MSc Sustainable Development

Blooming Communities

A case study exploring community gardening practices and social inclusion in Oxford, UK

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Track: Earth System Governance
Thesis credits: 30 ECTS

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August 12, 2018

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Picture source: OxGrow, 2015.

Abstract

By providing green spaces for recreation and value formation, sustainable food production, social capital as well as education and skills training, urban community gardens have the potential to contribute to a just and sustainable food culture in cities. The community garden OxGrow in Oxford, UK is one such initiative striving for the creation of a food system that promotes environmental and social justice. However, like many other urban farming organisations worldwide, OxGrow struggles with social inclusion and participation of people living in low-income and food poor neighbourhoods. This reflects common issues around food justice and urban socio-economic disparities among Oxford's communities, including inequalities in access to healthy, sustainable and affordable food. While previous studies have shown that urban community gardens have the potential to combat food poverty, little is known about the exclusionary dynamics of their establishment and how such initiatives can address structural challenges of participation. By applying Social Practice Theory to the case, the study aims to shed light on the material systems of provision as well as social and cultural conditions that shape participation at OxGrow. The theoretical framework explores how practices are recruited, reproduced and diffused based on the elements of *materials, competences and meaning* as well as the assessment of *networks and spaces*. During the case study conducted in Oxford, focus group discussions and interviews with community gardening practitioners at OxGrow, citizens living in low-income and food poor neighbourhoods as well as experts on urban farming and food poverty were conducted. The analysis showed that the practice of community gardening can only be moved by also focusing on the elements of related practice bundles. Materials, competences and meaning of food practices, leisure activities and political activism need to be targeted in order for people to value community gardening practice as an activity that builds a healthy, sustainable and communal food culture. Furthermore, the meaning element of community gardening needs to be moved by creating awareness of the practice and its benefits. Material constraints such as distance to OxGrow and limited time resources are crucial factors to consider while designing appropriate interventions. Furthermore, it was found that exclusionary dynamics are reinforced in networks and spaces, as they do not reach communities affected by food poverty. In order to make community gardening practices travel, practice carriers need to move the elements to yet excluded spaces. In the wake of the results, this study includes recommendations given to OxGrow and the wider urban farming network in Oxford.

Keywords: Community gardening - Grassroots innovations - Social inclusion - Food poverty - Social Practice Theory

Put down the leaden burden

Of saving the world alone.

Join with others of like mind.

Align yourself with the forces of resolution.

Staying open,

Staying grounded,

Be confident in the magic

And power that arises

When people come together

In a great cause.

(Shambala Warrior Mind- Training Verses)

Preface

This master's thesis is the final work to complete the MSc Programme Sustainable Development at Utrecht University. It aims to add to the knowledge about participation and social inclusion in grassroots innovations. I conducted an eight-week case study in Oxford at the community garden OxGrow to find out about how the benefits of urban community gardens can reach those living in food poverty. The topic stems from my personal concern about the environmental and social consequences of the industrial food system and my interest in the future of local and sustainable food production. I personally believe that governmental regulations from above are not enough to reach the Sustainable Development Goals. In order to achieve an environmentally and socially just food system, citizens need to be the driving force of positive change. I believe that this is only possible when everyone is included in the process.

Acknowledgements

The process of writing this thesis would not have been the same without the support and inspiration I received from so many people. First, I would like to express my gratitude to my supervisor Dr Giuseppe Feola, for his continuous guidance and constructive advice. His expertise meaningfully contributed to my learning process and helped me to critically reflect on the research process.

This thesis greatly benefited from the collaboration I experienced with the people in Oxford during my field research. I am thankful for the many inspiring encounters I had in these eight weeks. The support I received, as well as the expertise and insight shared by the respondents, made the thesis what it is. I especially want to thank the people from Hogacre Common and OxGrow for their help and cooperation.

I would also like to thank Dr Ariella Helfgott, for giving me valuable advice at the early stages of this project and for introducing me to the topic of community gardening and food poverty in Oxford. Furthermore, I would like to express my gratitude to Dr George Hedger, who did not only provide me with a home in Oxford but who greatly enriched my stay with his invigorating presence and his friendship.

My deepest appreciation goes to my family. This journey would not have been possible without them giving me the opportunities and experiences that led me to where I am today.

I am grateful for sharing this experience with so many kind, uplifting and inspiring people I am happy to call my friends. Thank you for your affection, your ever-listening ears and valuable advice! Finally, I want to thank Davide for accompanying me throughout this experience with endless love and support.

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Introduction

Background and problem definition

OxGrow and the inclusion of marginalized groups

Oxford offers a broad range of volunteer-based initiatives involved in climate action and urban farming. The network Community Action Groups (CAG) lists over 60 organisations across Oxfordshire based on local community activities (CAG Oxfordshire, 2018). One of such initiatives is the community garden OxGrow , an organisation striving "for a food system that strengthens rather than degrades the biosphere, promotes health and wellbeing across generations and geographical boundaries, and enriches our society and culture" (OxGrow, 2018, p.1). Embedded in the Hogacre Common Eco Park, the community garden offers space to experiment with organic, environmentally-friendly techniques of fruit and vegetable growing and to harness local knowledge. All in all, OxGrow aims to promote education, community building and diversity while making local fresh food sources accessible to everyone (OxGrow, 2018; 2018a; Appendix A).

Open gardening sessions are organised every Sunday afternoon (and Wednesday afternoon in summer) and are freely accessible by everyone. During these sessions, assigned hosts guide the gardening activities, welcome new participants and explain what has to be done and how. By the end of the day, people are free to take home what was jointly harvested. Furthermore, OxGrow organises different educational events around sustainable gardening, such as permaculture and seed saving workshops. From time to time, Oxford citizens are invited to join art sessions, such as painting, creative writing workshops and jam sessions (Appendix A).

However, OxGrow's efforts do not seem to reach all relevant actors of society. Like many other urban farming initiatives (Reynolds, 2015; Poulsen, 2017), the organisation struggles with diverse participation patterns and the inclusion of people from non-white or lower-class backgrounds (Lea, personal communication, February 15 2018; Lalor, personal communication, May 14 2018; Marden, personal communication, May 24 2018). This reflects common issues around food justice and urban socio-economic disparities among the city's communities, including disparities in access to healthy and affordable food. While Oxfordshire is one of the most affluent regions in England, fifteen areas of the city are listed among the country's 20 per cent most deprived neighbourhoods (Hansford & Friedmann, 2015; Bright, Hong, Yeung & Walker, 2015). Bright et al. (2015) claim:" the picturesque, wealthy nature of the centre contrasts with poverty in many of the surrounding areas of Oxford" (p.2). One in four of Oxford's children live below the poverty line and many citizens struggle with the consumption of affordable fresh

food sources (Hansford & Friedmann, 2015). This includes people with low-paying jobs, families with children over the age of five and people living in areas of deprivation (Lalor, 2014). Supermarkets that offer fresh food sources are scarce and fast food outlets selling mainly processed food and microwave meals proliferate on Oxford's low-income neighbourhoods. A phenomenon referred to as food deserts (Horst, McClintock & Hoey, 2017). Food poverty takes on many faces and can be defined as "the inability to obtain healthy, affordable food", including less or almost no consumption of fruit and vegetables" (Lalor, 2014, p.4).

Food poverty is indeed a widespread problem in the UK, with substantial numbers of households being affected (Food Ethics Council, 2010). According to Lalor (2014), reasons for that can be partly found in the changes of the UK welfare system, with citizens having their benefits sanctioned, capped or delayed. Meanwhile, food prices are rising, and the scarcity of nutritionally rich sources become more pressing. The complexity of the issue goes beyond questions of structural and material inequality. It has been found that many citizens do not develop the skills and experience and do not have access to facilities necessary for healthy and sustainable food consumption. Hence, food poverty is also about the lack of prioritising nutrition as well as the absence of a healthy food culture that "celebrates food, ingredients, cooking and the employment of eating together" (Lalor, 2014, p.42).

Acknowledging the link between poverty and malnutrition, and between community gardening and social capital, Hansford & Friedmann (2015) highlight the need for a greater access to food and for a food production that contributes to environmental and social justice. The "Feeding the Gaps" report highlights Oxford's community gardens as potential actors to build food-related skills and a healthy food culture (Lalor, 2014). Yet, the question remains: How can OxGrow foster more diverse participation and contribute to overcoming food injustice in Oxford?

Community gardening, Sustainable Development and food justice

OxGrow and its attempts to promote environmental sustainability and social inclusion can be envisioned under the extensive body of academic literature on Urban Agriculture (UA) and the principles of the global Sustainable Development agenda (Ernwein, 2014; Holland, 2004). Community gardens, classified as a type of UA, have become a counter-cultural and environmental movement, combining the "best of environmental ethics, social activism and personal expression" (Lawson, 2005, p.301; Milbourne, 2012). Growing concerns about the consequences of the conventional food systems, such as quality, costs, alienation and accessibility of healthy and nutritious groceries as well as environmental degradation have increased efforts of growing food locally in urban areas and in a community context (Poulsen, 2017; Guitart, Pickering & Byrne, 2012).

According to Stocker & Barnett (1998), UA initiatives can act as agents of change in three crucial ways that can be put in line with the environmental, social and economic pillars of Sustainable Development. The contribution of UA to Sustainable Development is illustrated in Figure 1.

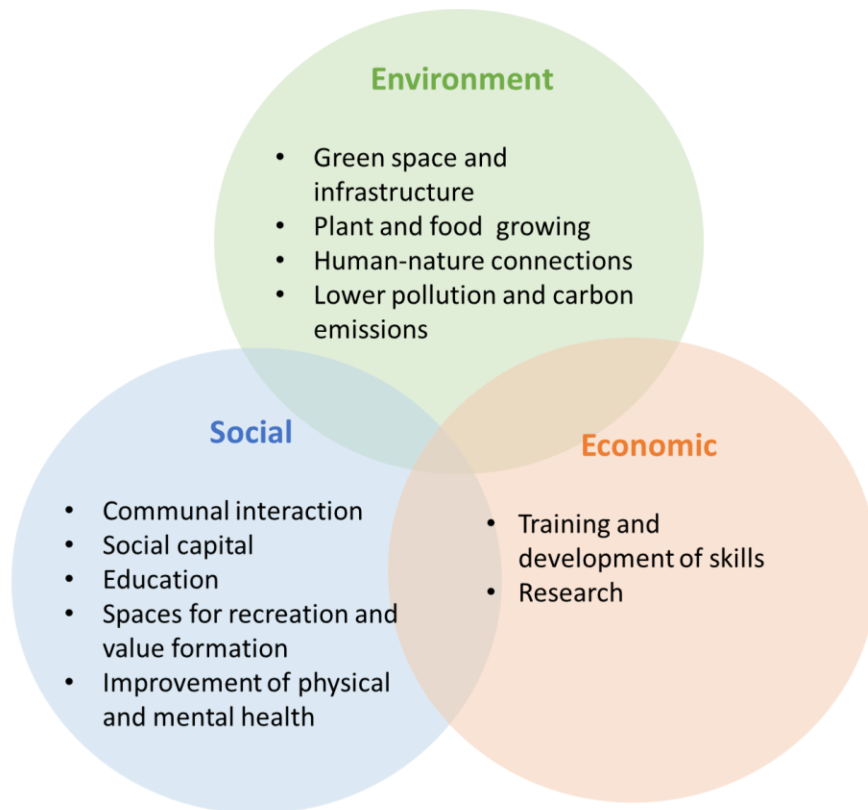

Figure 1. *The contribution of UA to the three dimensions of Sustainable Development. Based on Horst, McClintock & Hoey, 2017; Galt, Gray & Hurley, 2014; Lang, 2014; Milbourne, 2012; Carey, 2013; MacKenzie, 2016; Ernwein, 2014; Soga, Cox, Yamaura, Gaston, Kurisu & Hanaki, 2007; Ferris, Norman & Sempik, 2001 and Holland, 2004*

Following the maxim "think globally, act locally", the place-based action of community gardening is responding to a much greater issue of global concerns and the context of Sustainable Development. The Brundtland Report "Our Common Future" stresses the fact that urban food cultivation is an essential means to provide access to healthy and environmentally friendly food sources to the urban poor (WCED, 1987, p.254). Furthermore, the Agenda 21 (LA21), produced at the Rio Earth Summit 1992, contains a set of policies for the implementation of local sustainability, emphasizing that community-based action embodies the spirit of sustainability (Holland, 2004). The Agenda 21 points out the importance of a local approach to policy integration, "because so many of the problems and solutions being addressed by Agenda 21 have their roots in local activities" (Sitarz,1993, chapter 29). A similar approach is applied on the national level in the UK. The 2002 Curry Report of the Policy Commission on the Future of Farming

and Food views community-led, place-based initiatives as an essential driver for sustainable and equitable food production at the national level (Carey, 2013).

Indeed, existing academic literature shows a strong agreement on the claim that urban community gardening contributes to more sustainable and fair cities, combining elements of environmental protection and social justice through the provision of healthy food sources, education and community development activities (Holland, 2004; Stocker & Barnett, 1998). However, as Ernwein (2014) argues, "community gardens do not exist outside society". They are, therefore "embedded within the micro-politics of the city" (p.77). Scholars have begun to raise concerns about class-based disparities in UA, highlighting issues around unequal access to community gardening initiatives (Poulsen, 2017). According to Ghose & Pettygrove (2014), community gardens tend to reinforce neoliberal structures, as participation in such movements is not equally accessible among citizens. Local food production in urban areas surely does not solve the issue of food injustice by itself. What matters are questions around distribution and access (Horst et al., 2017). A study conducted by Reynolds (2015) shows that class-based inequalities are being reinforced in New York's urban farming initiatives, which are dominated by white, middle- and upper-class citizens. The exclusion of a wider range of actors is mainly of structural nature, as practitioners of the movement seek to create a socially just and sustainable environment, striving to include different local communities (Reynolds, 2015; Poulsen, 2017).

