Cultivating Well-Being
A study on Community Gardening and Health in Berlin and Paris
Copyright

The publishers will keep this document online on the Internet – or its possible replacement – from the date of publication barring exceptional circumstances.

The online availability of the document implies permanent permission for anyone to read, to download, or to print out single copies for his/her own use and to use it unchanged for non-commercial research and educational purpose. Subsequent transfers of copyright cannot revoke this permission. All other uses of the document are conditional upon the consent of the copyright owner. The publisher has taken technical and administrative measures to assure authenticity, security and accessibility.

According to intellectual property law the author has the right to be mentioned when his/her work is accessed as described above and to be protected against infringement.

For additional information about the Linköping University Electronic Press and its procedures for publication and for assurance of document integrity, please refer to its www home page:

http://www.ep.liu.se/

© Jackisch
Cultivating Well-Being
A study on Community Gardening and Health in Berlin and Paris

Josephine Jackisch
Master Thesis
Email: jjackisch@riseup.net
Phoenix Erasmus Mundus Master of Dynamics of Health and Welfare
Linköpings University, Division of Health and Society & L'Ecole des Hautes Etudes en Sciences Sociales
August 20, 2012

Defence Seminar: September 3, 2012 10am
Supervisors:
Lennart Nordenfelt
Luis Lopez
# Table of Contents

INTRODUCTION .......................................................................................................................... 1

CHAPTER 2 BACKGROUND

PATHS IN THE LANDSCAPE OF URBAN GARDENS ................................................................. 6
A Stroll through the History of Urban Vegetable Gardens ...................................................... 6
Community Garden Projects: A Working Definition ............................................................. 9
The idea of community gardens gaining ground ................................................................. 9
Paths already paved by the literature ................................................................................. 12
What is health? ...................................................................................................................... 13

CHAPTER 3 METHODS

FROM THE GROUND UP ............................................................................................... 16
Sampling and Harvesting Data .............................................................................................. 17
Processing the Fruits - The Analysis .................................................................................... 19
Preparing the Ground ......................................................................................................... 20

CHAPTER 4 DATA PRESENTATION

GARDENS FULL OF FRUITS ......................................................................................... 22
The Gardens ......................................................................................................................... 22
The Actors ........................................................................................................................... 25
The Call into the Garden ...................................................................................................... 27
The Fruits - Experiences and Pathways to Well-being ........................................................ 28
Nature and garden - active digging as well-being ............................................................ 29
Community and garden ...................................................................................................... 34
Laboratory for participation and engagement .................................................................. 38
Summary .............................................................................................................................. 41

CHAPTER 5 DISCUSSION PART I

CULTIVATING HEALTH - FERTILIZING HAPPINESS ...................................................... 42
Comparison Berlin and Paris ............................................................................................... 42
The community garden as green-space ............................................................................. 43
Community gardens as community spaces ...................................................................... 47
The community garden as free space and open space ..................................................... 53
Limitations of free and community spaces ...................................................................... 56
Accessibility versus protection ......................................................................................... 59
List of Illustrations

Table 1 Experiences by the actors in CGPs with respect to nature and gardening activity..............30
Table 2 Perceived experiences by the actors in CGPs with respect to community..............................34
Table 3 Actors’ experiences with engagement and experimental grounds in CGPs .........................38

List of Abbreviations

AD - Jardin Aqueduc (Paris 14ème)
JF - Jardin Fessart (Paris 20ème)
PP - Poterne de Peuplier (Paris 13ème)
RR - Rosa Rosa (Berlin Friedrichshain)
WG - Wuhlegarten (Berlin, Köpenick)

e.g. - for example
etc. - and so forth
CGP - Community garden project
UNHABITAT - United Nations Human Settlements Programme
WHO - World Health Organisation
WW II - The Second World War
Acknowledgements

First of all, I want to thank the gardeners for giving me their time, trust and openness. By sharing their visions and experiences, they provided the basis for this study and an inspiration to think differently about health promotion. I sincerely hope that this thesis does justice to their statements and experiences, despite the limitations of this study, that I alone can be held responsible for. These actors will appear with changed names in this report, nevertheless it is them - the community gardeners - who in so many ways made this research possible.

