Growing Communities: Integrating the Social and Economic Benefits of Urban Agriculture in Cape Town

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Abstract There has been growing interest in the use of urban agriculture to address food insecurity and poverty in Cape Town. This reflects debates on urban agriculture in the global south. In the north, growing food in cities has been tended to be framed in terms of its social benefits. This paper investigates the perceived benefits of urban agriculture in projects in Seawinds and Vrygrond in Cape Town. Using the concept of metabolic rift is argues for connections between northern and southern constructions of urban agriculture. This approach enables connections to be seen between the practice in seemingly different areas without losing the local context. The paper argues that by using this integrated approach, projects may be more sustainable and ultimately provide both clearer social and economic benefits.

Keywords Urban agriculture · Cape Town · Economic development · Social development

Introduction

The City of Cape Town faces a myriad of social and economic challenges. While these challenges have often been addressed in policy silos, the connections between these challenges are increasingly recognised by policy makers and NGOs—as it evidenced by the rebranding of the Department of Housing to the Department of Human Settlements. Urban spaces are far more than physical built environments, they are the landscapes in which people's lives are played out and in which identities are constructed and negotiated. As Gruenewald notes, 'space is alive, pulsing with

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beliefs, thoughts and actions that shape who we are as people' (Gruenewald 2003, p. 628). Appreciation of this demands different responses to the perceived challenges. As Cape Town undergoes social, political and economic transformation there is a need to address not only address economic and political imbalances entrenched by apartheid and its resultant segregation, but also the societal fractures. This paper considers the potential of urban agriculture as a means to address both economic and social challenges in an integrated manner.

In recent decades, urban agriculture (UA) has been powerfully advocated as a solution to particular types of urban challenges in the global south. As will be discussed later, this form of urban agriculture research focuses on tangible challenges such food security, poverty and urban waste management (Mougeot 2006). This interpretation of the benefits is reflected in the City of Cape Town's Urban Agriculture Policy (City of Cape Town 2007) which drives and justifies much of the food security advocacy work in the city.

In the global north, the growing of food in cities has been advocated to address a different set of urban challenges. While recognising the food security and other quantifiable benefits of southern configured urban agriculture studies, these focus more directly on social and community benefits. This work argues that the creation of green and growing spaces in cities can encourage 'upliftment', 'cohesion' and 'community development' (e.g. Jamison 1985; Glover 2004). Within these framings the practice of growing food in cities is terms 'community greening', 'community gardening' or 'civic agriculture'.

Until recently, these two strands of research on growing food in cities—southern urban agriculture and northern community greening/gardening—have existed largely independently of each other. The southern research has been informed by development studies and the northern research by critical urban studies and food justice research.

McClintock has recently attempted to develop a common conceptual framework to understand the dynamics giving rise to urban agriculture in both northern and southern context, and the engagement with the local that differentiates its practice and interpretation (McClintock 2010). He argues that an extension of the Marxist theory of metabolic rift may be useful in this pursuit. The heart of this theory is Marx's argument that the development of capitalism and its attendant urbanisation has 'alienated humans from the natural environment and disrupted our traditional forms of "social metabolism", the material transformation of the biophysical environment for the purpose of social reproduction' (McClintock 2010, p. 192). In McClintock's work, he suggests that this metabolic rift consists of three interdependent, but distinct forms of rift: '(i) ecological rift, which includes both the rift in a particular biophysical metabolic relationship (such as nutrient cycling) and the spatio-temporal rescaling of production that follows in its wake; (ii) social rift, arising from the commodification of land, labour and food at various scales and (iii) individual rift, the alienation of humans from nature and from the products of our labour. The form of metabolic rift most discussed by scholars is what I refer to more specifically as ecological rift. According to their arguments, the imperative of spatial expansion inherent to capitalism has cleaved a rift between city and country, humans and nature. In search of new spaces for ongoing accumulation, capital has also disrupted sustainable biophysical relationships such as nutrient cycles' (McClintock

2010, p. 193). Urban agriculture in its various forms represents attempts to address these forms of metabolic rift within their particular local configuration.