Considering the potential of community gardening initiatives to play a part in coping with urban food poverty and to establish a sustainable and healthy food culture, Ferguson & Lovett (2015) claim that advocates should aim for strategies that "build institutional capacity in ways that enable systematic efforts to expand meaningful diversity" (p.16). Despite the challenges urban community gardening is facing concerning social inclusion, advocates and practitioners are positive that community gardening could be an essential driver for the creation of a socially just system. In fact, it can "produce more than food. But for this to occur, some very critical and challenging realities need to be acknowledged and addressed" (Reynolds, 2015, p.255).

Knowledge Gap

Academic literature focuses more on the benefits of community gardening initiatives rather than the underlying dynamic of their establishment. While being portrayed as unproblematic and benevolent, little is known about how effective these initiatives are in establishing a just and sustainable food culture (Tornaghi, 2014). According to Tornaghi (2014), "we need a geography of UA which goes beyond the naive and unproblematic representation of urban food production practices, able to expose the socio-environmental exclusionary dynamics which are embedded into them" (p.561). Indeed, little research

exists on how grassroots networks such as community gardens could address the structural challenges of participation and how they can create a socially inclusive space (Poulsen, 2017; Ferguson & Lovett, 2015).

Local reports on food poverty and deprivation in Oxford stress the need to find out what can be done at the local level to increase access to affordable and nutritious food supply and to support more sustainable and healthy diets (Hansford & Friedmann, 2015; Bright et al., 2015). The "Feeding the Gaps" report mentions OxGrow and Hogacre Common as potential drivers to combat urban food poverty in the form of promoting education and skill development, a sustainable food culture and community cohesion (Lalor, 2014). The question remains in what ways this potential can be explored.

In sum, there is a need for a more nuanced evaluation on how community gardening can help to overcome food injustice (Horst et al., 2017; Pearson, Pearson & Pearson, 2010; Tornaghi, 2014). This type of inquiry can expose the role of UA in overcoming localized urban problems (Tornaghi, 2014).

Figure 2. *Impressions from the open gardening sessions and workshops at OxGrow. Source: Author's own*

Research objective and Research Questions

The research objective is to understand the practices and structures shaping participation in community gardening initiatives. This evaluation is based on Social Practice Theory, focusing on the elements of practices rather than individual agents. Practices identified to be related to community gardening, such as gardening, food consumption, leisure activities and political activism are given special attention. Based on the research outcomes, recommendations are given on how OxGrow can establish links to communities and actors from a wider range of socio-economic and ethnic backgrounds. Citizens living in low income and food poor areas, as well as different ethnicities, are included in the study.

The research objective translates into the following research questions:

1. How can Social Practice Theory be applied to the case of community gardening in Oxford?

2. How do practices related to community gardening of carriers and people living in low-income and food poor neighbourhoods compare?
   a) What are the practices of carriers related to community gardening?
   b) What are the practices of people living in low-income and food poor neighbourhoods related to community gardening?
   c) How do these practices combine?

3. What pathways can be established for community gardening practices to diffuse and travel to low-income and food poor neighbourhoods?

Research framework

The following research framework (Figure 2) illustrates the steps undertaken to answer the research questions and to achieve the research objective.

First, a review of the literature on relevant theoretical frameworks and concepts was conducted. This included literature on UA and participation as well as Social Practice Theory (a). The resulting subjects were translated into a conceptual and analytical framework (b), that were applied to the case study (c). Finally, recommendations based on the findings of the previous steps are given to OxGrow and the wider UA network. The findings on how elements of practice combine furthermore add to existing scientific literature on this topic (d).

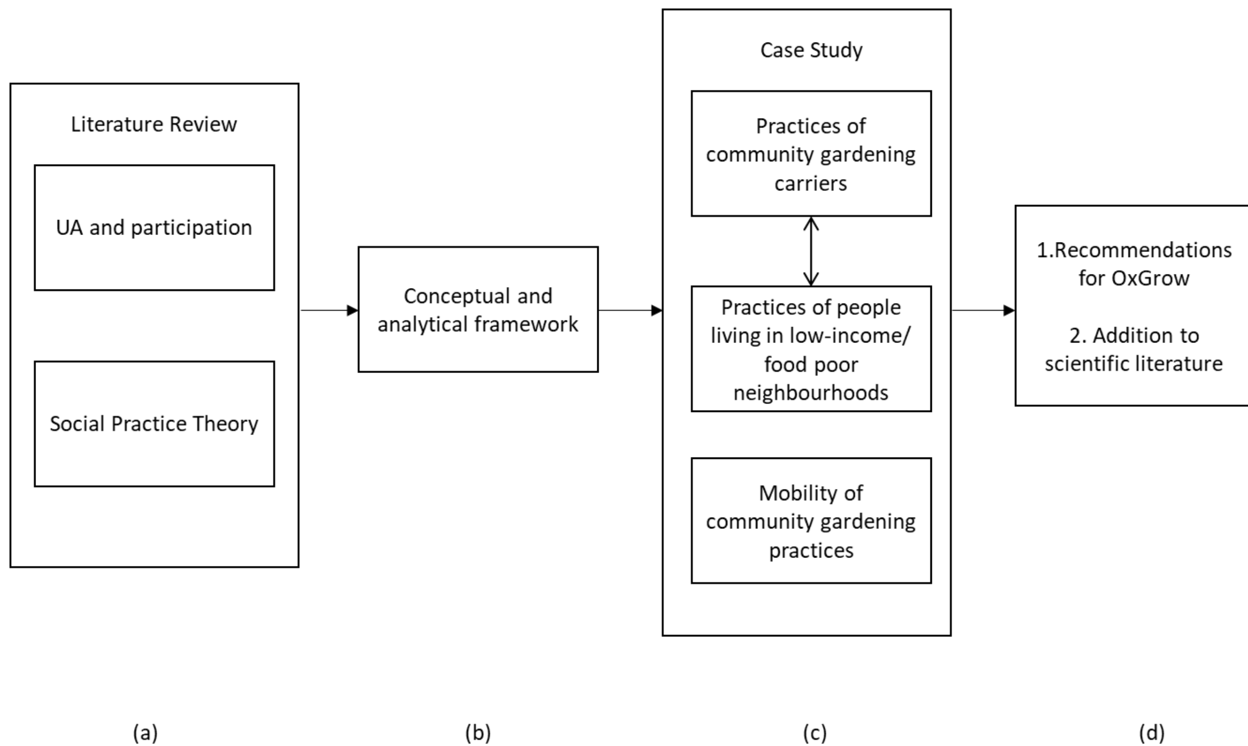

Figure 3. *Research Framework*

Societal and scientific relevance

A significant number of Oxford's citizens are deprived of access to environmentally friendly and healthy food sources (Hansford & Friedmann, 2015; Bright et al., 2015, Lalor, 2014). It is the same group of citizens that are not involved with OxGrow. UA organisations appear to understand the lack of diverse representation; however, the problem is far from being solved (Horst et al., 2017). Scholars fear that community gardening initiatives may "simply serve to placate the privileged, leading to a two-tiered food system in which the non-privileged must cope with the problems created by the industrial food system" (Poulsen, 2017, p.137). There is a strong need to find ways to engage a wide range of social actors since issues around food justice are at the core of environmental degradation and health challenges (Food Ethics Council, 2010).

While Oxford food banks redistribute canned and fresh groceries to 45 organisations working with people living under food poverty, there is a need to employ a more holistic, wider approach on food assistance that goes beyond "filling the bellies" and addresses educational and cultural dimensions of food consumption. A necessary step to conquer "underlying structural causes for the growth of food poverty" (Lalor, 2014; Cooper & Dumpleton, 2013, p.3).

Readers guide

The structure of this thesis is arranged as follows: By explaining the main concepts and the central theory of social practices, the conceptual framework is presented. Furthermore, an explanation of how the theory can be applied to the research project is given. The methods chapter lays out the analytical framework, including operationalization, research strategy and data analysis. These two sections are based on literature review and answer the question of how Social Practice Theory can be applied to the case of community gardening (Research Question 1).

The next section presents the results of the case study in Oxford (Research Questions 2 and 3), while the following discussion links the results back to the theoretical framework and provides practical implications, a reflection on limitations as well as implications for further research. A final conclusion summarises the findings of this research.

Theory and concepts

Central to the research objective is to unpack the practices and structures shaping participation in OxGrow. Therefore, the research is based on the application of Social Practice Theory, which goes beyond the perspective of rational choice and individual agency (Shove, 2010). It provides a theoretical and methodological approach which allows for understanding agency as well as the conditions behind agency, since "practitioners are neither overestimated strong social actors or underestimated victims of social conditions" (Halkier, 2009).

To provide a more elaborated insight into the research perspective, the main concepts will be introduced first. This includes community gardening as a type of UA as well as grassroots innovation movements and their issue of diverse participation. Afterwards, the theoretical approach will be explained and applied to the key concepts of the research framework.

Main concepts

Urban community gardens, characterized by small-scale, place-based networks and often made from grassland, wasteland or abandoned public sites, are "open spaces which are managed and operated by members of the local community in which food or flowers are cultivated" (Poulsen, 2017; Stocker & Barnett, 1998; Guitart et al., 2012, p.364). They are categorized as a type of **urban agriculture**, which is defined as "the growing, processing, and distribution of food and other products through intensive plant cultivation and animal husbandry in and around cities" (Tornaghi, 2014; Urban Agriculture Committee of the Community Food Security Coalition, 2003, p.3). This research focuses on a type of community garden

that is characterized by free membership, emphasis on fully communal exercises and community development (OxGrow, 2018a).

The activities taking place in a community garden link with themes of inclusion and participation (Ernwein, 2014; Galt et al., 2014). It contributes to the development of a community in that it provides a basis for members to work together and develop skills on common projects. The term '**community**' is applied to describe social groups that create conditions of coming together, communicate and share a common space (Stocker & Barnett, 1998; Aiken, 2015). However, this concept is criticized to portray an idealization of perceived features of tradition, a common history, shared stories, authority, loyalty, common actions and common perspectives on what is good. The created sense of identity contains the risk to create an environment hostile to social differences and integration. Stocker & Barnett (1998) therefore suggest taking a different perspective, claiming that "the concept of community can be reworked to mean a relationship based on affinity rather than identity: one which incorporates difference and diversity" (p.183). Aiken (2017) characterizes communities as grassroots innovation networks that try to counter environmental and social injustice by finding a solution that contains local interests and shared values of those involved. Therefore, communities are regarded as not homogenous, responding to local influences and conditions (Holland, 2004). This is a relevant remark since the research focuses on uniting citizen groups with different socio-economic and cultural backgrounds.

Subject to this research is the social and geographical disparities that exist in the participation of community gardening and in the access to healthy and environmentally friendly food sources. The concept of **food justice** highlights these disparities and how they are reinforced by the dominant food system as well as the alternative food movements (Horst et al., 2017). Similar to the Food and Agriculture Organisation of the United Nations (FAO), The Institute for Agriculture and Trade Policy (2012) defines food justice as "the right of communities everywhere to produce, process, distribute, access, and eat good food regardless of race, class, gender, ethnicity, citizenship, ability, religion or community". This definition points out the diverse ways in which socioeconomically disadvantaged groups are affected and stresses the need to focus on procedural and distributive justice as well as structural factors (Horst et al., 2017; Golay, 2009).

Social inclusion is defined as "the process of improving the terms of participation in society for people who are disadvantaged on the basis of age, sex, disability, race, ethnicity, origin, religion, or economic or other status, through enhanced opportunities, access to resources, voice and respect for rights" (United Nations Department of Economic and Social Affairs, 2016). **Participation** is a means to realize social inclusion. Tikare, Youssef, Donnely-Roark & Shah (2001) conceptualize participation as "the process

through which stakeholders influence and share control over priority setting, policy-making, resource allocations and access to public goods and services" (p.3). This process can range from plain membership in an organization to a more active role in decision-making (Social Capital Research & Training, 2018).

Due to their bottom-up character, their contribution to solutions for Sustainable Development, and their network-based form of organisation, community gardens can be classified as part of **grassroots innovations and transitions movements** (Feola & Nunes, 2014). Grassroots innovations are known for "challenging the status quo and promote new forms of organization of social and economic life (…), and alternative systems of provisions (such as local food systems and community energy)" (Feola & Nunes, 2014, p.233). The social innovation produced is characterized by practices responding to human needs, promoting participation and increasing access to resources (Moulaert, Martinelli, Swyngedouw & Gonzalez, 2005; Feola & Nunes, 2014). Indeed, research points out how such grassroots networks are an increasingly meaningful source for the societal transition to sustainability (Ferguson & Lovell, 2015).

Social Practice Theory

The dominant ABC paradigm, in which A stands for attitudes, B for behaviour and C for choice, takes the individual as the unit of enquiry (Shove, 2010). This approach postulates that the responsibility to adopt a sustainable lifestyle lies with the rational choices taken by actors. Hence, environmental degradation is the result of individual action and agency. This stance does not take into account the complex and interconnected nature of the environmental damage and social injustice, which makes it difficult to establish causal relationships. As a result, arbitrary lists of drivers and barriers guide policy initiatives and the steering of individual behaviour. Furthermore, the ABC perspective does not allow for any considerations about how social needs and aspirations identified as driving forces come about (Shove, 2010).

There is a growing need for a more holistic approach considering the interrelated character of sustainability. As Shove & Walker (2007) suggest, models of transition management are well applicable to solving complex issues of environmental degradation and social injustice. This perspective stresses the coevolution of social and technical dimensions, aiming to analyse and understand these socio-technical systems and their dynamics. Consumer behaviour is located within rather than outside the system since it highlights that daily life choices interact with infrastructures and systems of provision (Shove & Walker, 2007). Social Practice Theory is located within the sphere of transition management approaches and is thus increasingly applied in research areas dealing with environmental degradation and sustainability (Warde, 2014). The fundamental features of everyday human life such as sociality and "knowledge,

meaning, human activity, science, power, language, social institutions and human transformation" are understood through social practices (Nicolini & Monteiro, 2017; Schatzki, 2001, p.1).