Lennart Nordenfelt, whose ideas and precision have been an enormous source of inspiration for me. He has been a great supervisor. Nothing kept me more rigorously going than his trust and his very comforting patience. I also want to thank my co-supervisor Luis Lopez for his insightful and interesting perspectives on my work. My acknowledgements go to the entire Phoenix EM Dynamics of Health and Welfare team, who secured the grant that brought me to Linköping, Paris and into this programme. This Masters has been a wonderful opportunity to develop my own research interests and gain experience. I owe a big thank to all the other Phoenix Erasmus Mundis of this and past years, who were the most important teachers for me. You really made these years an enlightening and convivial experience and hopefully I can learn more from you in the future.

A whole-hearted and very loving acknowledgement goes to the people who were crucial for my own well-being and happiness during the last two years. Birgit and Stefan are the most generous and supportive foster parents I could have had during this writing summer. Thank you for everything! Nick gave me so much warmth, patience and caring which was truly uplifting. Birgit, Irene, Miwon, Maike, Nick and especially Paul for taking the time to proofread parts of my drafts and your useful comments. And all the people so close to my heart for being there and for your kind words of support, even though I am moving all the time and don't always manage to be there for you: Judith, Adriana, Anna, Bine, Ying, Pinky, Vera, Anne. The Ziege for fighting for something that still feels like home. And last but from the bottom of my heart I thank my Ma and Brudi, because I am so proud of you. Your strength, intelligence, unconditional support and loving are just wonderful, always.
INTRODUCTION

“The garden has given us the opportunity not just to have some fun, which we certainly had but also to address the important food and nutrition issues that we have to address as a nation. […] My hope is that through this garden we can continue to make the connection between what we eat, how we feel, and how healthy we are.”

(Michelle Obama, June 17, 2009)

Ying came to East Germany many years ago, in times when the regime was actively contracting workers. Before that, she was working as a medical doctor in a very poor country. Ying, her husband, and her three children were often suffering from hunger, but they had a garden behind their small house, where she grew vegetables. This way they had something to eat every day. When she got divorced, Ying’s husband got the twins and the house and she got a work contract in Germany and left, thinking she could work there in medicine once there.

This never was fulfilled; instead she worked in a laundry for five years. Ying did not mind this because going back to her country was not an option for her, though it was difficult since she started working directly after arriving, without having learned German. Furthermore, ten years ago she was seriously injured in a knife attack on her way home from work. She was ill for a long time and had a mental breakdown. Until today, Ying suffers from severe, chronic pain. Doctor's cannot help her to completely recover. She is afraid to go out by herself, and never walks on the streets at night. “I did not have a garden and did not know where I could go, I was afraid. Now I have the garden and feel that I am much healthier”. Since 2003, Ying had a small garden parcel in an intercultural garden where she goes every day. She says she became her own doctor, still having all the knowledge from her medical career back home in the head. She lost ten kilos since she joined the garden group and feels that she can function better. According to her she knows better than the doctors how to manage her pain and anxiety.

It is not that everything is good in the garden though -she complains that there are personal conflicts and laments that people were much more engaged in the beginning. However, she can forget her pain and talk to people and thus feels much better. For Ying the garden has become a location for getting active for her own and other's well-being and health, and she tells me that she believes the garden is therapy for body and mind.
If such a narrative was described after attending a health promotion programme it would sound like a successful intervention for mental and physical health and self-management of pain. This story however, is neither an intervention nor a therapy but an example for the experiences people report after joining a community garden.

The claim, that community gardens have an influence on health, has come in the past ten years mainly from the USA. Scientific evidence however remains very scarce. The First Lady, Michelle Obama, has even taken up the topic to fight malnutrition by creating new awareness about food and eating habits, especially in adolescents. Over and above nutrition, Ying’s story indicates that the connection between health and community gardens is more complex. When I first heard about community gardens, I associated the phenomenon with guerrilla gardening – with activists going on the streets during the night or day to plant flowers and occupy land – and with a new urban craze coming forth from the vogue of sustainability. For me, those gardens carried a political message, fighting for change in the way cities are planned and waste-land is handled. I saw it as a social movement of young people, searching for more creative, peaceful means of contention. And yet, the more I learn and see from community gardens, I realize that it is not only young and rebellious social movement activists who are active in community gardening but also people who have never before attended or participated in protest movements. This study will show that bottom-up community efforts to install urban gardens could be interpreted as an experiment to contribute to a healthier future for cities. The idea that non professional gardens could make modern cities healthier recalls pictures of the historical small garden lots found in cities – so called allotments.