By viewing urban agriculture in these terms, it is possible to break away from the apparent north/south dichotomy in literature. This paper therefore uses case studies of Seawinds and Vrygrond, in Ward 64 of Cape Town (see Figs. 1 and 2), to investigate the perceived benefits of involvement in urban agriculture projects. These case studies are used to critically reflect on the constructions of urban agriculture in the north and south. The paper concludes with a discussion of the value of McClintock's metabolic rift lens, and what the findings might mean for policy and practice in Cape Town.

Community Gardening: the Northern Paradigm

Formal advocacy of urban agriculture in northern cities began with the nineteenth century reform movement, which sought to maintain social order and morally uplift the working class (Pudup 2008). Ebenezer Howard's Garden City model, for example, allocated space within the city for vegetable gardens and allotments (Howard 1965 [1898]), in part to provide access to cheap food, but also to reconnect the working class with rural life. This is perhaps an early expression of urban agriculture as an attempt to address a perceived metabolic rift. This social reform element was strongly present in the allotment movement of the nineteenth and early twentieth centuries (de Silvey 2003).

A second strand of urban agriculture advocacy arose during the Second World War with the Victory Gardens movement in which citizens were encouraged to turn private gardens and public parks into vegetable gardens. This was most immediately a response to dire food shortages, but also an encouragement towards active citizenship. Participants found participation in this gardening process as a reactivation of
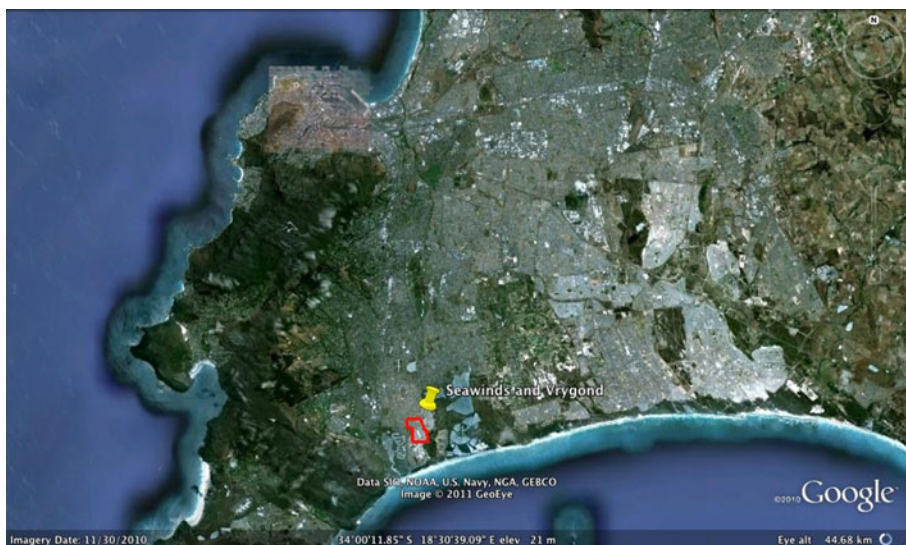

Fig. 1 Location of Seawinds and Vrygrond in Cape Town (Source: Google Earth)

Fig. 2 Detailed image of Seawinds and Vrygrond (Source: Google Earth)

natural order in the apparent chaos of war (Miller 2003, p. 400). Again, urban agriculture was a response to a form of metabolic rift.

As the post-war food security challenge lessened, the focus of urban agriculture work shifted away from a food first perspective. Researchers began to focus more directly on the potential social benefits of growing food in the cities. There has been a shift from framing the growing of food in cities as 'urban agriculture' and towards 'community gardening'. Indeed, Holland goes so far as to argue that if the practice is framed as community gardening, 'it need not be exclusively concerned, indeed to concerned at all, with growing food or animal husbandry' (Holland 2004, p. 290). Framed thus, the focus of urban agriculture then is about: citizen participation and the production of social capital (Glover 2004), producing places of 'counter-hegemonic democratic politics' (Dirlik and Prazniak 2001, p. 3 in Baker 2004, p. 306) where food citizenship is contested, reclaiming space in declining neighbourhoods (Glover 2004; Saldivar-Tanaka and Krasny 2004), promoting urban physical and mental health (Wakefield et al. 2007), and for cultural transfer (Saldivar-Tanaka and Krasny 2004).