In Social Practice Theory, practices are taken as the central unit of analysis, while individuals are perceived as their carriers (Shove, Pantzar & Watson, 2012). A practice is defined as "a routinised type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge". A practice is thus understood as a "routinized way in which bodies are moved, objects are handled, subjects are treated, things are described, and the world is understood" (Reckwitz, 2002, pp.249-250). Theories of practice have traditionally focused on merely cultural aspects, such as shared norms, meanings, understandings and practical purposes. More recently, material conditions are added to the framework. Not every actor has the material capacity to engage in every possible practice, nor are these possibilities to engage equally distributed. Time, material resources, access and expertise are therefore crucial factors to consider (Shove et al., 2012). Personal, material and political architectures shape each other recursively in socio-technical systems and create a dynamic that is "neither the conscious, voluntary purpose of human actors nor the determining force of given social structures" (Shove et al., 2012, p.3).

Shove et al. (2012) identify three elements of social practices: materials, competences and meanings (Figure 3). A practice is only possible to exist, to be recreated and to circulate when all three elements occur. First, **materials**, including objects, tools and infrastructure, are analysed by their availability and affordability. Their physical allocation hence depends on systems of provision and distribution. Second, the element of **competences** circulates in a characteristically different manner. For any individual to become a carrier of practice, the experiences and the process of building up competence is essential. The question of how these elements travel goes beyond face-to-face interactions and the idea of sending and receiving. Rather, concepts of abstraction and reversal are applied in describing this process. As Deuten (2003) explains, the focus is in "what has to be done to make knowledge moveable (decontextualization and packaging), to let it move (infrastructure) and to make it work elsewhere (recontextualization, standardization)" (p.18). Competence and know-how can only reach places in which practitioners are open to receive it, based on prior experiences and cultural dynamics. In other words, potential practice carriers need to be familiar with its characteristics and conditions. Furthermore, the codification of relevant knowledge forms the basis of how the recruitment of a new practice is organised, what potential carriers already do, what they learn and how this new knowledge is reproduced and transformed. Hence, the concept of 'transferable' skills (which can be connected to prior knowledge and competences) is central. Lastly, the element of **meaning** indicates a cultural association with the practice and aims to

understand how meanings and images circulate and move. Concepts related to the practice in question have to be already existent in cultural associations of communities. In other words, meaning is associated with interpretations and associations that a group of people shares. In order for the practice to have roots in cultural associations, it has to already exist in "popular imagination" and needs to include "recognizable qualities born of prior practice-based associations" (Shove et al., 2012, p.53). The element of meaning is also related to the status of practice carriers and the understanding of how social and cultural hierarchies are created and sustained. As Shove et al. (2012) explains: "By participating in some practices but not in others, individuals locate themselves within society and in doing so simultaneously reproduce specific schemes and structures of meaning and order" (p.54). This perspective focuses on the positioning of the practice carriers within the social order and evaluates how practices relate to certain groups of people with different socioeconomic or ethnic backgrounds. These meanings are subject to the dynamic process of this association; thus, they change over time (Shove et al., 2012).

Furthermore, practices condition each other and form bundles: "loose-knit patterns" based on co-location and co-existence of distinctive practices. Although each involves different combinations of materials, competences and meaning, practices may be bundled together by shared associations of one or more of these three elements, including spatial and technological arrangements (Shove et al., 2012).

Social Practice Theory also highlights questions of access, space and the role of social networks. If any human being can undertake a specific practice strongly depends on financial and material resources, expertise, physical ability, time and social connections. This generates "highly uneven landscapes of opportunity and vastly unequal patterns of access" (Ghose & Pettygrove, 2014; Shove et al., 2012, p.132). Hence, considerations around social and economic power structures as well as issues of material inequality are not absent from this analysis. Actors who have the material means and opportunities to participate in valued social practices find themselves in a privileged position as they are the ones shaping and developing the elements of such practice. Those who are socially excluded consequently lack the means to meaningfully participate. Therefore, Shove et al. (2012) argue that the combination and diffusion of social practices are rooted in existing inequalities, which then reinforce patterns in future developments. As the authors state: "Our account is similar in locating sources of power not (only) in the resources and capacities of individual actors but in the circuits of reproduction through which elements and practices are brought together and by means of which they are pulled apart." (2012, p.136). This inequality is furthermore represented in social channels and the pathways they establish for the recruitment of practitioners as well as learning and sharing throughout different communities. Ideally, these channels reach the domain of those potential carriers currently excluded (Shove et al., 2012)

Conceptualized by Shove et al. (2012), space is a resource or a representation of a geographical location. Although not every practitioner has access to practice space, elements of practices travel. Practices cannot reach every geographical domain, and their travel journeys are limited by the three elements of materials, competences and meanings as well as social ties. Citizens that are not part of the social network in question, may, therefore, lack the means and capacities to become carriers of a certain practice (Shove et al., 2012).

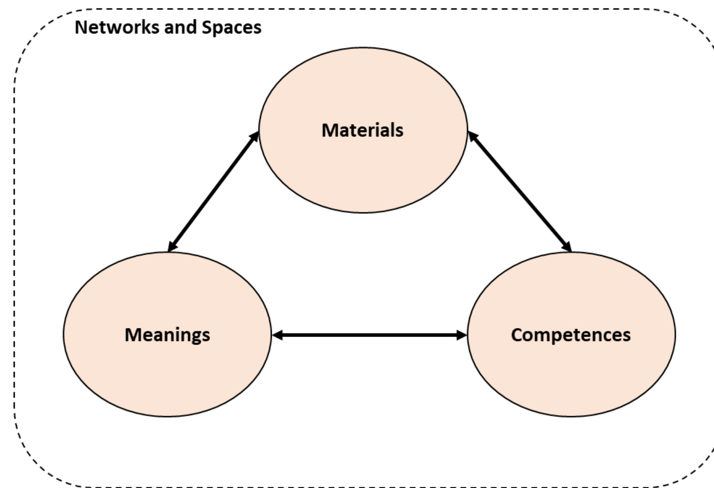

Figure 4. *The three elements for practices to be recruited, reproduced and diffused. Influenced by networks and spaces*

Application to the research project

Social practice theory allows studying the issue of social inclusion in the OxGrow community from a perspective that goes beyond a rational choice paradigm. It considers social and cultural dimensions, as well as the fact that actors’ opportunities of participation are determined by political and economic structures. Urban community gardening will be treated as a category of practice and this research aims to establish whether and how this practice can move and diffuse to Oxford’s low income and food poor areas.

The practice of community gardening and related practice bundles will be analysed with the help of the three elements of materials, meanings and competences. This allows looking at the structural conditions that shape the capacity of inclusion as well as the meanings and competences associated with community gardening. Since some of the neighbourhoods studied are located outside the city centre, the question of accessibility and space is another central theme in the research. People living outside the centre might not have the physical capacities to access OxGrow. For the community gardening practices to reach low-income areas around Hogacre Common and further geographical areas, OxGrow has to communicate them in a wider network. Furthermore, they have to fit into infrastructure as well as local meanings and

competences in the neighbourhoods studied. OxGrow can act as a network hub through which community gardening practices may travel to potential carriers.

Methods

Operationalisation

The research explored the social practices and their elements related to community gardening in Oxford. Therefore, the unit of analysis is gardening as a social practice to which the three elements for practices to be recruited, reproduced and diffused were applied (Table 1).

	Materials	Competences	Meanings
Gardening practices	• Availability and affordability of materials and tools • Availability and affordability of practice space • Time resoures	• Gardening skills • Knowledge on planting and harvesting food and flowers	• Shared associatons and interpretations of the practice • Level of implementation • Purpose of gardening • Perceived benefits from gardening (e.g. physical health, mental health, social connection, human-nature connection)

Table 1. *Operationalisation of gardening practices*

As Lawson (2005) points out, community gardening can be associated with different meanings and combines other practices related to "environmental ethics, social activism and personal expression" (p.301). The multifaceted nature of gardening was therefore examined by taking its intersection with other practice bundles into account (Figure 4).

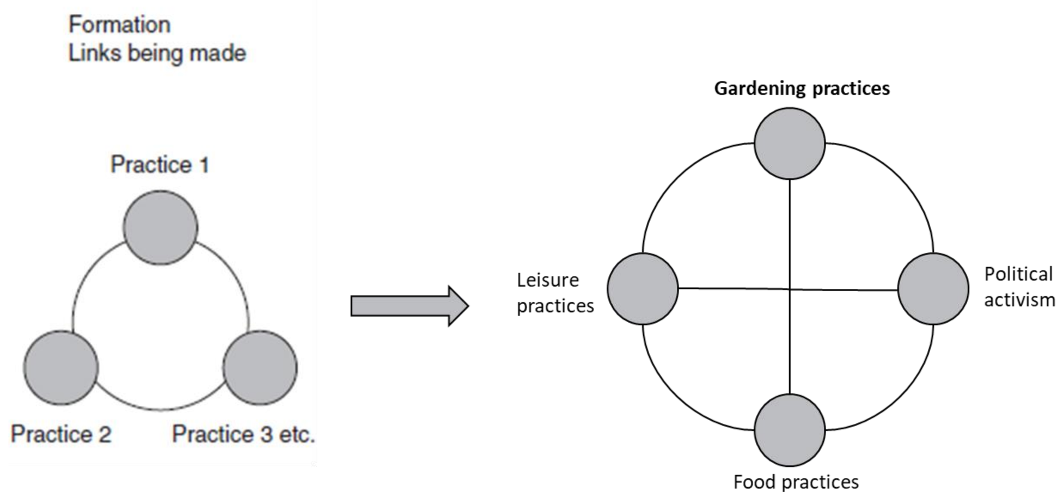

Figure 5. *Illustration of connections within practice bundles by Shove et al. (2012, p. 83) applied to community gardening practices*

The final research question aims to evaluate the mobility of practices. Based on the claim expressed in the theoretical framework, the question of how community gardening practices travel was investigated by looking into the variables of networks and spaces (Table 2).

Networks		– Organisational structure of OxGrow – Actors and organisations facilitating the practice – Movements of involved actors and organisations – Level of intention to move practice – Online/Offline platforms
Spaces	1. Geographical	– Geographical spaces in which social networks operate – Relationship between spaces (Centralised vs. decentralised) – Spatial boundaries
	2. Social	– Social spaces in which networks operate – Relationship between spaces (Centralised vs. decentralised) – Relationship between neighbourhood communties

Table 2. *Operationalisation to determine the mobility of gardening practices*

The networks variable was explored by stating questions around the actors and organisations involved in community gardening in Oxford and how they are related to each other. Special attention was given to the organisational structure and capacities of OxGrow, to explore how outreach and projects can be organised. This provided an indication of how far OxGrow is the central organisation to spread the practice and reveals other potential social channels the community garden could connect with. Movement of actors and the level of intentionality to spread the practice provided an understanding of the current strategy central carriers are applying to diffuse the practice and if this diffusion happens through an intentional plan or everyday social interactions between actors and community members. Furthermore, it was observed how knowledge is shared and practices are communicated, as this could happen through the online publishing of materials or through the movement of people or projects. This is connected to the geographical and social dimension of the spaces variable, as it was asked in how far spaces matter, through which spaces the practice travels, how these spaces are connected and what their boundaries are. Space does not necessarily have to be determined by a physical location but can be defined by the connection of people across different neighbourhood communities.

Research strategy

Data were gathered from key informants, community gardening practitioners at OxGrow as well as people living in low-income and food poor areas, including respondents from different ethnic backgrounds.

Although food poverty is spread throughout the city (Lalor, 2014), the neighbourhoods Blackbird Leys and Rose Hill were strategically chosen, since they are identified as food deserts (Hansford & Friedmann, 2015; Bright et al., 2015). The area around OxGrow was included because inhabitants around the community garden are most likely to benefit from the project, living close to the space itself (Figure 6). The online database *acorn* (acorn.caci.co.uk) showed that one can find a high number of social housing and low-income households surrounding Hogacre Common.

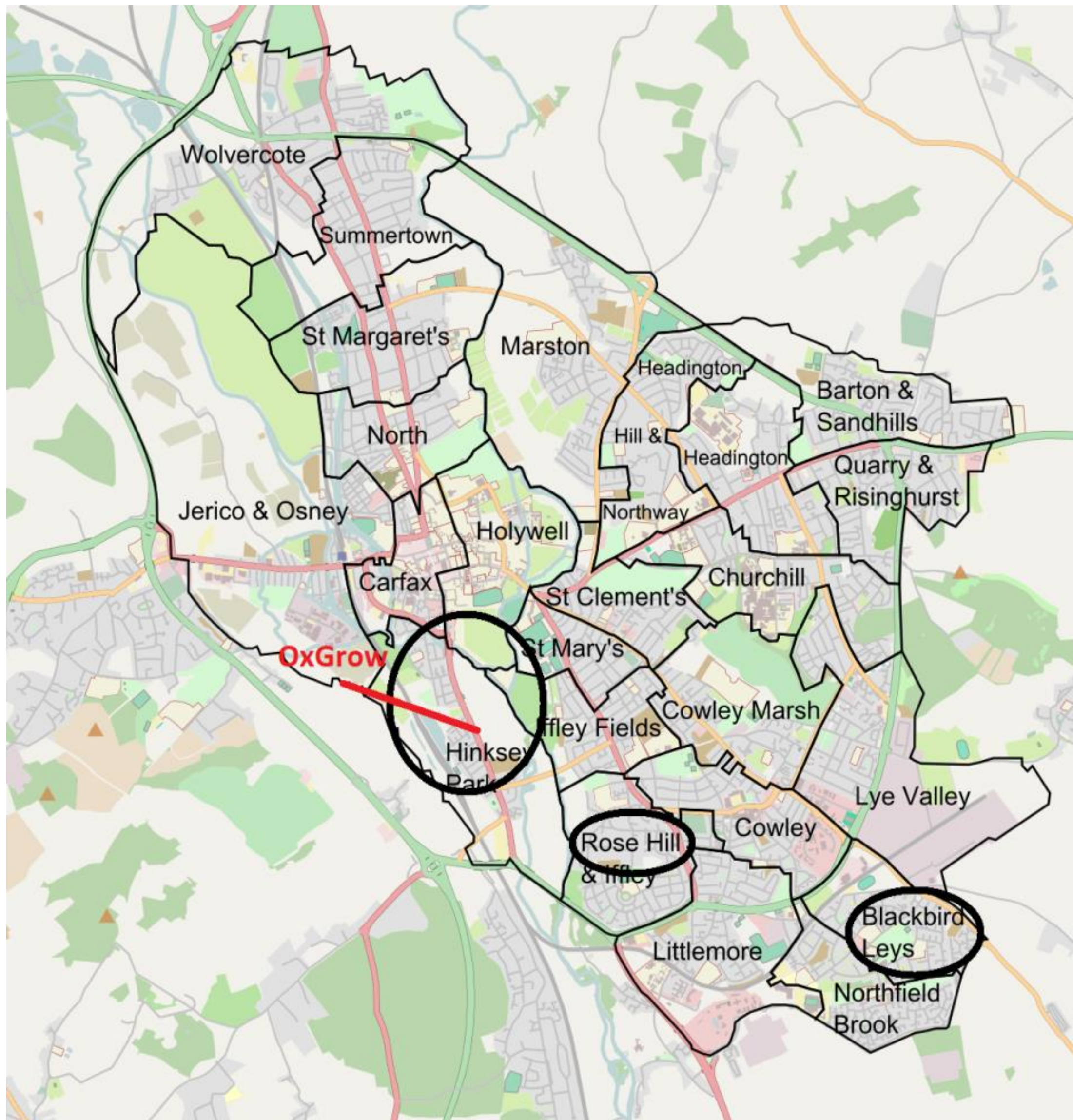

Figure 6. *Oxford's areas under study*

Data were collected using three different but complementary methods. Prior to the field work, desk research mapped out the latest theories and developments around community gardening and participation. The literature review provided information on the conceptualisation of urban community gardening and

its benefits. Literature on grassroots innovation movements and their struggle with diverse participation offered insight into the wider structural and societal problems that community gardens are facing. Furthermore, desk research built the basis for the theoretical framework and contributed to answering Research Question 1. Data sources for this process was general literature, such as online journal articles, newspaper articles and books as well as secondary data such as results from previous case studies and organisational reports.