When Michelle Obama initiated a community garden on the White House lawn, she proclaimed this act as a step toward healthier food for her family and of her nation. “By making this small change [planting the garden] and adding more fresh produce, Barak, the girls and me, we all started to notice that we felt better and we had more energy. So I wanted to share this little piece of experience that I had with the rest of the nation.” Obama emphasized a strong connection between planting a community garden, changing one’s diet and feeling healthier. This set off a new wave of community garden foundations in the United States. It could be argued that the allotment garden philosophy, that we have to reconnect with nature to stay healthy has a revival. What struck me about this was, that, beyond the avant-garde character of the new urban gardening movement, these gardens seemed to carry a dimension reflect subjective experiences of health and well-being.

1 From a speech given by the First Lady, June 17, 2009. at the occasion of a harvest party of the kitchen garden, which she planted with help of elementary school pupils and white house staff on the grounds of the white house. Video accessed May 27, 2012 via http://www.whitehouse.gov/video/First-Lady-Michelle-Obama-in-the-Garden-on-Health-and-Nutrition
In the European discourse about community gardening health is playing hardly any role. Stories like Ying’s show that there is a certain link between community gardens and health which was worth investigation and matter beyond their emphases on nutrition and youth projects alone. The study at hand will therefore investigate into dimensions of health and well-being in the European community garden movement. I pay special attention to how urban gardeners experience and explain connections between the garden and health and well-being.

What does the growing interest in community gardens tells us about health in cities? Gardens are not simply emerging or born but are made by city-dwellers with labour and imagination. They thus represent parts of a gardener’s social identity, and can mirror bigger social processes happening in the context of a city. More than half of the world’s population worldwide lives in urban areas. While cities fight to develop strategies that address the impacts of growth, environmental problems and creating attractive marketing strategies, one of the most important threats to billions of city dwellers remains their health, and one of their biggest concerns is their happiness. The way in which cities are planned and governed shapes people’s life choices (e.g. transportation and diet). Health promotion has acknowledged this interdependency and often focuses on design of policies and interventions on this basis. Experts agree that rapid, unplanned urbanization has exceeded the ability of local governments to build essential infrastructure and to enforce legislation that makes life in cities safer and healthier (Chan, 2010). Ban Ki Moon, the Secretary-General of the United Nation, commented the last World City Report by pointing to “the urgent need for new, more sustainable approaches to urban development. [21st century city scenarios] argue for greener, more resilient and inclusive towns and cities that can help combat climate change and resolve age-old urban inequalities” (State of the World’s Cities 2010/2011, 2008).

In most western European countries, the proportion of the population living in urban areas is higher than 70% (World Bank, 2011). While cities offer lots of advantages, such as opportunities, jobs, and services, access to social and health services and education, they also concentrate risks and hazards for health. Urbanization carries risks such as social isolation, crime and violence, unhealthy lifestyles (e.g. poor nutrition, exclusion and marginalization and especially huge socio-economic inequity). “Poor health, including mental health, is one of the most visible and measurable expressions of urban harm. Health inequities can also be a rallying point for public demands for change that compel political leaders to take action” (Chan, 2010).

In times of financial and economic crises, slow economic growth, and with the threat of a widening social gap, the challenge is great. Thus, policy interventions and top-down strategies alone are hardly sufficient to create healthy cities for all. It is urgent to remove
barriers that prevent access to land, housing, infrastructure and basic services, and to facilitate, rather than inhibit participation and citizenship (*State of the World's Cities 2010/2011*, 2008).

