers, looking at the allocations, it's quite scary". The second group rejected aspects of the watering debate itself in two notable ways: first, they objected to the forms of watering practices that were encouraged and had instead developed their own techniques which they believed were more productive and sustainable (most often this involved not strictly following the ACTEW water restrictions by watering every third, instead of second day). Secondly, some rejected the idea that, just because less water was used, a plot could be deemed more sustainable. Indeed, those in this group argued that more productive plots may actually use more water but could achieve far greater returns, meaning reduced food miles and carbon footprints.

The ways in which these debates are articulated and the attachment to certain methods of watering are, in part, produced out of the embodied, place-bound relationship people have with watering practices. Indeed, there were those who noted that "it is therapeutic to water". Others commented on the contribution lugging around heavy cans of water made to their fitness, "we're losing weight, it's wonderful". For all, watering was the reason that they were most often at the garden. Thus, regardless of the method used, it is while

engaged in the practice of watering that people interact with other gardeners. Watering also provides people with the most regular opportunity to experience and engage with their plots. Indeed, whether hand watering or using dripper systems, it is a COGS requirement that people are in the garden when watering. Due to water restrictions (even though they are not always adhered to), most people were there between 7 and 10 in the mornings and evenings. Water is, most often, the reason why people need to be at the garden and, thus, is a key medium through which people start to feel a sense of belonging to these places.

People's attitudes to water seem to be driven by their relationship to the soil and how they feel they can best care for it. Soil and water, the two key elements gardeners can work with to improve production, provide the opportunities for place-making and belonging to place. However, the issue of water is particularly problematic – some people feel overly surveilled and are quite antagonistic towards the ways in which the water restrictions are being implemented. Many, indeed, called for a strategy that promoted greater education rather than demands. Given that water is the main medium through which people are in contact with their plots, its soil and produce, and with other gardeners, it is vital to recognise the embedded and embodied nature of these practices. An understanding of this should be incorporated into education strategies designed to promote sustainable water use.

Conclusion

Community gardening is an embodied practice. Its potential to encourage and promote broader practices of sustainable living in urban areas can only be adequately harnessed if the role of the body is taken into account. In the gardens bodies are engaged with nature, and, in particular, the soil and water, as active partners in the growing process. Connections to broader environmental concerns relating to issues such as food miles, climate change, and water security are often informed by the intimacy of the individual's relationship to the soil in their plot in these communal places. It is this micro-level engagement which connects them to the broader lifeworld and, potentially, more sustainable practices. While the seeds for this embodied shift are sown through this engagement with production, future research needs to focus on how such embodied practices can extend beyond the borders of these gardens. This form of embodied engagement moves beyond notions of sustainable/ethical consumption to intimately implicate and embed us all in the natural world. It is these forms of relationships which have the potential to most effectively promote and maintain long-term sustainable initiatives in urban areas. More research into the capacity of community gardens to support this is needed.

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