This paper focuses on the individual and collective social benefits of urban agriculture, rather than the research that focuses on growing food as a counter-hegemonic movement, although it recognised that this may be viewed as a false distinction (see McClintock 2010). Likewise, it is difficult to disentangle individual and community benefits, as what starts as a benefit to an individual may 'ripple' outwards to the community (Westphal 2003, p. 127; Armstrong 2000).

Individual Benefits

Many authors have emphasised the ability of gardening to 'transform people' (Pudup 2008, p. 1232), claiming that the process of gardening can 'enhance feelings of self-worth' and 'self confidence', 'psychological security' and 'psychological well being' (Jamison 1985, p. 476–477; Armstrong 2000, p. 319; Kaplan 1973; Ulrich 1981).

It is also suggested that community gardens can 'alleviate some of the alienating aspects of modern lifestyles, restoring a sense of place to the urban context' and relieving stress (Hall 1996, p. 18). This again suggests a response to a form of metabolic rift.

Studies have shown that UA can help create a sense of place and stability for immigrant populations (Saldivar-Tanaka and Krasny 2004) and groups affected by disaster events such as the 2004 Tsunami in Sri Lanka where the Department of Agriculture used UA projects for economic reasons as well as to help address 'psychological damages' (Smit and Bailkey 2006, p. 156).

Greening literature provides insight into the 'psychological benefits' of green spaces in urban areas, for stress levels, health and general well-being (Kaplan 1973). This falls into a growing body of research on 'horticulture therapy', which looks at how gardening (a relationship between humans and plants) can enforce feelings of self-worth and appeal to the human spirit as well as benefit people's health (Pudup 2008, p. 123; Stigsdotter and Grahn 2003).

Community Benefits: Connecting People and Places

It has been claimed that urban gardening has the potential to 'change people and places' and people's relationships with the spaces in which they live (Pudup 2008, p. 1228). This section examines this claim through a focus on the potential of UA to connect people to each other and to connect people and places.

A number of studies argue that urban agriculture contributes to foster 'community development' through the use of shared experiences, spaces, tools and skills (Armstrong 2000; Smit and Bailkey 2006; Jamison 1985). This was particularly evident in the urban gardening movement in the USA and Canada in the 1970s and 1980s. Community gardens were viewed as venues for 'creating empowerment' and community organisation (Jamison 1985, p. 477, Armstrong 2000; Allen 1999), and through this they strengthened community identity (Smith and Bailkey 2006, p. 149). It is, again, difficult to separate out the community benefits from the wider political project of this form of urban agriculture, further suggesting the need to see the practice as a localised response to broader metabolic rift.

More recently, UA has been seen as a way of foster 'community capital', which includes building social and human capital (Smith and Bailkey 2006, p. 145). Within this strand, there has been a particular focus on immigrant communities and the role that gardens play in intergeneration cultural transfer (e.g. Twiss et al. 2003; Krasny and Tidball 2009). Many NGOs and community action groups have adopted the idea that such project can encourage cohesion and co-operation. Transformation through gardening has become a 'consistent and well-documented theme across the history of "community gardening" in the US' (Pudup 2008, p. 1228).

However, it is also argued that the connections are not simply connecting people to people, but also people to urban places. Under this formulation, urban agriculture is viewed as having the potential to enhance people's sense of place and belonging. In the USA, this strand of the community greening movement was largely a response to urban decay and crime. It hinged on the idea that communities have agency and do not have to wait for government and planners to intervene (Tidball and Krasny 2007). As such, gardening has been seen in the US, in particular, as an effective means to

revitalise degenerated neighbourhoods and transform dangerous and neglected public spaces (Schukoske 1999, p. 356).