Community gardening has become a big trend also in European cities since the turn of the millennium. Many have argued that urban gardening and the trend to create community gardens is not only a life style craze or pure nature-nostalgia but points at bigger underlying changes in our urban systems (Müller, 2011). Research in Europe has analysed the gardening phenomenon and concluded that the movement is making valuable contributions to community cohesion and to their political aims to “reclaim the cities” (Jahnke, 2010; Reynolds, 2008), promote social integration (Müller, 2002), and ensure subsistence or small-scale agriculture (Meyer-Renschhausen & Holl, 2000; Müller, 2011). The investigation into health and well-being in community gardens offers an additional, fertile perspective for both researchers interested in community gardens and researchers interested in urban health and health promotion. This well-being dimension has often been omitted or only superficially scratched in European studies. However, evidence which comes mainly from the USA has claimed that community gardens improve health, well-being or urban resilience (see Okvat & Zautra, 2011 for a review). I suggest that this needs further investigation in the European context.

Therefore, this study sets out to empirically investigate experiences of health and well-being in community gardens in Berlin and Paris. The main research questions which crystallized in the process of this study are:

1. Which common experiences of health and well-being in community gardens have been perceived by the gardeners?

2. How do the gardeners make sense of this and construct the link between health and community gardens?

3. What do community gardeners' experiences tell us about health and quality of life in cities?

Empirically, this study contributes to understanding the links between community gardens and health, and how the gardeners make sense of their experiences. Furthermore, I show how these proposed connections and experiences can be approached and clustered by theoretical means. This close-up study of health in a specific type of urban space opens windows to perceive manifestations of broader pathways to well-being in urban contexts. Inspired by the various concepts and incongruence between health theory and the gardeners
talking about health, I go beyond the empirical data and present a theoretical reflection on the concepts of health and well-being.

The next chapter starts by explaining the background and foundations of the hypothesis that urban gardens could be relevant for health by looking at the origins of allotment gardens and synthesizing existing literature on health and community gardens. Chapter three will explain methods and approaches of this study. Chapter four will present data and actor's concepts and experiences of health and well-being through community gardens. This presentation is followed by a discussion of those results in chapter five. There I make a proposition that the experiences made in the garden help us to shed light on three bigger social mechanisms that seem to be linked to quality of life. In chapter six I arrive at a conceptual discussion on health and well-being.
CHAPTER 2 BACKGROUND

PATHS IN THE LANDSCAPE OF URBAN GARDENS

We can currently observe a trend – some might call it a comeback – of vegetable gardens in urban areas in Europe. The movement, which has led to the phenomenon of community gardens, was born in New York City with the “Green Guerillas”. Especially in New York, community gardens have been booming since the 1970s. A little bit delayed, the movement made the transition to mainland Europe in the late 1990s. Thus, community gardens are still a rather recent social phenomenon in many cities and emerge in different variations with different nomenclature, but they enjoy an ever-growing popularity.

Notwithstanding the current publicity around all forms of community gardens (the current craze is roof-top gardening), it seems not to be a very new idea to install small gardens in cities. European cities have known amateur gardens for decades if not centuries.

A Stroll through the History of Urban Vegetable Gardens

Who has not seen those 'unexpected spaces' (Weber, 1998) - the impression of collective gardens with many small garden patches- perhaps through a window of a car or train entering a city? These are the so called allotment gardens\(^2\), which have become a common feature in many cities around Europe (and elsewhere) emerging in the wake of booming urbanisation and industrialisation at the end of the 19\(^{th}\) century. A short historical excursion might help to better understand the ambitions and historical moments that brought community gardens into existence and inspired a global movement. With an eye on France and Germany I will set the 'new' community gardens into perspective with allotments as the more established forms of urban vegetable gardens.