Second, focus group discussions lasting 40 until 60 minutes were conducted to gain insight into the elements of social practices related to community gardening, aiming to provide answers for Research Questions 2 and 3 (Appendix B). Focus group research consists of small group discussions among a selected set of individuals. According to Gray (2014), this method is especially useful in the exploratory stage of the study when the respondents’ views and attitudes are yet unknown. It allows the researcher to explore attitudes, opinions and practices while generating group dynamics and discussion among different groups of society. The data source in this stage are individual people, ideally grouped into different homogenous samples. The commonalities within the participant group (age, social class, occupation, ethnicity etc.) help to generate positive group dynamics (Gray, 2014). The individual people selected were OxGrow participants as well as people living in low-income areas around the community garden and residents of Blackbird Leys. At OxGrow, the groups were divided into hosts (members who participate on a regular basis and host the open gardening sessions), volunteers (members who participate occasionally) and newcomers (people who participate for the first time). All these focus group discussions were conducted in the community garden during or after the open gardening sessions on Sundays. Furthermore, a group of respondents living in close by social housing arrangements of the charity organisation ACT! agreed to participate in a focus group. In Blackbird Leys, a focus group with the local allotment association was undertaken. The final group discussion was organised during a WOW (Women of the World) SPACE meeting hosted by the African Families in the UK, with mothers from African and South Asian countries (Table 3). All focus group discussions were recorded and transcribed.

Group	Participants	Date	Location
OxGrow Hosts	N=3	15.04.2018	OxGrow
OxGrow Hosts	N=3	22.04.2018	OxGrow
OxGrow Newcomers	N=3	06.05.2018	OxGrow
OxGrow Volunteers	N=4	20.05.2018	OxGrow
ACT!	N=8	10.05.2018	OxGrow
Kestrel Crescent Allotment Association	N=3	12.05.2018	Allotment Pavilion
WOW Space	N=6	18.05.2018	Blackbird Leys Community Centre

Table 3. *Focus Group Discussions*

To reach out to more actors affected by food poverty, structured interviews of 15 minutes were conducted at the Rose Hill Food Bank and the Community Emergency Food Bank at Saint Francis Church (Table 4). The structured interviews contained questions about gardening practices, food consumption and awareness of community gardening initiatives (Appendix C). As people just shortly stopped by to pick up their food supplies, the setting did not allow for longer and more in-depth conversations. One respondent at the Rose Hill Food Bank agreed to meet again for a semi-structured interview of 30 minutes. As the noisy setting and the hectic nature did not allow for recordings, notes were taken during the interviews and a detailed summary of the responses was formulated after. Also, it was perceived that respondents felt more comfortable without being recorded.

Foodbank	Respondents	Date	Location
Rose Hill Foodbank	N= 8	02.05.2018	Rose Hill Community Centre
Community Emergency Foodbank	N=5	25.05.2018	Saint Francis Church

Table 4. *Structured interviews at Foodbanks*

Finally, semi-structured key informant interviews were executed throughout the case study. This method was chosen as it allows the researcher to prepare for the interview while having the option to react to responses and to probe for more detailed explanations (Gray, 2014) Those were helpful to gain an overall and holistic picture of the issue under study and were conducted with community gardening advocates, policy-makers, researchers and consultants to answer Research Questions 2 and 3 (Table 5). Key informants were contacted via e-mail, telephone or direct conversations at events and meetings. Many were recommended by others. Policy-makers were helpful to provide insight into the issue of food poverty in Oxford and how urban farming initiatives and their potential to benefit the city are regarded on the policy-level. Rosie Butler from a local school and Jane Benyon from the Community Emergency Foodbank are in close contact with people living under food poverty and active in the attempt to create food justice throughout the city. Advocates at Hogacre Common and OxGrow were sharing their knowledge in the organisation’s attempt to become more socially inclusive. Doireann Lalor, Jane Neville and Andonis Marden were especially active in setting up campaigns and strategies aiming for a more diverse participation in the past. All key informant interviews were recorded and transcribed.

Key Informant	Date	Location
John Tanner, Labour Party, Councillor at Oxford City Council, Board Member for Climate Change and Cleaner Greener Oxford	19.04.2018	Private house
Rosie Butler, Assistant Community Operations Manager & Young Carers Lead at the Oxford Academy in Littlemore	24.04.2018	The Oxford Academy
Penelope Lea, Former OxGrow committee member and chair person	06.05.2018	OxGrow
Jane Benyon, Community Emergency Foodbank Director	08.05.2018	Saint Francis Church
Deborah Glass-Woodin, Hogacre Common Director	10.05.2018	Hogacre Common Pavilion
Doireann Lalor, Co-Founder of OxGrow, Author of the „Feeding the Gaps" report	14.05.2018	Private house
Jade Neville, Feeding the Gaps Project Coordinator, former OxGrow Community Coordinator, Good Food Oxford Consultant	22.05.2018	Skype
Andonis Marden, former OxGrow garden coordinator **Madeleine Ballard,** former OxGrow volunteer	24.05.2018	Skype

Table 5. *Key Informant Interviews*

The researcher attended OxGrow's open gardening sessions and workshops on a regular basis. Furthermore, to support the data collection, a research dairy was kept. Observations, thoughts and reflections were documented as the researcher joined activities to recruit people from the surrounding neighbourhood, such as the setup of a questionnaire and going from door to door together with a Hogacre Common member. In addition, impressions and information from informal conversations at the garden and at other social events as well as observations from the open gardening sessions at OxGrow were written down. As Gray (2014) argues, research diaries are a useful tool to provide a factual description of the research activities as well as remember thoughts, reflections and initial interpretations.

Data analysis

All collected data were transcribed, coded and analysed with the qualitative data analysis software NVIVO. Qualitative data analysis involves the "process of breaking data down into smaller units to reveal their characteristic elements and structure" with the aim to "interpret, understand and explain" (Gray, 2014, p.607). As the research largely follows an inductive and exploratory approach, theories were developed based on observations at the end of the process. However, some priori criteria were established based on the variables developed in the operationalisation process. Hence, such as the data collection, the data analysis was based on classifications around materials, competences and meanings of gardening

practices and practice bundles as well as questions around spaces and networks. Other criteria emerged throughout the process, such as sub-categories of "purpose of gardening" and "perceived benefits of gardening" (element of meaning). To understand the differences and similarities between community gardening practitioners and people living in low-income and food poor neighbourhoods, resulting categories of these two groups were compared and relationships were established (Research question 2). This step was necessary to understand how receivable excluded communities are for the practice of community gardening. A new NVIVO file was created to then understand the mobility of gardening practices by exploring structures, networks and spaces (Research Question 3).

Ethical considerations

Ethical concerns that were considered are anonymity, confidentiality and informed consent. To address those, the researcher informed the respondents prior to the data collection on which data will be collected and how they are used. Information such as the nature of the study, the research perspective and objective were also be clarified beforehand (Sanjari, Bahramnezhad, Fomani, Shoghi & Cheraghi, 2014). Due to the public character of focus group discussions, anonymity and confidentiality are constrained within this method (Gray, 2014).

Prior to the data collection, the respondents had to agree that the interviews and focus group discussions are recorded and that notes are taken by the researcher (Sanjari et al., 2014). All raw data are stored in a private computer and phone and are not made publicly available before publishing the report.

Results

Comparing gardening practices and practice bundles

Materials

Almost all respondents from OxGrow as well as from low-income and food poor areas indicated that they do not have any allotments, backyards or other practice space that they can use. Many also do not possess any gardening tools. Some use small areas, such as balconies and window sills to plant vegetables and herbs. Many OxGrow participants appreciated that the community garden offers practice space that they otherwise would not have access to.

The majority of the respondents living in low-income areas and food deserts live in flats and do not have a garden or balcony. Some said that they like to join their friends and family members that have gardens or allotments to grow and harvest fruit and vegetables from time to time. While having individual allotments

is financially and timewise not possible for most of the respondents living in the city's low-income areas, Oxford's community gardens are hard to reach for many. Respondents, therefore, indicated that they would like to join a community garden in their own neighbourhood. Only a minority of the respondents living in food poverty are situated in walking distance from the garden. Similar findings can be presented for OxGrow participants, who live in different parts of the city.

A lot of respondents that come to OxGrow are students, with many stating that they do not have enough time to grow things at home. Although many claim to have little time during the week, respondents enjoy coming to the garden on Sunday, as they would need a social outdoor activity anyhow. When asked about their time resources, many OxGrow respondents agreed that although one does have less time due to work and family, practices are often shaped by what people are willing to invest their energy in. As one volunteer at OxGrow argues:

"It is about how you value your own time. We plant the potatoes, care for them over months, harvest them, clean them, prepare them and that takes a lot of time. If you try to sell that to someone they will just say: "well, we can just go and buy them for 50 pence in the shop, it will be five minutes and I have eliminated the work". Time is a big part of making a shift to this kind of food growing"

Time was observed to be a significant factor for people living in low income and food poor areas not to adapt gardening practices. Especially respondents at Oxford's foodbanks stated that they have to go to work that only provides a low income, while also taking care of family and children. Although many of the respondents were interested in practising gardening, they felt like they could not engage in the practice because of lack of time. However, some inhabitants from Blackbird Leys and Rose Hill said that they would like to take the time to travel to OxGrow occasionally. As one mother of four children in Blackbird Leys explains:

"A community garden as you suggested is very well needed but again there is our commitment for the children and the home. But now that we know, it is an opportunity to make a plan, we can work around it (...) But Sunday is our family day, we go to church, we come back home, we relax, and it would take a lot for us to say yes we are coming!"

Competences

All respondents showed mixed backgrounds when it comes to gardening skills, including knowledge on how to grow and prepare local plants. A lot of respondents from OxGrow learned gardening through their parents and grandparents while growing up. Some joined volunteering programs in school, participated in other community gardens before or worked on farms while travelling. Others have very little experience or have never done gardening before. Hence, most of the OxGrow respondents were familiar with the conditions and possessed relevant knowledge as well as transferable skills. However, the notion that one

needs competences and prior knowledge to join a community garden is not shared among practice carriers. As one OxGrow host remembers:

One time I came to the garden and they were telling me to harvest kale, and I did not realise that you had to snip it. I was pulling it off the stalk so basically, I was destroying the kale plant. I was really embarrassed but the person [someone from OxGrow] was telling me that it is okay"

A volunteer that joined the garden for the first time explains her experience:

"I have literally zero experience, but everyone is being so helpful"

Transferable skills were also found to be present among the respondents living in low-income and food poor neighbourhoods. Respondents from the UK explained that they learned how to garden while helping their parents in the allotments and backyards. One respondent did his apprenticeship in gardening and landscape.

Especially respondents from African, Caribbean and South Asian countries said that they used to plant a lot of fruits and vegetables in their home countries before coming to the UK. However, while they are skilful gardeners, respondents with migration background lack the knowledge of what can be grown in the UK. As one respondent from Nigeria argues:

"We have a lot of experience because we grow to be gardeners in our home place. But here we do not really know what to grow, because of the different seasons. We do not know what is preferable for the soil in this place. The food that we are accustomed to grow, it would not flourish in this environment"

On the other side, a large number of UK residents living in low-income situations do not seem to receive education on food sources and food growing. In this case, gardening practices would be harder to recontextualize in areas identified as food deserts. Rosie Butler works in a school in which 54 per cent of the students is from a low-income background. She described her experience with the students during the gardening sessions at her school:

"Something that shocked me was that children do not understand that a potato was a vegetable. They think that cauliflower cheese is a vegetable […] They do not understand that some vegetables grow under the ground and that some grow on a plant. I do not think they necessarily understand where their food comes from"

Meaning

The practice of having allotments and growing edibles in the UK is rooted in the need for local food production during the Second World War. Nowadays, networks of allotments are still strongly present. The Oxford City Council is renting out plots all over the city, including low-income areas and food

deserts. From this perspective, community gardening is not disconnected from popular culture in the UK, and the only new feature it entails is the idea of sharing the plots with fluctuating community members. According to councillor John Tanner as well as respondents from the Kestrel Crescent Allotment Association, having an allotment is popular among retired male citizens from working as well as middle-class backgrounds, as they do not have a busy working schedule and usually do not have to look after children. Despite that image, key informants and respondents with allotments claimed that more and more women and young people get involved.