Gardening projects have been said to increase neighbourhood pride, and change the way people feel about their environment (Shmelzkopf 1995). They can add a new and 'uplifting aesthetic' and 'sense of nature' to blighted areas (Jamison 1985, p. 478). According to some authors, gardens can help establish 'community rootedness' (Shmelzkopf 1995, p. 1) and transform people's attitudes about their neighbourhoods, often increasing commitment and involvement in neighbourhood agenda (Jamison 1985, p. 478). It has also been recorded that gardens often lead to offshoot social activities such as music and theatre (Armstrong 2000). Others have shown how gardens become important social centres where people can come together for social events, make friends and discuss problems and concerns or new ideas (Slater 2001; Shmelzkopf 1995).

It has also been argued that gardening has the potential to decrease crime in an area (Armstrong 2000). Gardens are used to create 'defensible space'—blocking criminals escape routes and increasing the public range of vision (Schukoske 1999, p. 356). This notion has its roots in Jane Jacobs's classic argument for 'eyes on the street' as a means to improve urban safety (Jacobs 1961). Urban food gardens are referred to as providing safe havens for women and providing children with places to play away from the harsh and dangerous realities of street life in many low income neighbourhoods (Shmelzkopf 1995, p. 2, Jamison 1985).

Urban agriculture: the Southern Paradigm

Research on urban agriculture in the south has taken a different trajectory. Much of the work in the south is driven by an advocacy approach which views UA as a potentially powerful development tool (Zezza and Tasciotti 2010). Studies on UA in the south gained momentum in the 1980s as a result of the 1975 World Food Conference's highlighting of food insecurity as a critical development challenge (Maxwell 1995, p. 1669). UA was argued to be 'as old as African cities themselves' (Maxwell and Zziwa 1992, p. 13) and vital to understanding how poor people survived in cities. Many researchers cite a 1996 UNDP report that estimated that 800 million people worldwide are engaged in urban agriculture worldwide (see for example Mougeot 2006; Bryld 2003) to demonstrate the importance of urban agriculture and to argue for even more food production in cities.

Research within this paradigm has tended to focus on UA as a means to ensure food security and to address urban poverty through enhancing livelihoods (Ellis and Sumberg 1998; Mougeot 2006; Foeken 2006; Simatele and Binns 2008). It is argued that amongst other benefits UA improves nutrition (Maxwell et al. 1998) and provides additional household income through sale of produce (Foeken 2006). Urban agriculture is predominantly argued for in terms of tangible development benefits. There is a second strand of research that argues for the environmental benefits of urban agriculture. This strand argues that through the use of wastewater and urban solid waste, urban agriculture can address some of the waste management challenges of developing cities (Smit and Nasr 1992).

While urban agriculture research in the south has a strong advocacy perspective, often driven by researchers from NGOs (such as RUAF—www.ruaf.org) and

international development agencies, there has been considerable discussion of the resistance many local governments have shown to the activity. Urban agriculture has been resisted on grounds of public health with concerns around the use of wastewater for farming leading of cholera, or the potential of water sources as breeding grounds for mosquitoes, leading to malaria (Simatele and Binns 2008; Drakakis-Smith et al. 1995). Concerns over odour, noise, road blockages and waste are also often invoked (Hovorka 2008). The institutional and legislative barriers to urban agriculture have been the focus of research by Mbiba (1994) and Bowyer-Bower (1997) in Harare, Simatele and Binns (2008) in Lusaka and Mkwambisi et al. (2010) in Lusaka. Despite these challenges, urban agriculture remains advocated as a key means to address food insecurity.

Overall, the focus of urban agriculture research in the south tends towards economic and nutritional benefits and towards developing appropriate local policies. Few studies focus on social benefits. Within South Africa, research has taken a similar trajectory with the work of Rogerson (1993) and May and Rogerson (1995) reflecting the international trend. While this work tends to be more critical of some of the assumed benefits of urban agriculture than elsewhere, it remains focused on potential economic and nutritional benefits. The City of Cape Town's Urban Agriculture Policy reflects the construction of urban agriculture in the south: 'The City believes that urban agriculture can play a pivotal role in poverty alleviation (to improve household food security and nutrition status of people) and economic development (as economic activity it can contribute to job creation and income generation)' (City of Cape Town 2007, p. 4).