Around the turn of the last century, allotment gardens gained momentum in Germany and France. Although urban agriculture as such existed far earlier in different forms, the particularity of allotments was that they were not intended for the sale of products produced. In differentiation to private gardens they were often detached from housing. Generally, we can find in literature on the history of central European allotment gardening a differentiation between at least three phases in their history: the beginnings (dates vary from country and publication between 1814 to 1896) to 1914, the war and inter-war period lasting from 1914 to 1945, and the after-war period from 1945 to 1980/1990 (Cabedoce & Pierson, 1996; Katsch & Walz, 1996). I would furthermore argue for a fourth period starting from the 1980s and

\(^2\) In England they are called allotments so I will use this term throughout this essay to refer to what is called jardins ouvriers or familiaux in France and Schrebergärten or Kleingärten in the German speaking world.
1990s until today, characterized by a renewed interest in small vegetable gardens. In this period we see a fight for protection of existing places, and the creation of new forms of urban small scale gardening within community gardens (see also Dubost & Lizet, 2003; Meyer-Renschhausen, 2010; Müller, 2011).

In Germany, the first documented allotments had their beginnings around 1814 as Armengärten [gardens for the poor] through the initiative of the landlord Carl von Hessen, who founded the first federation of small scale gardeners in Kappeln. In France, the concept of jardins ouvriers [workers’ gardens] was created in 1896 with the foundation of the association 'Ligue du coin du terre et du foyer' led by the democrat Christian Abbé Lemire. Both these forms of collective gardens were given to the poor for subsistence gardening, thus having a primarily nutritional function. They were created by philanthropists in order to help workers and the poorest parts of the population to improve their living conditions. In parallel to this charitable ideology, concerns arose that the alienation from nature, caused by urbanisation and industrialisation, devastated public health and child development. From the late 18th century onwards, hygienists and “Lebensreformers” (members of the 'Life Reform' movement) rediscovered Hippocratic traditions. They emphasized effects of climate, diet, habits and local environment on health and development. Thus doctors, industrialists, teachers and politicians formed a movement that not only brought the nuisances of urbanisation to public attention, but also aimed to fight these developments by promoting outdoor activity, in fresh air, with physical exercise for youth and families - eventually creating gardens which became the German ‘Schrebergarten’. Pointing a finger at the dependency between health and wealth they influenced urban public health policies (Bourdelais, 2007). The lack of broad coherent programmes initiated by the government to promote living conditions left philanthropy to play an important role (ibid., p.8.).

It has, however, been argued that allotments have a hidden aspect - the normative idea of re-socializing the dangerous classes. Florence Weber (1998) shows that local politicians and industrialists used the regulatory elements of the gardens, imposing rules and norms which were checked in regularly visits and official celebrations. Also, industrialists installed worker's gardens close to their factories or close to the tenements to attach workers to a location and to keep them from moving on. By providing them with a base for subsistence this measure also discouraged them from asking for higher wages, gathering, drinking and preparing to rise up in revolt. To this extent it could be argued that worker's gardens had a downside in the form of patronization and domination. Garden promoters argued that gardening for the poor was not only producing food but was also a healthy, morally strengthening activity that ran contrary to giving money - which was seen to demoralize and produce idleness. In sum, these gardens were as much meant to reduce moral degradation...
that was enhanced by urbanisation, and to fight poverty (and its dangers) and misery, as they were meant to promote health through exposure to nature and exercise. At the same time allotments were more of a 'symptom relief' than 'curing' the social question and social inequity of the time.

During and between the world wars, the initiatives of formerly small alliances and garden associations became boosted by national interest. The German and French governments of this period acknowledged these gardens as sources of resilience to food shortages, and promoted the creation of allotments by providing more land and funds to the associations.

After WW II, the social question became less prominent and allotments as a source of sustenance lost their importance. A massive decline in the number of allotments began (with the exception of East Germany) in the context of the pressure of real estate markets, and in the transition towards a consumer society. In many ways, the social function of allotments transformed into private spaces of leisure – as an extension of the home and as an interim to the pursuit of home ownership (Dubost, 1984). The decline of urban gardens only began to decelerate in the 1970s, with the rise of environmentalist ideas and the introduction of legal frameworks for protection of allotments (in French law in 1976, through the German Federal Allotment Law in 1983, and in 1977 through a program by the East German Central Committee to promote allotments).