Indeed, the practice of gardening in a community context, as it happens at OxGrow, mainly attracts a crowd of young professionals and students. However, most indicated that they never really implemented gardening as a dominant practice. Just a few grow vegetables and herbs at home or show more interest in doing so. Nevertheless, for a large majority of OxGrow respondents, the practice of community gardening contains qualities that they can relate to and that exist in the popular imagination of the community. As the majority of the focus group respondents at OxGrow grew up with people planting food sources around them, they were already familiar with the concept to some extent. Some respondents grew up with joining their families and friends' gardening activities, others were never really interested in helping out family members in the garden. Many claim that the interest in planting flowers and edibles came later in life, if not just recently. Some respondents stated that they started coming to OxGrow because they have a friend who is active in the community garden. However, the majority of the students said that they do not know a lot of people who practice gardening or community gardening outside OxGrow, especially because of the lack of practice space and time. As one volunteer explained during a focus group discussion:

"As a student, there are quite a few things that you are removed from, you do not know about them. Things like plants and gardens…students do not have a big garden or anything. So people are less likely to express that sort of thing"

Just a few respondents were not familiar with the qualities of gardening practices before joining OxGrow, as nobody in their surrounding did practice it.

Apart from the respondents of the Blackbird Leys Allotment Association, most of the respondents living in low-income situations or food deserts do not practice gardening in their everyday lives. The majority, however, was familiar with the practice and stated that they would like to garden again. Such as many practice carriers at OxGrow, the majority grew up with parents or friends growing their own food. For respondents from tropical countries in the Carribean, Africa and South Asia, the practice of growing edibles is deeply rooted in their cultures and therefore strongly present in the popular imagination. All of

the respondents with a migration background used to have gardens in their home countries. As one respondent from the organisation ACT! stated:

"My father was a farmer, I grew up in Africa. It is quite a common practice there. People always have gardens and eat their own vegetables. (...) When my parents moved to London they started a garden and they grew the vegetables that they could not get in the store but that they usually eat because they did not want to miss that food"

Just a few claimed that they would not enjoy gardening itself and therefore would not take on the practice.

In many of these aspects, the respondents living in food poverty or low-income areas compare with the respondents from OxGrow. However, all of the respondents living in food poverty were not familiar with the concept of community gardening and did not know about the community gardens in Oxford.

When asked about the purpose of gardening and the perceived benefits, respondents from both groups came up with similar themes. The image of gardening as a relaxing exercise with **physical and mental health benefits** seems to be popular among carriers of community gardening practices as well as those living in low-income and food poor neighbourhoods. For OxGrow respondents, gardening is perceived as a practice for stress relief and escape from work and city life. Many stated that working with the soil and watching the plants grow is a very satisfying experience. As one student hosting the open gardening sessions:

"It is really nice as students to come because it is so stressful in Oxford, and it got so many mental health problems. The counselling service is so overrun. Working in the garden, it gives you a lot of satisfaction"

Furthermore, for practice carriers at OxGrow, coming to the community garden is strongly associated with the idea of having a joint project, working with others and engaging in **social interaction** during leisure time. For a majority of the respondents, the practice of community gardening is about connecting to people that one would otherwise not meet and the exchange of skills and knowledge. Many have been new to Oxford and were looking for a social platform to meet people, others stated that they generally enjoy the *"community spirit"* that is otherwise harder to find in an urban context. As an OxGrow host explains:

"I prefer to garden here than at home. Definitely, I enjoy the shared experience"

A student that volunteers at OxGrow states:

"It is nice to get out of the bubble as well, studying in Oxford and just interacting with students can feel quite insular. Coming out here, being somewhere different and finding people outside the university. And there are different age groups as well which is really nice"

The image of **cultivating a healthy and sustainable food culture** is another purpose behind gardening dominant in the data collected. A majority of OxGrow respondents stated that they are happy to experience growing edibles and to learn more about food, where it is coming from and how it is grown. A common theme among the OxGrow respondents were plant-based diets and the concern about how food is produced. Many respondents were vegan and vegetarian and appreciate that OxGrow offers a platform to reconnect with local and organic food sources as well as to create knowledge of what is in season. Many did not know some of the fruits and vegetables that grow in the community garden and appreciate that the experience of coming to OxGrow expands their diet. As one OxGrow host explains:

"I did not really cook with purple sprouted broccoli before and I took that home and threw together some recipes. Or celeriac. I have never grown celeriac but I found out that I could make some french fries or mash out of them"

Furthermore, many are happy about the education and inspiration and state that the new knowledge obtained in the garden influences their cooking and eating patterns.

Similarly, the value **of social interaction** and **the development of food culture** were also images of community gardening perceived by the respondents living in low-income areas and food poverty, as people can learn from each other and share their gardening and food practices. After explaining the concept of community gardening, some respondents became enthusiastic about the thought of preparing fresh food sources that were planted and harvested together with others. Especially respondents from the global South would value the exchange of knowledge, as they could also bring the seeds they brought from their home countries and teach others about their food culture. Some claimed that community gardening practices will probably convince people to eat more healthy and fresh food. However, this was mainly the case for citizens that already carried the practice elements of competences and meaning related to community gardening. One housewife from Kenia stated:

"That is why I would like to get this opportunity, to discuss and to learn from each other. Some of the white British people, they know the food, they know the cooking styles. We like them to teach us"

Although many respondents living in food poverty and low-income neighbourhoods are familiar with gardening and perceive it as an enjoyable practice, they do not participate at OxGrow. This is partly due to the fact that they were not aware of the project and that they lack time resources, however, perceived social and cultural hierarchies, as well as the perception of leisure and free time, seems to play a crucial role.

Some respondents connected the practice of gardening with an upper and middle-class lifestyle. As one respondent at the Rose Hill Foodbank argued:

"It is sort of a middle-class thing to see the value of that. There are people who tend to be brought up with those things. They are more adventurous, and they got more time. The working class they live sort of hand to mouth. Spending time doing that [gardening] seems less productive. And the middle class is doing that because they are educated and see the value of it. As they say, fashions come and go"

Jane Benyon at the Oxford Community Emergency Foodbank tells a similar story while trying to find an explanation for the lack of diverse participation in community gardens:

"I think it is not experiencing this. I mean, obviously, you enjoy being outside and working in the fresh air. People are getting really hooked on growing things, and the pleasure that gives, and excitement, and the benefits of having fresh food. But people do not think it is for them. I think it is probably more a cultural issue"

Practice Bundles

The results illustrate that the practice of community gardening bundles with food practices as well as leisure activities. For OxGrow practitioners political activism also played a role.

During the focus group sessions, OxGrow respondents often related their gardening activities to their **food practices**. As, for example, many appreciated that the garden supports the cultivation of a healthy and sustainable food culture. The majority of the respondents stated that they enjoy cooking and that fresh food consumption is essential in their eating routines. Although many stated that they try to implement sustainable food consumption into their lives, they cannot financially afford organic and local food sources. Respondents from OxGrow tend to be experimental with food and regularly try out new recipes and food sources. Some pointed out that they enjoy the quality of the food grown in the garden over the groceries that one can get in the big supermarkets. As one host tells:

"It gives it [the food] a story and that is always important"

Another host explained how she perceives the quality of the food growing in the garden:

"Food in the garden is just different from what you can buy in the supermarket. When you buy kale in the supermarket and it comes in the bag, it is unappealing, and it will cook down. But the kale from here, I can pick it, then I go home and fry it and it is still crispy"

For other OxGrow respondents, however, the question of quality and diversity of food sources was not central. Many lack of time resources and good cooking facilities. Generally, students who attended the focus group sessions do not have proper kitchens available in their dorms and therefore eat in the college halls or consume simple and quick dishes.

Just as respondents from OxGrow, people living in food poverty or food deserts turned out to adapt very different habits and approaches when it comes to food practices. Generally, respondents from the global South are much more likely to cook daily with fresh fruit and vegetables and eat together with others. A healthy and diverse diet is central for them and their families, with the mothers cooking everything from scratch. Many discussed health issues such as obesity, diabetes and allergies coming with the consumption of processed food. Some respondents from African countries living in Blackbird Leys said they would travel to Cowley or even London to buy fresh and high-quality vegetables for low prices. Foodbanks are not only used to support low-income families with food provision but also to widen the knowledge on local groceries. Some respondents enjoy that possibility to try out fruit and vegetables that they otherwise would not have bought in the supermarket. As one mother from the African Families in the UK explains:

"One reason we use the foodbank is to help the families because sometimes they are on a low budget (…) People will not necessarily choose the most diverse diet for their children. So the foodbank definitely supplements and widens the variety. You get different sorts of food to try them. If I do not eat something, I would not spend my money on it at Tesco. But when it comes with the foodbank, I would try it"

Joining a community garden would have a similar purpose for some respondents from low-income and food poor areas. Enjoying the preparation and consumption of fresh fruit and vegetables, therefore, connects with the meaning element of community gardening as a practice that cultivates food culture, provides high-quality food sources and brings people together.

On the other hand, many people affected by poverty lack healthy and nutritious diets because they were missing an education in food and food culture. Some respondents from the food banks were not taught how to cook meals with a wide range of groceries. Many are suspicious of vegetables they have not seen before and show reluctantly to try them. According to Jane Benyon, who runs the Oxford Community Emergency Foodbank, people would not take home the less known food sources:

"The trouble is to the general public when you see celeriac, that would still be there. And then occasionally you get someone who surprises you and who is a cook or something, but most of them have not been educated with vegetables. Lately, there were sugar peas and they did not go away, and that is so easy to cook!"

Furthermore, many respondents from low income and food poor areas argued that they prefer something quick and low priced. As a middle-aged man situated close to OxGrow explains:

"*We are sort of budgeted on how much we can spend on our week to week basis. I just buy something from the microwave which is quick and easy. If I buy something fresh, it is really a treat. We are not really in the position where we have the budget, and with prices being so high for fruit and vegetables, I only live on pasta and rice"*

For those citizens, the elements of competences and meaning in gardening and its related food practices are missing. A value cannot be found in community gardens as cultivators of food culture when food consumption and preparation is regarded as a necessity and when fresh food sources are not part of cooking routines.

Furthermore, for a large number of respondents at OxGrow, the image of community gardening bundles with practices of political activism and environmental awareness. Many people encountered at Hogacre and OxGrow had a political motivation to join the community. During the focus group discussions, OxGrow respondents expressed the need to change the way we live, produce and consume. Some stated that they see their participation at OxGrow partly as a form of political expression. As one OxGrow volunteer argues:

"At Hogacre Common, the whole environment is a really great form of resistance even if it is not active protesting. It is a way of slightly disrupting the capitalist system"

Another volunteer pointed out the role of OxGrow for expressing this political activism:

"We are up against massive corporations, I do not know how much the individual person can actually change. Which is why this [OxGrow] is great, it brings people together, it is not just one person"

Doireann Lalor, co-founder of OxGrow, explained that part of her motivation to establish the community garden was her determination to be part in finding place-based solutions for climate change:

"I had kind of a climate awakening the year before we started it. I was getting passionate about climate change and trying to think about reorienting my life a bit (…) And so I decided that I wanted to be part of building positive solutions rather than trying to battle the big energy companies and all these other things that I feel we should get rid of. And decided that food was the area that seemed the most exciting"

Only a few OxGrow respondents indicated that sustainability issues were never a central concern in their lives.

The large majority of the respondents living in low-income areas and food poverty, on the other side, were not concerned with sustainability issues. Often, respondents were not knowledgeable on issues around environmental degradation. One respondent, for example, denied climate change. However, some claimed to feel close to nature and that they feel a responsibility to take care. For example, one respondent from a social housing arrangement close to OxGrow likes to pick up litter during his walks.

It could be perceived that carriers of the practice often come from an activist background, which makes them see the value in grassroots innovations such as OxGrow. This creates the image of community

gardens as a practice for those that have enough time and resources to engage in political activities. Community gardening then becomes an expression of the carriers' political views and attitudes. Respondents not engaging in sustainability issues might have more difficulties to identify with such an image.

Community gardening competes with other leisure activities. To look into how the practice can travel, inquiries into bundled leisure practices are required. Generally, leisure activities were often quite similar for both groups. Many enjoy being outside, walk through Oxford's parks and meadows and meet new people. One respondent from ACT! stated that he regularly walks and picks up fruits from trees and bushes. These are activities that are in one line with the image of community gardens as space for social interaction and health. All OxGrow respondents appreciated the fact that they could combine outdoor, exercise and social activities while being in the garden. However, the open gardening sessions compete with other Sunday practices, such as going to church or taking care of family and household. This is especially significant for those who lack time and resources. Many respondents at the foodbank perceived that they do not have any leisure time and that therefore they would not be able to come to the garden.

Pathways to make gardening practices travel

Organisational structure and network

OxGrow

OxGrow involves people from different backgrounds and age groups. Although the community garden seems very student-centric at the first glance, it turns out that many participants are locals and young professionals. Many respondents stated that the composition of people changes over time. Especially in the summer months, there are more families and locals present, as the Hogacre Common café also opens its doors every Sunday and attracts people who would otherwise not come. However, retired citizens are barely active in the garden.

Jade Neville was employed part-time for six months to promote the garden and reach out to other communities. The committee consists of three volunteers, that take on the position of chairperson, secretary and treasurer. Turn limits of one year are imposed on these positions, so that people in charge are rotating. Other than that, OxGrow relies on the efforts of a fluctuant number of volunteers, operating within a loose and non-hierarchical structure. This is partly because of the lack of financial resources and funds but also because of the informal character in the community garden. As Penelope Lea, former OxGrow chairperson, states:

"The main thing with OxGrow, and I wish others would invest more energy in this, is strengthening the structure. I think that is the main problem, the structure is not strong enough. That what makes it wonderful, too. It is very open, very loose and easy. But I think, if it was more formal we could take on some more projects"

Doireann Lalor argues that more formal structures would help OxGrow to take on larger projects, without disrupting the character of the community garden:

"It is possible to have completely non-hierarchical, completely volunteer-run thing that changes all the time, while having someone paid to do something specific. Not to be the big leader, but someone who respects that character and slots well into that while doing the tasks he or she has been paid to do so."