However, there is an emerging literature that seeks to interrogate the assumptions of why people farm in cities. Møller (2005), for example, challenged the assumption that if institutional barriers were removed there would be significant take up of gardening (Simatele and Binns 2008). Her work in Grahamstown found that it was viewed as an old-fashioned and undesirable and was therefore avoided by the younger generation. Slater's (2001) work in Cape Town argued that the limited engagement with social aspects of urban agriculture has means that the practice has tended to be viewed in overly economistic and utilitarian terms. Finally, Dunn's recent thesis examining the life histories of farmers in Cape Town found that they articulated social benefits as being more important than economic benefits (Dunn 2010). In Africa outside of South Africa, social and community benefits have been acknowledged, but have been viewed as secondary to the economic and food security benefits (Foeken 2006).

While it seems that social benefits are increasingly acknowledged in southern research, recent work in the global north, particularly in light of the financial crisis of 2008, is increasingly returning to discussions of the economic value of urban agriculture (McClintock 2010, p. 191). The following data presentation and discussion draws on these previously divergent research traditions and seeks to demonstrate their interconnectedness.

Field sites and Methodology

This paper focuses on gardening projects in two adjacent neighbourhoods in Cape Town, Vrygrond and Seawinds (see Figs. 1 and 2). Vrygrond was established in the 1930s prior to the Group Areas Act and has been called the oldest 'informal'

settlement in Cape Town. It was originally a fishing settlement. During apartheid, parts were demolished continuously and many residents were forcibly removed, yet some remained despite harsh policing and lack of services.

Since the late 1980s it has grown and become more established. Although residents come from many different areas, many are from the Eastern Cape. Today the population of between 8,000 and 10,000 is about half 'coloured' Afrikaans speaking and half Xhosa speaking. The area has both informal housing and formal state-built housing. In the years since the end of apartheid, approximately 1,600 formal low-cost houses have been built in the area (www.vrygrond.co.za/history). Geographically, it is a low-lying area with sandy soils and often high wind levels which are challenges for gardening.

Seawinds was established in the late 1980s and early 1990s and mainly consists of state-built subsidy housing with some informal housing. Most houses have a small front yard, which looks onto the street, in which gardens can be established. Residents receiving this housing were on the waiting list and some for as many as 15 years. As with Vrygrond, people who came to live in Seawinds came from a variety of different parts of Cape Town and South Africa. Many came from areas to which they had been moved under the Group Areas Act.

Access to the field was negotiated through Soil for Life, an NGO which has been working with urban agriculture projects in Cape Town since 2003 (www.soilforlife.co.za). The fieldsite gardens, the Sibanye garden in Vrygrond and the nearby home gardens in Seawinds were established after the ward councillor approached the NGO to assist in the ward.

Soil for Life provides 10-week training workshops on creating 'home gardens' to groups of people linked by common area of residence. In this programme, a fieldworker signs up one group of interested participants at a time. They undergo a 10-week programme (once a week) which teaches them how to grow their own vegetables in their back yards, using sustainable organic methods and very little space. They are then supported for a year with seedlings, manure and other materials. This is important especially as these areas have very sandy soils. Members of the group learn collectively but are in charge of their own individual gardens, as opposed to the community gardening method, which relies on collective input.

The data for this paper were generated through participant observation and interviews. One of the authors of this paper volunteered at Soil for Life, attending the weekly training sessions at Seawinds, and working at the Sibanye garden in Vrygrond. Semi-structured interviews were conducted with individual gardeners from both sites and with Soil for Life fieldworkers who had been engaged in the site for between one and five years. Finally, a focus group interview was conducted with members of the gardening group.

Motivations and Benefits

Much of the southern urban agriculture work is based on the premises that urban agriculture has a long history within cities (e.g. Simatele and Binns 2008; Mougeot 2006) and that urban farmers have agricultural skills and sensibilities brought with them from the rural area, portraying urban agriculture as the expression of a

'sociocultural identity tied to agrarian traditions' (Hovorka 2008, p. 95). It is often assumed that farmers will be recent migrants to urban areas (de Zeeuw et al. 2011).