Since the 1990s, urban gardens have seen a revival which might seem to be a revival of the hygienist ideas of the first period of allotment development (Dubost & Lizet, 2003). Today, people of all ages and social classes have rediscovered urban gardens as means to (re)connect with nature. Hand in hand with the environmental movement and latest with the Rio Summit in 1992, a new ecological awareness and idea of ‘the global community’ promoted an ideology of sustainability. The discovery that resources are not always renewable, and that nature is fragile, along with emerging ideologies in post-industrial societies have led to new questions and initiatives. Community gardens emerge in many western European cities in different variations and with different names. Those new vegetable gardens in the public representation became something hip and creative as opposed to the slightly old-fashioned image allotments have.

---

3 We conceptualize community gardens as part of urban agriculture or urban gardens, sometimes intersecting with guerrilla gardening. Different terms are used which might under certain circumstances merge into the term community gardening: neighbourhood gardens, collective gardens, kitchen gardens. In French the terms: jardins communautaires, jardins collectifs, jardins associatifs, jardin solidaires, and in Paris: jardins partagés and jardins d'insertions are the most frequent. In German mostly the terms Nachbarschaftsgarten, Gemeinschaftsgarten, Interkultureller Garten are used. Different terms sometimes also allude to slightly different main objectives of the gardens, especially Interkulturelle Gärten and Jardins d'insertion are a special subgroup of community gardens that focus on the 'integrative' character of gardening and follow a special social function in favouring people with migration background or social economic- or health difficulties.
**Community Garden Projects: A Working Definition**

Community gardens are not consistently defined in scientific literature. Different terms have been used to describe new gardening phenomena in cities, and terms differ from country to country\(^3\). The difficulty of one common definition lies in the huge variety of grassroots initiatives which exist. Nevertheless, I will attempt to describe some minimal criteria.

For the purpose of this study I refer to urban community gardens as plots of land collectively used and managed by urban dwellers for gardening (including growing food).

Even though some community gardens allocate parcels/ lots to individuals, they are usually not separated by hedges or fences. Thus, the ensemble of the garden is accessible to every member and cared for collectively. The initiative to create the garden typically comes through bottom-up processes. Allotments, and other forms of relatively top-down or centrally managed communal gardens as exist for example in hospitals or schools therefore do not fall into the scope of this study\(^4\). Moreover, I will use mainly the term community gardening projects (CGPs) to refer to the fact that these are not only common gardens in the sense of green spaces but to emphasize that they are bottom-up, community-based efforts to create socio-ecological spaces which serve as social meeting points.

**The Idea of Community Gardens Gaining Ground**

In France, we can trace the first activists for community gardens back to the middle of the 1980s when there were several, rather singular, projects. We can speak of a movement since the late 1990s when the Fondation de France financed 189 projects in France and the organisation of meetings and colloquia. In a meeting in 1997 in Lyon, an informal network of garden activists called “Jardin Dans Tous Ses Etats” was created, which has since strongly promoted the creation of community gardens throughout France. Today there are over 400 community gardens in France and around 70 in the city area of Paris alone\(^5\). Most of them were created after 2001. This was the year when the municipality of Paris under its new (and current) Mayor Bertrand Delanoë, embedded in a “city-greening” program, launched the initiative of the “Main Verte”. This municipal project has as objective to foster the creation of new community gardens in the city area and to provide them with a regulatory institutional framework the “Charte de la Main Verte”. It has been argued that this initiative has been a reaction to single existing occupations and wild gardens on abandoned places in Paris and thus supposedly has been a way to discipline them. However, it was in the same breath a

---

\(^3\) However, the line is not always clear to draw between allotments and CGPs. The bottom-up characteristic is a slightly fuzzy criterium and many previous studies have also been remarkably imprecise about the boundaries of the new movement.

\(^4\) The precise number is constantly changing since new projects are in preparations and many projects have generally an ephemeral status.
“response to a structured and precise citizen request” (Caggiano, 2010, p.1215). An explicit ambition in all of these garden projects has been the reinforcement and fabrication of social links and community through inclusiveness and openness.