Deborah Glass-Woodin from Hogacre Common explains that there is a lack of ownership and that the initiative struggles with recruiting committed volunteers. As the non-hierarchical organisation lays out, most people do not take on any specific roles and responsibilities, resulting in the fact that people do not join the community on a regular basis:

"It is always difficult to get people to volunteer and to work or to join things. If it is something that seems open-ended and that seems that you are taking responsibility, it is very hard to get people to sign up (...) There is somehow a lack of ownership in this place by the wider community. Why does no one else feels that this belongs to them in a way that I feel that this belongs to us"

Network

OxGrow and Hogacre Common are embedded in a larger network of Oxford's urban farms, community gardens and organisations concerned with food growing and consumption around Oxford. The CAG network brings together these different groups by establishing links between them and organising social events. Other organisations present in the network are Barracks Lane community garden, Oxford city farm, FarmAbility (farming program for adults with autism and learning difficulties), Incredible Edible (urban gardening initiative that offers trainings and consultancy around food growing) as well as Feeding the Gaps (community-led initiative to tackle food poverty and food waste). Members can exchange knowledge, take on projects together and seek out for advice. As Penelope Lea explains the structure of the network:

"Through CAG, OxGrow has contacts. Most of the CAGs know who the other CAGs are. So they can get in contact in case they want to work together, and that does happen sometimes. But that is it. There is no formal partnership with anybody else, it is much more informal. If somebody gets in touch because they want to do something, then we try to come together"

According to Jade Neville, CAG has created collaborate groups, in which different initiatives with the same focal area come together. In this structure, OxGrow joins with other CAGs and non-CAGs that focus on gardening and food growing. Furthermore, Good Food Oxford supports several projects around food production and consumption around the city.

Level of intention to move practice

While Incredible Edible and Good Food Oxford reach out to different communities in the city, including those struggling with food poverty, community gardens such as OxGrow are more place-based. The community garden's intention and strategy to move the practice is restricted to its limited capacity and space specific character.

Approaches to circulate and move the practice of community gardening is to go from door to door and distribute flyers and leaflets in the surrounding neighbourhoods by mainly Hogacre Common volunteers. However, some more specific efforts have been made to include a wide range of people and communities. As Doireann Lalor explains, the intention to be highly inclusive was incorporated into the concept of OxGrow from the early beginning. As she explains her personal motivation to set up a community garden:

> *"I thought about getting involved in setting up a project that is much more open and accessible and has a much more educational aim to help people eat more sustainably and connect to food. We knew about inequalities in access to food and education, That was definitely something we were aware of (…) But we did not really have the resources to put together a proper strategy for how to do that"*

A project called the "global garden" followed. The idea was to plant and harvest edibles from different regions of the world together with people coming from tropical countries. Jade Neville was employed for six months to do specific work on community outreach, with the aim to increase engagement and participation by connecting with other local groups in Oxford and inviting them to the garden. While Andonis Mardin was active in the garden, he connected with local refugee programs, volunteered at their community dinners and tried to establish a connection between these two groups.

Furthermore, OxGrow is hosting a wide range of events in the garden, such as horticulture workshops and family days. However, these projects failed to include a wider range of people from different socioeconomic and ethnic backgrounds. Doireann Lalor gives a potential reason, as she thinks the global garden project would have been more successful if it would have been designed with the different communities right at the beginning, rather than engaging them in a later stage and sending out invitations. Other reasons mentioned by the key informants were lack of financial resources, time, specific strategies and a low number of committed "core" volunteers. According to Penelope Lea, OxGrow's loose structure

does not provide a strong basis to do more specific projects that target outreach to other communities. As the garden has much potential to benefit citizens that live in food poverty, it is already a big effort to "*keep the space going*".

Online and offline platforms

To share knowledge and communicate the practice, OxGrow uses different Online and Offline channels. A weekly newsletter is sent out to those that sign in either on the OxGrow website or during events. The newsletter contains, for example, information on events and workshops hosted by OxGrow, tasks that have to be done during the gardening sessions and recipes with food that grows in the garden. Although OxGrow has a website, it does not seem to be updated on a regular basis (An online calendar that is supposed to inform about weekly gardening sessions and other events has not been updated for 2018). Furthermore, OxGrow uses social media channels like Facebook to invite to events and post news and pictures. Some OxGrow members promote the garden on their individual Facebook, Instagram and Twitter channels.

Concerning offline platforms, OxGrow attends the annual Oxford University's freshers fair, in which different societies in the city aim to recruit new members. Hogacre Common's annual harvest festival and the café invites a wider range of people to the space, who otherwise would not have known about it. One volunteer at OxGrow stated that he got to know about the community by attending the harvest festival. Since then he joins occasionally for the gardening sessions. Posters and flyers are set up and distributed around the neighbourhood. Occasionally, volunteers go from door to door to promote certain events or the space in general.

As the results show, OxGrow communicates its practice throughout different channels and networks. However, these channels only seem to reach those people that are already privileged and familiar with the concept of urban farming, local food production and community gardening. The organisations most active in building up a network that includes citizens living in food poverty and food deserts are Incredible Edible and Good Food Oxford. In order to move the practice to potential carriers in low-income, food poor neighbourhoods, OxGrow has to establish stronger channels and connections to these communities.

Space

Geographical Space

The practice space is limited to the geographical area of Hogacre Common. To arrive at the community garden, one has to cross a railway bridge, which makes it inaccessible for disabled citizens. Although public transport is available, the garden is not easily accessible for people living in Blackbird Leys, Rose

Hill or other neighbourhoods located rather outside the city. Indeed, as many key informants and focus group respondents acknowledged, travelling all the way from another part of the city to the garden and the associated time and costs can be a reason for people not to come. This can especially affect families with small children, as they require more time and resources to plan and move. The majority of the key informants at Hogacre Common and OxGrow agreed that it would be more effective to reach out to the social housing communities close to the space.

As Jade Neville notes:

"One of the issues of community gardens…the ones that I know that are really successful, tend to be quite physically within the community. I know that people say that distance is not a problem, but I still think it's a barrier."

Respondents from focus groups in Blackbird Leys also stated that they would prefer to have such a project in their own neighbourhood, rather than travelling to OxGrow on a regular basis.

Furthermore, Hogacre Common is located off the beaten track, hidden behind a little path and a railway bridge. As Madeleine Ballard points out:

"It is a little bit of a random place. You would not pass it if you are not looking for it"

<u>*Social space*</u>

Practices travel across space from carrier to carrier through a social network. As the results previously presented, some respondents got to know about OxGrow through their friends. Many were familiar with the concept of gardening by knowing or growing up with other practice carriers. However, practice carriers of community gardening did not build up connections to the target group of people living in low-income and food poor areas.

Just as the geographical aspect of space, the social space is rather centralized and focused on OxGrow members and its urban farming network. As Deborah Glass-Woodin points out, communities and social spaces are often separated in Oxford, with not much interaction between them:

"I think part of the problem in Oxford is that we are all in isolation somehow. That we have small groups that do not cross over. For such a small place there is an extraordinary number of self-contained groups."

Hogacre Common rents out the space to other organisations for workshops and events. However, the communities using the space are already within the established network, such as People and Planet, Oxford Student Hub, Incredible Edible and Radical Roots.

Although there are no strong connections between the communities, Rosie Butler stressed the fact that there are strong cohesions within the communities themselves. As she tells from her own experience in Blackbird Leys and Littlemore:

"We all meet up and just check with each other, we just try to support each other as much as possible. For most people, the RX4 postcode is associated with bad behaviour and crime. But the sense of community is massive and when somebody really needs something, they all put together and they try to help."

However, it could be observed during the research that people in these different social spaces and communities wish for more interaction.

Taking this into account, the travelling journeys for gardening practices seem limited to reach people excluded from networks and spaces. The majority of the carriers do not move to low-income and food poor areas, hence, they do not carry the materials, competences and meaning required to other spaces. The movements occur are the door-to-door promotions, setting up of posters and distribution of flyers in the neighbourhood around Hogacre Common and University settings. The attempts in the past to reach out to low-income and food poor communities were mainly aiming to move the element of meaning, therefore, to make people aware of the concept of community gardening and its benefits and to invite them. Other than that, carriers stay within the boundaries of the geographical and social space. The interaction between the communities never went further than informal invitations. Offline platforms such as the weekly newsletter are able to travel to excluded networks and spaces and support the movement of meaning and competences (as it includes information about gardening sessions and recipes), however, people need to be aware of its existence and sign up for it. Hence, it only reaches those that were at least once in contact with the network and space.

Discussion

Designing appropriate interventions

Exploring the topic through a social practice lens allows for an in-depth analysis of why some people engage in certain practices and others do not while going beyond the ABC paradigm and its causal explanations. Therefore, this research aimed to explore disparities of participation in community gardens within the framework of Social Practice Theory. **Research Question 1 asked how the framework can be applied to the case of community gardening in Oxford**. Despite the benefits that such UA initiatives can bring to urban sustainability and food justice, scholars point out the issues around ethnic and class-based inequalities in participation and access to community gardens (Poulsen, 2017; Ghose & Pettygrove, 2014; Reynolds, 2015; Ernwein, 2014, Tornaghi, 2014). For grassroots innovations to contribute to a

meaningful transition towards sustainability, it is time to get to the bottom of questions around their exclusionary dynamics (Horst et al., 2017; Tornaghi, 2014). Strategies are required that enhance social inclusion and diverse participation by understanding the socio-technical systems in which community gardens and their (potential) practice carriers operate in. The three elements of practices to be recruited, reproduced and diffused were therefore applied to practices related to community gardening. The elements of materials, competences and meanings enabled the understanding of structural as well as social and cultural conditions of social inclusion and participation. Intersecting practice bundles, including food practices, leisure and political activism were taken into account to examine the multifaced nature of (community) gardening practices (Research Question 2). By furthermore looking into dynamics and establishments of networks and spaces for the practice to travel through semi-structured key informant interviews (Research Question 3), the application of Social Practice Theory allows for a more holistic comprehension of the problem.

To explore how receptive excluded communities are for the practice in question, **Research Question 2 asked for a comparison of practices related to gardening between carriers and people living in low-income areas and food poor neighbourhoods.** In contrast to practice carriers at OxGrow, systems of provisions and the availability and perception of free time limit respondents living in Blackbird Leys and Rose Hill to join OxGrow for the regular open gardening sessions. All respondents from the identified food deserts claimed that they were more likely to join a community garden if it would be in their own neighbourhood. These results support the assumption of Social Practice Theory that daily life choices are constrained by material structures. The question of geographical distance is however not applicable to those living in social housing arrangements close to OxGrow, for which the time factor and other missing elements might be more striking for the practice not to be recruited.

The element of competences was missing partly for respondents living in low-income areas and food deserts. Many practised gardening in the past (a few still do) and possess the skills and knowledge. However, Rosie Butler and Jane Banyon pointed out that people living in food poverty lack the knowledge of fresh food sources and how to grow them and therefore miss transferable skills. A similar diversity in the data could be identified among the OxGrow respondents. A significant number of practice carriers also did not possess competences and did not know how to garden before joining OxGrow.

The most striking differences could be found in the element of meaning. The practice of gardening is popular in the cultural imagination of all respondents, with the majority of both groups growing up with their families and friends gardening in their backyards and allotments. However, all respondents from low-income and food poor neighbourhoods were not aware of the concept of community gardening. After learning about OxGrow and how the initiative operates, some respondents connected that practice with a

middle-or upper-class lifestyle, arguing that they do not have the time and means to engage in such practice. As Shove et al. (2012) explain, the element of meaning is related to the social and cultural status of the practice carriers. By participating in some practices and not in others, practices related to certain groups with different socioeconomic and ethnic backgrounds (Shove et al., 2012). As the results suggest, the practice of community gardening in Oxford is associated with young practitioners (mainly students and young professionals without families), with a middle-or upper-class background and a certain degree of political activism.

Looking at these elements applied to the practice of gardening, it could be concluded that the element of meaning needs to be moved to excluded communities. While competences are also crucial for a practice to be recruited, reproduced and diffused, they are not necessarily required to join a community garden. However, the presence of transferable skills makes it more likely for the practice to travel and establish somewhere else. Concerning materials, it is more feasible for the respondents living close to OxGrow to become carriers, as they do not spend the time and costs to travel across the city.

However, this conclusion does not produce sufficient insight to design meaningful interventions. To understand the heart of the problem, Spurling & McMeekin (2015) as well as Shove (2015) state that one needs to grasp how practices co-evolve and how their elements are interlocked with other practices. Rather than focusing on the practice under study, "the focus shifts to recrafting those interlocking practices, such as how work and leisure are organised" (Spurling & McMeekin, 2015, p.96). From this perspective, it makes sense to look into the wider system of practice bundles rather than treating a practice as an isolated unit. Indeed, how much time someone is willing to invest in gardening depends on how the practice is understood as a valuable leisure activity. What level of transferable skills, knowledge and interest someone possesses is related to how much that person is in touch with a sustainable and healthy food culture and the consumption of fresh food sources. The extent to which someone identifies with the political character of such a grassroots initiative is connected to the person's environmental awareness and political expression.

At this point, one must stress the fact that OxGrow is not, and does not aim to be, a heterogenous community. The data collected expound that the community garden aims to create an environment open to social differences and integration. Not all practice carriers encountered in the garden were politically active or valued the preparation and consumption of fresh food sources. Many students at OxGrow, for example, did not possess proper cooking facilities in their college dorms. However, next to recognizing community gardening as a valuable leisure activity that includes social interaction, exercise and outdoor activities, all respondents at OxGrow attached importance to the education and skill-building that the

community garden offers regarding food culture and political awareness. This aspect of the meaning element was often missing among the respondents from low-income and food poor neighbourhoods.