This was not the case in Seawinds and Vrygrond. Neither area had a tradition of urban agriculture before the Soil for Life projects began. Despite the high levels of poverty and unemployment in the area—which the urban agriculture literature suggests would make urban agriculture a logical livelihood strategy—none of the participants in the projects had any previous farming experience. One of the longest established gardeners, Sheila, said that before she did the Soil for Life training she had no skills, and that even 'the houseplants would die' and had never really thought about growing food. Another of the participants spoke of the negative perceptions of urban agriculture in the area, that people say that 'playing with soil' was something they used to do when they lived in rural areas in the Eastern Cape and that they did not want to 'make [their] hands dirty in Cape Town'.

In her Masters research, Shirley Dunn also found that many of her research participants expressed similar perceptions. One of her participants said that despite coming from rural areas and growing food there, it never occurred to her to garden in the city until introduced to an urban agriculture project some 40 years later (Dunn 2010, p. 87). Another had come to the city to work as a nurse aid and stated, 'When you are a nurse, you don't think of bending down and playing with the soil' (Dunn 2010, p. 88).

A second assumption in the urban agriculture literature is that the food grown makes a valuable contribution to food security and household income. One of the key participants, Matilda, who coordinates the Sibanye garden, does derive financial benefit from the project. She is able to sell seedlings from the nursery and some of the vegetables through the local health food shops. However, she still needs to work as a police officer to make enough money to support herself.

In reality, when the participants spoke of the benefits of their gardens, they rarely mentioned any food-related benefits. One of the women even distanced her produce from the concept of food. Fatima was so enraptured by watching her first cauliflower grow that she could not bring herself to pick it. She said that she 'liked it so much it would not be right to eat it.' Likewise, in Dunn interviewed a goat farmer who was so connected to his goats as company that he was loath to sell them and would only sell them live (Dunn 2010, p. 88). One participant argued that urban agriculture cannot simply be about the production of food for consumption or sale. She said '…you can make money from it but first you have to love to plant because that season when the rain is going to wash all your seeds away is going to stop you…but after two or three years of doing it for the love of improving yourself and letting the soil be with you and you with the soil…only then can you plant to get paid for it'.

The benefits that were articulated were predominantly social. Although acknowledging this as a false distinction, this section presents the benefits as individual and community.

Individual Benefits

The first set of benefits was related to health. Participants recognised the nutritional benefits of the food they were producing, but the identified health benefits were far broader than this. One of the participants spoke of how working in the garden was helping her to manage her ADHD through instilling discipline and patience. As in

Dunn's work, a number of the older gardeners viewed the gardens as a form of exercise, which brought improved health (Dunn 2010, p. 111).

Being active in the garden was viewed as bringing about a number of psychological benefits. One participant said that gardening had 'helped him with his lifestyle' as he no longer had time to go out drinking with his friends. The busyness and sense of purpose that came with gardening were identified by participants as key benefits. There was a sense of personal fulfilment that came with growing food. As one participant said, 'I didn't think I could do something like this and it's a joy for me to do this. And it makes a difference because it keeps me busy.' This busyness and sense of purpose was important given the high unemployment in the area. Gardening became an escape from the daily worries, with a number mentioning that it took their minds off worrying about the potential risk if violent crime to their children. Spiritual benefits were also frequently articulated and participants identified with biblical references to planting and growing. The gardening meetings all began with a prayer expressing appreciation for the garden and all that it meant to the gardeners.

Finally, the gardens became places where some form of status could be attained. The sense of pride generated by the gardens is articulated in the following interview sections, 'You know, people come and ask me—and they say, "Is it really a veggie garden?" And I say, "Yes" and so everyone likes it and it makes you feel good.' And 'It's excited to work in the garden. It keeps you busy if you're not working, and it's a pleasure if someone comes to your place and sees it.' It is possible to connect this sense pride to a sense of *ordentlikheid* or respectability afforded by gardening. This point will be returned to in the discussion section.

Community Benefits

The second set of benefits articulated were those at the community scale, however, they were not community benefits as usually understood in the northern literature which are premised on the assumption of some pre-existing sense of community to be supported and enhanced. In these gardens there was no real sense of community before the gardening projects began. At the beginning of the project, only a few of the gardeners knew each other, while others did not even think they lived on the same street. And yet, despite this, there was a strong feeling of community benefits.