Development in Berlin was much less explosive, not least because a concrete, systematic support by the Senate of Berlin is lacking to this day. Although consistent city politics and an institutional framework are absent, many community gardens have been put in place, especially since 1997 (Rosol, 2006). Some of them have been legalised from formerly occupied grounds as a relict of squatting- and city farming projects in West Berlin (Meyer-Renschhausen, 2011). Others, such as the initiatives at the “Gleisdreieck”, advocated and fought for many years against real estate speculation tendencies to gain permission to cultivate abandoned public or private grounds (Meyer-Renschhausen, 2010). Because procedures for getting legal permission to utilise grounds are often very time consuming, gardeners engaged in different strategies, like the guerrilla manner or the new concept of mobile ‘nomadic’ gardens. Garden nomads cultivate vegetables in boxes filled with earth to be set on park decks, construction or demolition sites that await different uses, or other kinds of urban vacant land. They are free to move to a different place whenever it should become necessary (a prominent example is the “Prinzessinnengarten”). Around 2004 the first so called ‘intercultural garden’ was created in Berlin with support of the local government. Christa Müller suggests that marginalised groups in particular find fertile ground for integration in these new community gardens (Müller, 2002). In absence of general structural support from the government, the non-for-profit foundation “Stiftung Interkultur” has taken over the lead to foster the development of intercultural gardens. Of the currently around 30 new community gardens created in Berlin many have only temporary permissions to use the land (e.g. the big pilot project on the former airport ground “Tempelhofer Feld”). Expulsions of gardeners from their gardens (for instance the garden “Rosa Rose”) have in the past created much media and public interest. Hence gardeners continue to call for more sustainable politics and support from the city (Meyer-Renschhausen, 2011). Many of the existing community gardens in Berlin today are built on public ground where other public projects were cancelled due to the financial situation of the local government. In some cases community gardens were tolerated as an alternative low cost utilisation (Rosol, 2006).

In order to understand the ambition and motives for taking the initiative to create a community garden both in France and Germany we might have to move across the ocean to the United States. The movement was inspired by the first working community gardens situated mainly in New York City and still today many community garden projects see their roots and motivations in these ‘working utopias’ (after Crossley, 1999).
The beginning of the community gardening movement went together with so called “guerrilla gardening”, which has been defined as “the illicit cultivation of someone else’s land” (Reynolds, 2008). Reynolds (2010) and many others date the beginning of the community gardening movements to the year 1973 when in New York City the young artist Liz Christi started to spread seeds and plant trees on vacant or abandoned plots in her neighbourhood in Manhattan. This project which started as an occupation or use of waste-land has motivated many followers and attracted media interest. She called her group the “green guerilla” which was also the origin of the term ‘guerrilla gardening’. When in the course of the feminist and emerging environmental movement, citizens and habitants started to use vacant and abandoned spaces in cities to create little green oases, they usually did not ask for authorisation to do so (Jahnke, 2010). When those occupied spaces become tolerated by local governments (or the respective owners of the land), or spaces are allocated to activists groups in order to turn them into CGPs, we then speak of community gardening.

We see that in some crucial elements the emerging forms of gardens are not a reproduction of the allotment movement but indeed new movements. Firstly, the initiators have shifted from external benevolent philanthropists to city dwellers through grass root initiatives. Secondly, the motivations and ambitions have also changed. As Florence Weber (1998) puts it, between the beginning and the end of the 20th century the ideology has changed from charity and hygienist ideas to environmental education and social inclusiveness. Equally noteworthy is the notion of the critical consumer, who started to reverse the post-war representation of industrially-produced food as higher quality than home-grown products. Gardeners act in line with the environmentalist spirit, hence adhering to principles of organic farming. Besides greening the city and providing space for growing one’s own tomatoes, community gardens, as a quasi-public space, follow the ideology to produce neighbourhood ties and create a source of social cohesion. In times of economic crises and discussion about social-economic inequities, certain forms of community and allotment gardens ideally fulfil a new integrative function aimed at integrating marginalised groups of society (e.g. Jardins d’insertion in France and Intercultural Gardens in Germany). Some might argue that there is also a structural difference between the two forms of gardens. Typically, community gardens are created more in the midst of the city on public spaces, abandoned or vacant land. Whereas allotments assign one garden patch to each family/gardener which serves for individual and private use within the limits of a specific framework of regulations, a community garden is a single piece of land gardened, sustained and cared for collectively by a group, mostly on a voluntary basis. Thus it is often proclaimed that community gardens are self-governed; decisions are typically taken democratically and management, access and finances are regulated collectively. However, in both garden types the organisational form of associations is dominant. It could be argued that CGP associations
are only in earlier stages, and do not yet rely on elaborate rules and regulations as allotments do.