In how far food practices are central for the initiative can be observed in its principles. OxGrow aims to create a food culture beneficial for people and the environment (OxGrow, 2018). As the Feeding the Gaps report claims, Oxford’s community gardens can indeed contribute to overcoming food poverty that includes the lack of prioritising a healthy and sustainable food culture (Lalor, 2014). The competences and meaning of food practices, therefore, interlock with the elements of gardening. Materials, competences and meanings to engage in food practices that include the preparation and consumption of fresh food sources were partly present among the respondents from low-income areas and food deserts. However, many stated that they mainly consume “beige food” or microwave meals out of comity as well as financial and practical reasons.

When comparing the two groups of respondents concerning leisure activities, people living in low-income situations and food poverty lack materials and meaning to relate to the practice of community gardening. Respondents argued that they do not have the time or live too far away from the garden. Considering the element of meaning, respondents were not aware of the concept of community gardening and quickly identified it as an activity for middle-and upper-class citizens with sufficient financial and time resources. Many leisure activities mentioned, however, interlock with elements of community gardening. Respondents mentioned outdoor and social activities, such as walks through the park or meeting friends in the pub as preferable leisure practices.

Lastly, the elements of materials, competences and meaning for the practice of political activism was mainly present among carriers of the community gardening practice. For many OxGrow practitioners, environmental degradation and social injustice that comes with the conventional food system was a motivation to join small-scale solutions such as community gardens. Apart from a few respondents living in low-income and food poor areas, the majority did not possess the time, knowledge nor cultural association to engage in such topics. Figure 6 illustrates how the practices are bundled together by shared associations between the practice elements.

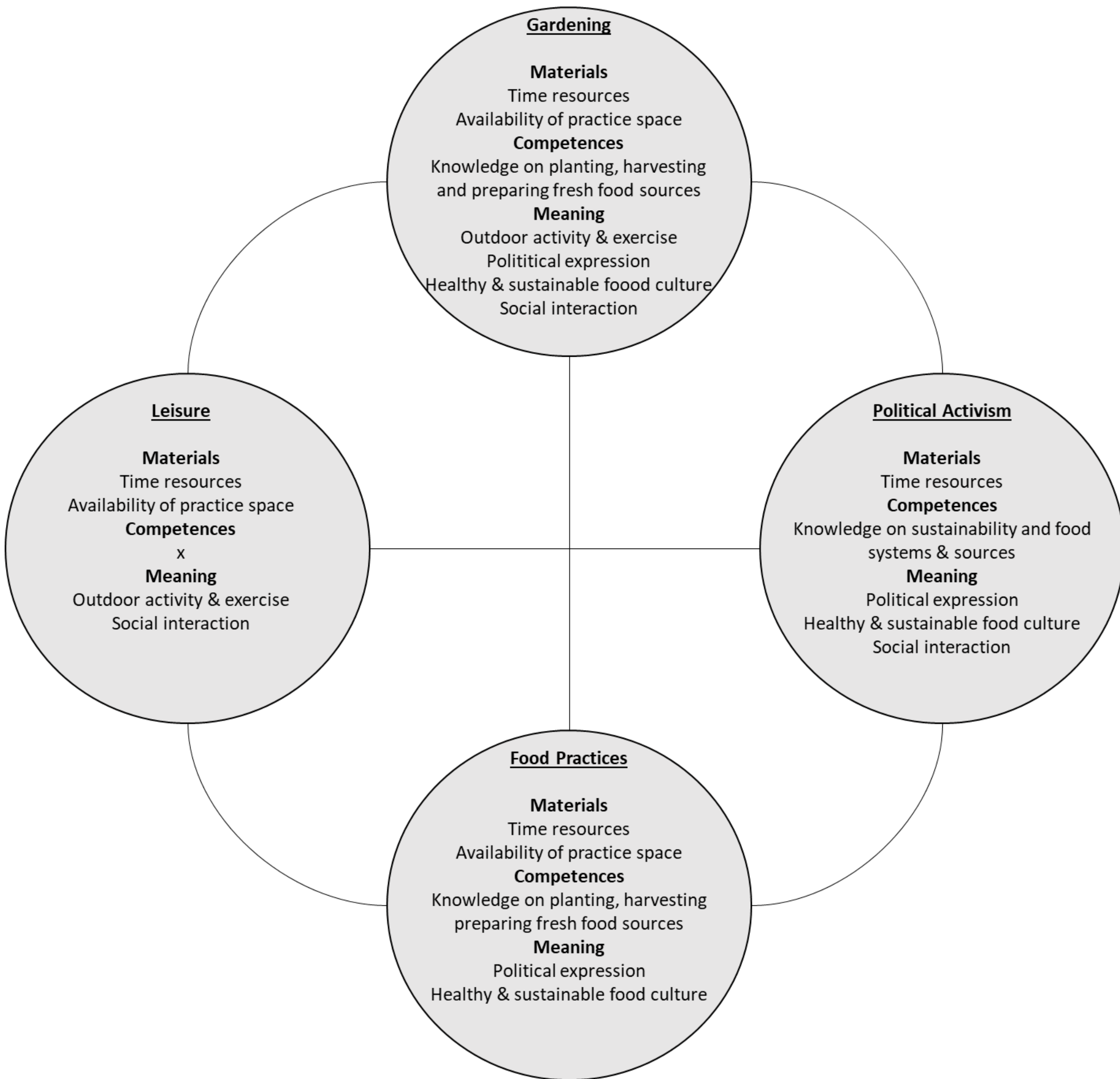

Figure 7. *Connections within the practice bundle of community gardening*

These results in combination with the theory give several indications of how interventions can be designed and what elements need to be moved in order for community gardening to be recruited, reproduced and diffused. The question is how to make the practice of community gardening more attractive and how to promote sets of practices into which community gardening might fit in for low-income and food poor communities. This involves interventions in the framing of needs, wants and systems of provision (Spurling & McMeekin, 2015). Prior attempts to involve excluded communities failed, as they did not target the lack of practice elements and therefore not the needs, capacities and everyday life structures of targeted groups living in low-income situations and food poverty. Investigating

the interlocked elements of the practice and practice bundles help to overcome the limitations of past initiatives and to establish novel ways forward.

Looking at the practice and practice bundles, it can be concluded that the materials, competences and meaning of planting, harvesting and preparing local and fresh food sources in a communal context need to be moved to excluded communities. This needs to be accompanied by the movement of the interlocked meaning element of community gardening as a healthy and sustainable leisure activity. For that to be possible, awareness and knowledge around the benefits of fresh food sources and outdoor activities as well as on environmental issues is beneficial. Furthermore, the movement and recontextualization cannot be implemented without regarding material structures and systems of provision. The material limitations in all bundled practices in which the respondents from low-income and food poor neighbourhoods move must be therefore considered.

While Research Question 2 investigated in what elements need to move to excluded communities, **Research Question 3 asked what pathways can be established for the practice of community gardening to diffuse and travel to low-income neighbourhoods and food deserts.** Apart from exploring elements of practices and practice bundles, Shove et al. (2012) and Spurling & McMeekin (2015) state that networks and spaces are crucial channels for practices to move to excluded communities. Inequalities in the ability to adopt certain practices are represented in social channels and the pathways they establish for the recreation and diffusion of practices. Without these channels, actors from different communities do not have a platform for sharing and learning. Citizens that are not part of the social network are therefore excluded from the means and capacities to become practice carriers (Shove et al., 2012) While community gardens have the potential to address these structural challenges of social inclusion and participation, they are often limited by socioeconomic exclusionary dynamics which are embedded into them (Tornaghi, 2014). Indeed, apart from some students at OxGrow, it was observed that mainly citizens that are already in a privileged position experience the benefits of Oxford's community gardens. Key informants acknowledged this pattern, stating that OxGrow mainly makes a difference for those who already carry practices of gardening, healthy and sustainable food consumption and political activism. The image of underlying social and cultural hierarchies is reinforced by the spatial and social boundaries OxGrow operates in. The loose structure, lack of ownership and reliance on a fluctuant number of volunteers limit OxGrow in coming up with specific and effective strategies to reach out to excluded communities. Online and offline platforms mainly target those already involved in the wider urban farming network in Oxford. Distributing leaflets does not seem enough to spread the word. Indeed, all respondents living in low-income and food poor areas were not aware of community gardens and their concept. Furthermore, the geographical boundaries hinder people from food deserts to join the garden, as

they would have to travel by car or public transport with their children. While changing the spatial arrangements of the community gardening practice at OxGrow is not possible, interventions in the network and social spaces might lead to new spaces and new forms of interlocking of practice bundles for citizens living in low-income and food poor areas.

Practical implications

These findings hence translate into several recommendations for OxGrow.

Regarding the element of materials in the practice of gardening, people living in low-income areas and food deserts do not have the time and financial resources to join the open gardening sessions on a regular basis. Therefore, it would be more efficient if OxGrow designs specific events and projects to recruit practice carriers living in food poverty, rather than expecting them to join the regular work parties. This would be the first step to move meaning and competences of community gardening to other places.

Furthermore, OxGrow could design events and projects around social inclusion with the participation of the targeted communities from scratch to fit the needs, capacities and everyday life structures. As the research has shown, prior strategies for outreach included invitations to join projects and events that were already set up and not tailored to specific and context-based needs. These interventions failed, as they did not regard the constraints of materials, consequences and meanings of the practice.

Such specific events and projects could be the establishment of cooking classes combined with joined gardening sessions. Social Practice Theory highlights that the practice of community gardening cannot be promoted in isolation. Interlocked food practices hence need to be the target of intervention. The results illustrate that for community gardening to be recruited and diffused among communities living in low-income situations and food deserts, competences and meanings in the growing and preparing of fresh food sources need to be developed. Respondents from the global South pointed out that they would value such sessions that provide a platform to share and learn from each other. Oxford's food banks would be another potential network to reach out to. Successful projects would furthermore add meaning to community gardening as a leisure activity providing social interaction, education, exercise and relaxation.

The study highlights that OxGrow operates with limited finance, time and human resources. These limitations put a constraint on the initiative's capacity to expand their social channels. OxGrow could, therefore, aim to implement a more formal structure by applying for funds and involving a long-term paid position that deals with questions around food poverty, social inclusion and the design and implementation of related projects. Another possibility would be the involvement of committed long-term volunteers that explicitly deal with the issue and formalise these efforts by creating a committee for social

inclusion. In addition, the project could be promoted among Oxford University students to conduct studies around the issue.

It is furthermore recommended that OxGrow establishes stronger and more formal connections with the larger UA network in Oxford to expand their social network and space to excluded communities living in food poverty. As the results demonstrate, the community garden cannot act as an agent of change by itself given its organisational and spatial boundaries. A collaborative group within the CAG network dealing with the issue would strengthen the ties between CAG members and would enable them to jointly work on the issue on a larger geographical and social scale.

OxGrow could furthermore contribute to the movement of the community gardening practice by having its practice carriers move to different social and geographical spaces. As Social Practice Theory suggests, practices move along with their carriers and the established social channels. Groups that expressed interest in cooperation are African Families in The UK in Blackbird Leys and respondents living in social housing arrangements established by ACT!

However, material elements of the practice and practice bundles are largely influenced by infrastructure and systems of provision that are beyond OxGrow's capacity to interfere. Providing infrastructure and education that fosters food equality and environmental awareness also lies in the hands of the city's policymakers. Respondents from Blackbird Leys and Rose Hill stated that they would like to have a community garden in their own area. Oxford's city council offers allotments for a low price in these areas, however, many do not have the time and resources to take care of their individual plot. Therefore, the promotion and provision of community gardens by the council would be a valuable contribution to these neighbourhoods. Community gardens in food-poor areas could become part of the CAG network, in which they could seek support and collaboration. For example, Incredible Edible works on the establishment of a community garden in the Oxford Academy in Littlemore (materials), while offering courses on horticulture and local fruit and vegetables (competences and meaning). OxGrow could seek cooperation with other community gardens established in the city's food deserts to jointly organise events around food culture and urban sustainability.

Limitations

The researcher faced several limitations throughout the implementation of the project, which will be reflected on by discussing the concepts of validity and reliability.

As Leung (2015) describes, validity in qualitative research means "appropriateness of the tools, process and data" (para. 4). Internal validity refers to the correlation question and to the question if causal

statements or conclusions can be drawn (Gray, 2014). Some limitations on internal validity can be identified. Due to the sensitivity of the topic and the external position of the researcher, it was challenging to reach out to people living under food poverty. Most of the respondents that agreed to join interviews and focus groups were interested in the topic of gardening and were familiar with the concept. Information about people affected by an extreme lack of materials, competences and meanings related to gardening and other related practices were only possible to gain through key informants. A highly diverse and partly contradicting set of data made it difficult to identify patterns and to draw a clear picture of gardening practices. Furthermore, the research focused only on interviews and focus group discussions. As the project was aiming to generate an in-depth understanding of personal experiences, opinions and processes, the researcher decided to forego the achievement of a large sample size through, for example, the use of questionnaires.

External validity refers to the extent to which the results of this research can be generalized (Verschuren, Dooreward & Mellion, 2010). The small-scale character of the single case study poses a limitation on external validity. As Verschuren (2010) explains: "The fewer cases studied, which is often needed for achieving in-depth knowledge, the more difficult it is to apply the results to a broader population of interest or to similar cases" (p.185). Indeed, the results of this research project include statements about UA and food poverty in Oxford in particular, rather than producing a general theory.

The concept of reliability refers to the consistency of the research project, while internal reliability contains the agreement of different observers (Bryman, 2016). However, the project was conducted by a single, relatively unexperienced researcher. To combat this aspect, auditing by the supervisor and peers at Utrecht University and in Oxford was conducted throughout all stages of the research design and implementation. Furthermore, research bias was aimed to be avoided through a standardization of the interview and focus group schedule and through following the same protocol in all data collections (Gray, 2014).

The researcher furthermore faced limitations in time and scope. As a 30 ECTS project, the research is restricted to 21.5 weeks, including an eight-week period of field research in Oxford. Furthermore, the researcher was not local to Oxford. The only knowledge gathered before starting the fieldwork was provided by the literature review. The process of understanding the urban farming network and the situation of food poverty as well as the selection of focus group respondents and key informants was, therefore, time intensive and slow.