Participants spoke of how being involved in the project had brought people together and given them a collective sense of purpose, as this extended quote illustrates, 'This road is like a gardening business here now…yes…because when I look over the road Aunty Martha here and she's over here or you'll come pop in or I just see someone's head over the wall there, and the most important thing for me is I've met new a circle friends, we've been here for twenty years already and we don't know each other we never spoke to each other…I know her for a very long time but not the rest, now when we meet each other in the road we have something to talk about…yes….yes ..how is your cauliflower.' Another participant joined the programme because she had been looking for a way to 'get involved in the community'. This previous lack of community can be attributed in part to apartheid urban tradition, a point discussed further in the discussion part of this paper.

A few of the participants had discussed setting up a business together, a coffee shop selling homemade sandwiches using their produce. While this has not

materialised, this aspiration can be viewed as an emerging entrepreneurialism through community support that may not otherwise have existed.

Perhaps most importantly has been the potential impact on crime. In Dunn's thesis, one gardener had begun her project with the explicit aim of reclaiming community space from criminals (Dunn 2010, p. 137). In Vrygrond and Seawinds, it was more organic than that. Because participants felt that they now had a reason to be in their gardens and a reason to engage with their neighbours, they were more visible in the neighbourhood and were more able to act as 'eyes on the street' (Jacobs 1961). Their mere daily presence watching the activities in the neighbourhood was viewed as having potential community benefits.

However, it is also important to note that problems in the neighbourhoods negatively influenced the projects. Theft and vandalism have been ongoing problems for the gardens, particularly at the community garden site in Vrygrond. In addition, many of the original participants of the community garden had dropped out of the Seawinds Sibanye project. Soil for Life have subsequently stopped trying to establish community gardens because they found that they ended up being too political and that people did not take ownership of them like they did with individual gardens. This shift represents an important point about assumptions about communities and how they are enacted in urban agriculture projects.

Discussion

The data presented suggest that the dominant characterisations of urban agriculture in the south are flawed and that, in Cape Town, many of the ideas debated in global north may more accurately describe the practice. However, this does not necessary mean however that there should be a wholesale adoption of the northern discourse around growing food in cities. Simply replacing one set of articulations and assumptions with another will do little to develop an understanding of why people farm and what benefits they derive. Without this understanding, it will not be possible to generate appropriate strategies that will align urban agriculture with the particular developmental challenges of individual cities.

This section therefore returns to the question of why urban agriculture is viewed as important within Cape Town, both from the City's perspective and from the perspectives of participants. Following McClintock's assertion that the characteristics of urban agriculture in any location are shaped by the local experience of metabolic rifts at multiple scales, this section therefore also interrogates what factors shape the success and failure of projects.

Within the City's Urban Agriculture Policy, the following key goals are identified: household food security, jobs and income, redress imbalances, and, technical and social skills training (City of Cape Town 2007). These are clearly important goals. A 2008 survey of poor areas in Cape Town identified 80 % of households as being moderately or severely food insecure (Battersby 2013). The 2001 census found reported 29.2 % of the population as being unemployed, and in 2005, 38.8 % of all households in the city were living below the poverty line of R1,600 per month (City of Cape Town, no date). The City therefore views urban agriculture as a way to address some of the economic

and social imbalances which have their roots in the cities apartheid history, a particular expression of metabolic rift.

The participants, on the other hand, identified urban agriculture's value primarily in its redress of individual and collective social problems brought about by the previous and current regimes. In their view, the gardening helped to address alienation, to restore positive identity and to build community. This response identifies a different configuration of the ecological, social and individual rifts identified by McClintock.

The key individual benefits identified by participants were to do with mental and physical well being through activity, spiritual engagement and a sense of pride and status through growing a successful garden. These benefits can be connected to attempts to overcome the economic and social problems brought about by the multiple dislocations and alienations of the apartheid city (Western 1981). Jensen and Turner (1996) identify an assertion of religious identity and an assertion of respectability as an attempt to overcome individual challenges and to separate oneself from the negative constructions of the neighbourhoods in which people reside. This idea of respectability or *ordentlikheid* is built on by the work of Ross (2009). So, while urban agriculture in this context is a response to general individual rift, in McClintock's construction, it must also be read as a particular response to a specigic local form of individual rift.

Likewise, the invocation of a community being developed speaks of the failure of apartheid planning and the post-apartheid housing policies. The failure of conventional housing project in the post-apartheid era to build human settlements in which a sense of community develops has led to the State's reassessment of housing policy and the emergence of the People's Housing Process in 1998 and the Breaking New Ground policy statement in 2004 (Huchzermeyer 2001; Charlton and Kihato 2006).

While these gardening projects can be viewed as a potentially powerful response to the particular local configurations of metabolic rift in Seawinds and Vrygrond, the continued influence of these challenges must be recognised as challenging the continuation of these gardens. One of the ongoing challenges for the participants is the low soil quality and winter flooding. This is clearly the result of colonial and apartheid-era planning norms that reserved the best land for the white population and placed the poor on marginal lands. The logic of this environmental racism persists. In this confluence of an injustice of spatiality and spatiality of injustice (Dikeç 2001), the people placed in these locations are amongst the least able to afford to buy resources to make this land viable for agriculture. This only reinforces their dependence on Soil for Life, an NGO run from outside of the area. This dependence on the NGO and the perceived power imbalances have at times threatened the viability of the project. The Sibanye garden survives only because of the commitment of Matilda, but the potential profit margins from the nursery and sales to organic markets are so marginal that the garden cannot even support one person fulltime. Although the City of Cape Town views urban agriculture as a potential source of income, the market structures do not support the sustainable entry of products from these projects into existing markets. Finally, the projects are constantly threatened by theft and other criminal activity in the area. All these challenges are the outworkings of the localised expressions of forms of metabolic rift and challenge the viability of urban agriculture as a solution.

While these local challenges are distinct to the local context, they are not unique. Both northern and southern literatures identify similar challenges elsewhere and show urban agriculture to be a response to these local configurations metabolic rift emerging from the 'expansionary logic of global capital' (McClintock 2010, p. 203). It therefore possible to compare and learn from both northern and southern paradigms of theory and practice.

Conclusion

The starting point for this paper was that Cape Town has a myriad of intricately related development challenges, social and economic. Urban agriculture has been advocated by many NGOs and academics as a poverty alleviation strategy that can have environmental benefits. The City of Cape Town has an urban agriculture policy based on this premise. However, the case studies presented in this paper suggest that this particular framing of urban agriculture does not accurately represent the motivations for and benefits derived from urban agriculture in Cape Town, which seem to owe more to the northern framing.

This paper has therefore attempted to employ McClintock's appropriation of the concept of metabolic rift to connect the different motivations for and manifestations of urban agriculture around the world. McClintock argues that this approach can help academics and practitioners to 'understand the social and ecological dimensions of urban agriculture's multifunctionality', which can ultimately 'be of service not only to academic but also to policy makers, non-profit workers and UA advocates as they frame discussions of UA and develop future policy and programmes' (McClintock 2010, p. 193).

What might this look like for Cape Town? This approach re-iterates the interconnectedness of the economic and social challenges of Cape Town. It also demonstrates that urban agriculture cannot be viewed as a response to one challenge in isolation. Participants in urban agriculture projects articulate their motivations and benefits in multiple and symbiotic ways. However, the City of Cape Town has framed urban agriculture through one set of benefits. Likewise, even though Soil for Life recognise the multiple forms of benefits, their funders fall into the southern construction and are interested primarily in the quantifiable food and economic benefits.

Many urban agriculture projects developed by NGOs fail within their first few years. This paper argues that these failures are to a large degree the result of framing the projects benefits in too limited terms and failing to understand the local factors shaping involvement. For a project to be sustainable, it needs to meet the social and economic needs of the participants. To return to one of the partipicants, '…you can make money from it but first you have to love to plant because that season when the rain is going to wash all your seeds away is going to stop you…but after two or three years of doing it for the love of improving yourself and letting the soil be with you and you with the soil…only then can you plant to get paid for it'. Ultimately, it appears that in Cape Town, only by acknowledging and validating the social benefits of urban agriculture can the economic benefits be realised.

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