Implications for further research

Further research on the topic is needed to understand how community gardening could address structural challenges of participation and help to overcome food poverty in Oxford. As this research mainly focused on OxGrow, Social Practice Theory could be applied to the question on the effects of the establishment of community gardens in food deserts and what it would take for citizens to adopt the practice within their own communities. One example is the newly established community garden and the provision of classes on gardening and food culture at the Oxford Academy in Littlemore on the border to Blackbird Leys. One aspect of that study could be the investigation of the effects of this project on the practice elements of materials, competences and meanings.

Based on the results and the recommendations given to OxGrow, further research for the implementation of specific projects is required. One question could be how formal links and projects between Oxford's CAGs and food banks could be established. A strategic planning workshop based on the findings of this study would help to map out future ways forward.

Conclusion

The research objective of this study was to understand the practices and structures shaping social inclusion and participation in urban community gardens in relation to food poverty in Oxford. By providing green spaces for recreation and value formation, plant and food growing, communal interaction and social capital as well as education and skills training, community gardens have the potential to contribute to a just and sustainable food culture in cities. While Oxford is home to many UA initiatives, socio-economic disparities in access to healthy and affordable food sources are a pressing issue in the city. This includes the issue of food deserts in low-income neighbourhoods as well as the lack of material, social and cultural means to adopt a sustainable and healthy food culture. Such inequalities are reflected in the participation at OxGrow, as the community garden struggles with the inclusion of citizens affected by food poverty. Indeed, little is known about how effective initiatives such as OxGrow are in addressing structural challenges of participation and social inclusion and how they can explore their potential to combat urban food poverty.

By applying Social Practice Theory, the study aimed to shed light on the material systems of provision as well as social and cultural conditions that shape participation at OxGrow. Social Practice Theory goes beyond the assumption that the responsibility to adapt sustainable lifestyles lies within individual action and rational thinking by asking the question how practices are recruited, reproduced and diffused based on the elements of materials, competences and meaning. Resulting interventions are thus not focused on

steering individual behaviour, but on finding holistic solutions that regard infrastructure as well as cultural conditions. Based on this approach, the study aimed to answer the following research questions:

1. How can Social Practice Theory be applied to the case of community gardening in Oxford?
2. How do practices related to community gardening of carriers and people living in low-income and food poor neighbourhoods compare?

a) What are the practices of carriers related to community gardening?
b) What are the practices of people living in low-income and food poor neighbourhoods related to community gardening?
c) How do these practices combine?

3. What pathways can be established for community gardening practices to diffuse and travel to low-income and food poor neighbourhoods?

First, a literature review on UA and participation in grassroots innovations as well as Social Practice Theory was conducted. The resulting conceptual and analytical framework was then applied to an eight-weeks case study focusing on the practice of community gardening and its movements in Oxford. Focus group discussions, key informant interviews and short interviews at two food banks were implemented with a total of 52 respondents including practice carriers at OxGrow, people living in low-income areas and food poverty as well as UA advocates, policy-makers and experts on food poverty in Oxford.

To apply Social Practice Theory to the case, the elements of materials, competences and meanings of the practice bundle related to community gardening were explored. This includes the practice of gardening as well as bundled practices of food consumption, leisure activities and political activism (Research question 2). Furthermore, Social Practice Theory highlights questions of how practices move to potential carriers by assessing exclusionary dynamics in networks and spaces. Variables focusing on the network as well as the geographical and social space around OxGrow were hence added to the analytical framework (Reseach question 3).

In many aspects, carriers at OxGrow as well as citizens living in low-income and food poor neighbourhoods are comparable when it comes to gardening practices. Most of the respondents lacked practice space and time resources. Respondents from food deserts furthermore live far away and only reach the garden by public transport. Regarding competences, many respondents from both groups possessed skills and knowledge in planting, harvesting and preparing herbs, fruits and vegetables. However, others lacked transferable skills as they did not garden before and did not cook with a lot of fresh food sources. The main difference was found in the element of meaning. Although gardening is popular in the cultural imagination of all respondents, people living in low-income and food poor areas

did not know about the concept of community gardening. Some associated the practice as a middle, -or upper-class activity. For practice carriers at OxGrow, the element of meaning was interlocked with food practices, leisure activities and political activism. Community gardening was appreciated as an outdoor activity that combines social interaction, the cultivation of a healthy and sustainable food culture as well as a small-scale solution against the damaging environmental and social consequences of the industrial food system. Although many respondents from low-income and food poor neighbourhoods shared these associations, the majority lacked the materials, competences and meanings of a healthy and sustainable food culture, political activism or community gardening as a leisure activity.

Exploring networks and spaces around OxGrow, it can be concluded that the initiative's social channels do not reach citizens living in low-income and food poor areas. OxGrow operates within its geographical boundaries and a fluctuant number of volunteers while having loose connections to other CAG members concerned with UA. There are no specific strategies for outreach. Offline and online platforms only reach those already recruited to the practice. While geographical boundaries cannot be overcome, OxGrow needs to expand its network and social channels in order to establish pathways for the practice of community gardening to travel.

These results provide valuable indications for how interventions should be designed and what elements of the practice have to be moved to excluded communities. The study highlights the fact that the practice of community gardening cannot be targeted in isolation, but that the wider set of practice bundles as well as material constraints (infrastructure and systems of provision) needs to be considered. The practice cannot be diffused without moving the element of competences and meaning of a healthy and sustainable food culture, political activism or community gardening as leisure activity available for all citizens. OxGrow offers practice space and tools (materials), skill-building in planting, harvesting and preparing local and fresh food (competences) as well as education and leisure (meaning). However, these elements can only be diffused by the practice carriers themselves and the social and geographical channels they establish. In order to include citizens affected by food poverty, OxGrow needs strategies that go beyond invitations to the regular open gardening sessions and to actively connect with excluded communities.

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Appendix A

OxGrow Constitution

Community Action Groups

Name of the Organisation:	OxGrow

Aims and Objectives:
OxGrow is a community food-growing project that seeks to be part of the movement towards a more sustainable food system in Oxford.

Our vision is for a food system that strengthens rather than degrades the biosphere, promotes health and wellbeing across generations and geographical boundaries, and enriches our society and culture.

In pursuit of this aim OxGrow has the following objectives:

Education – running hands-on work-parties and other skill-sharing and learning events for adults and children of all ages.

Demonstration – ensuring that the activities and features of the site are documented and communicated, and that they are replicable.

Experimentation – putting to the test a whole range cultivation techniques and methods of working, as well as growing a wide variety of crops.

Community Building – creating a fun and collaborative space that the community can call its own, where adults and children can meet, socialise and play.

Diversity – aiming to attract as diverse a section of the community as possible, bridging the town-gown divide and reaching out to more marginalised groups.

Sustainability – promoting the benefits of locally-grown, seasonal food, supporting greater biodiversity, minimizing waste and resource use and maximizing use of recycled and renewable resources.

Membership:
The group is open to every member of the community and there is no requirement to notify the group or apply for membership before attending a work party or meeting. However, for the purposes of this document a member shall be considered as any person who has expressed an interest

in the group and provided their contact details so as to be kept informed of its activities. The secretary will keep a record of volunteers who attend the site for the purposes of on-going community engagement and funding applications.

Meetings:
Members' meetings will be held as necessary, normally fortnightly, to decide the objectives of the Group, to direct its work and delegate actions and activities. Decisions will normally be taken by consensus but, if considered necessary by the meeting, by majority vote.

Annual General Meeting:
Timing and process:
An annual general meeting (AGM) will be held once a year after the accounts for the previous financial year are available.

The secretary will call the meeting at least 21 days before the date of the meeting by distributing an announcement to all members and posting a notice within the community to attract new members.

Five members will form a *quorum* (the minimum number of people needed at the meeting in order to make decisions). The chair of the organisation or persons authorised by the chair will conduct the meeting.

General functions of the AGM:
The AGM will review the group's finances, authorise the scope of proposed activities, elect officers, and address any other issue brought forward by a member. Any member may table a motion or resolution by giving it to the secretary before the meeting.

Special General Meeting (SGM):
A special general meeting may be called at the request of any member with the agreement of an officer. A special general meeting can perform the same functions as an AGM. The secretary will inform all members of a special general meeting at least one week before it takes place.

Changing the constitution:
The constitution may be changed at a special or annual general meeting. A proposal for changing the constitution will be circulated by the secretary at least one week before the meeting. The decision will normally be taken by consensus, unless the members decide that a majority vote should be used. Any changes to the constitution must not lead to designated funds contributed for one purpose being diverted to some quite different purpose. A draft of the new constitution will be sent

out via e-mail for viewing by members. Comments can then be made by a date decided at the meeting. Any changes to the constitution will be made in consultation with a CAG officer.

Officers of the organisation:
The officers of the group will be a chairperson, secretary, and treasurer.

Officers will be elected at an annual general meeting for one year and will not serve consecutive terms in the same office. Officers will not be paid. Officers may be removed by a decision taken by a special general meeting or AGM if they do not attend meetings or carry out their duties for four months. Officers may leave at any time by notifying a members' meeting and the vacancies will be filled at a special general meeting or AGM. Officers' powers and responsibilities will be defined by members at an AGM.

Coordinators and key holders:
Coordinators may be appointed at any members' meeting to support the officers in their duties and assist with the organisation of the group. Their responsibilities will be defined by agreement with the members and may be modified from time to time at any members' meeting, again by mutual agreement. Coordinators may leave at any time by notifying the group at a members' meeting.

The group must maintain at least four key holders who will be responsible for opening the site before work-parties and securing the site afterwards. Key holders must sign an agreement with Hogacre Common accepting their terms of use. Key holders may be appointed by the group at a members' meeting and may leave at any time by notifying a members' meeting.

Finance:
The Treasurer will keep the group's financial accounts and records, prepare annual accounts, and control expenditure. The Treasurer will be responsible for setting up and managing the group's bank accounts, and will approve signature of cheques (two signatures from among the specified signatories, who will normally be the chairperson, the secretary, the treasurer and coordinators; signatories must not be related). The treasurer is also responsible for providing annual accounts to the CAG project every April.

Members may through a decision at an annual general meeting or a special general meeting, make provision for the accounts to be independently examined or audited, and to appoint a person authorised

to do this and may decide to dismiss that person. Officers and members of the group may not act as the independent examiner, but a CAG officer may be approached to fulfil the role.

Termination of group:
A decision to wind up the group can be taken by an AGM or an SGM and in consultation with the CAG Project. The members will transfer any assets of the organisation to an organisation with similar aims and objectives.

This constitution was adopted on the ....day of............ 2011					
Signed		Position	Chair	Date	
Signed		Position	Secretary	Date	

Source: https://oxgrow.files.wordpress.com/2011/04/oxgrow-constitution.pdf

Appendix B

<u>Main themes touched upon during the focus group discussions</u>

As the focus group discussions were semi-structured, these questions were prepared beforehand but not necessarily stated during the session. All focus group discussions touched upon the following themes, however, the researcher adapted to the situation and the progress of the discussion. This list therefore served as notes for the researcher, rather than as a fixed structure of the discussion. All of these themes were mostly commented on without the researcher stating a specific question about them. Political activism was the only practice not mentioned while talking to people from low-income and food poor areas.

1. **Gardening**
   - For OxGrow participants: What brought you to OxGrow? Since when are you here? What is your personal motivation to participate?
   - What purpose do you see in gardening?
   - Is it something that you practice in your everyday life as well? And is yes, do you have your own practice space at home? And access to materials and tools?
   - Is gardening something common in your social environment? Among your friend and family?
   - When it comes to your gardening skills and knowledge…you know how to plant what, which vegetable grows when, when can you harvest…is that something you mainly learned at OxGrow or did you know that before?

2. **Food practices**
   - What does food consumption mean for you? Is it important to consume environmentally friendly food sources? Is health important? Or to save money? As necessity?
   - Where do you buy your food?
   - For OxGrow participants: When you come to a community garden…what do you come for? The people, the gardening activity, the education, the food you can take home?
   - What is your cooking routine and how important are fresh food sources in that routine? Do you eat a lot of microwave meals/ fast food?

3. **Leisure activities**
   - What do you like to do as a leisure activity?

- What benefits does community gardening provide to you? Can you feel any physical or mental health benefits? Is it relaxing? What do you enjoy the most during this practice?
- For OxGrow participants: You are a group of people coming to the garden on a regular basis. Where do you get the time?
- Do you live far from the OxGrow garden? What is your travel time? Is that a burden?
- Do you enjoy being outside and close to nature?

4. Political activism

- For OxGrow participants: Political meaning of community garden...do you think you contribute something to a greener, more socially just city by participating in OxGrow?
- For OxGrow participants: Are you aware about the issue of food poverty in Oxford?
- How central are sustainable life style choices for you?
- Where do you gain the knowledge about sustainability issues…what enhanced your awareness?
- How deeply connected you feel to nature? Do you feel responsible for environmental protection?

Appendix C

Structured interviews at the foodbanks

Gardening

1. **Is** gardening a common practice for you? *(Could be anything from growing plants or herbs in the kitchen, having or sharing an allotment, growing flowers in the flat etc.)*

Yes — No

Why?

1.1. Where do you practice it?

1.2. What do you plant?

1.3. Where do you get the tools from?

1.4. How much time do you spend on gardening?

1.5. Where did you learn about it?

1.6. What benefits do you perceive?

2. Did you grow up with people around you gardening? Such as friends, family members etc.

3. Do you think gardening is something in your social environment right now? Do you know some people who do that?

4. Have you heard of any community gardening initiatives, where people grow plants and food together in your neighbourhood?

5. Have you heard from any other initiatives promoting the consumption of fresh fruits and vegetables and that maybe help to increase the access to it?

1. What is your favourite food?

2. Do you like consuming fresh fruits and vegetables? If yes, how often do you eat it?

1. What do you do for leisure? When you want to relax?

Other:

1. Would you like to get involved in a free community gardening group in which you learn more about growing and harvesting local fruits and vegetables with others? Why (yes or no)?

2. Would you be interested in helping me more with my study and meeting me for a 40 minute interview? If yes, could you give me your e-mail address?

- (Often the conversation went beyond those questions, as they served for entering the interview)