Christa Müller (2011) convincingly argues that those structural differences are not the most important factor which differentiate community gardens from allotments. It is rather the conscious dialogue and relation that community gardens seek with cityscapes and urbanity: “[The new garden] wants to be perceived as genuine part of urbanity rather than as alternative to it - and only at last it is a place, in which to recover from the city” (p.23, translated by me). Urban community gardens also represent political battles over power and disposition over (urban public) space (Rosol, 2010). Studies analyse and interpret the community gardening movement as a laboratory to locally reflect global social changes (see different articles in the book edited by Christa Müller, 2011). They are thus more than an idealisation of nature and a mini-playground for environmentalists, but are presented as a farsighted and timely response and vision to address the challenges of today's world (Desmazières, Gras, Kraft, Philippe, & Rollier, 2011; Meyer-Renschhausen, 2004)

**Paths Already Paved by the Literature**

Although health in Europe has not been described as a primary motive for engaging in community gardens, it is quite consistently reported as one of the effects of these gardens. In a systematic literature review I have identified 39 scientific studies on community gardening that mention health. The focus of most of these studies was primarily community development. Approximately three quarters of the studies mentioned or empirically investigated health related effects of CGPs, all of them predominantly positive. Overall, the studies were descriptive and correlational in nature. With a specific focus on health, the majority of empirical evidence shows that CGP have an effect on nutrition and food preferences (Alaimo, Packnett, Miles, & Kruger, 2008; Allen, Alaimo, Elam, & Perry, 2008; Corrigan, 2011; DeMattia & Lee Denney, 2008; Dart, 2010; Hopkins & Holben, 2010; Lautenschlager & Smith, 2007). Furthermore, a number of studies report associations between CGP and social capital (Alaimo et al., 2010; Comstock et al., 2010; Glover, Parry, et al., 2005; Glover, Shinew, & Parry, 2005; Larsen & Stock, 2011; Shinew, Glover, & Parry, 2004). Social learning, sustainability and resilience were other important topics that more distantly touched health and well-being (Bendt, 2010; Krasny & Tidball, 2007, 2009; Saldivar-Tanaka & Krasny, 2004). A number of studies explored more broadly into the benefits of community gardens and concluded that they foster health and well-being. Many of those studies were surveys or qualitative studies based on accounts of garden organisers or very active community gardeners (Armstrong, 2000; Dow, 2006; Ferris, Norman, & Sempik, 2001;

---

6 The search terms entered in the databases Scopus, Web of Science and Pubmed were ‘community garden’ and health and we did the same with the almost synonym terms ‘neighbourhood garden’ and ‘intercultural garden’.
Twiss et al., 2003). Others were qualitative studies mostly in one garden or one city (Hanna & Oh, 2000; Kingsley, Townsend, & Henderson-Wilson, 2009; Milligan, Gatrell, & Bingley, 2004; Wakefield et al., 2007; Wills, Chinemana, & Rudolph, 2010). It has mostly been generally concluded that health related effects are numerous with mental, physical and social health benefits (e.g. Draper & Freedman, 2010), and it has been argued that community gardens boost well-being and resilience in cities (e.g. Okvat & Zautra, 2011). All studies, which mentioned health effects in community gardens, confirmed that these effects were generally positive at the individual, community and/or environmental level. Yet, if we look closer into those articles there are a number of limitations to many of these studies. Many articles make no clear distinction between allotments and community gardens and mention health or well-being benefits only very generally without explaining pathways or concrete experiences related to improved health (see appendix literature review). However, the first green shoots sprouting from the analysis of the literature and history of the allotment movement led me to the hypothesis that health plays a certain role in the community gardening movement and conversely that a CGP might have the potential to contribute to health promotion.

The origin of my basic research question and the starting point of my investigations is herewith laid out. However, looking back at the literature, I would like to extend the observation that it has not always been entirely consistent what is meant by health, let alone clearly described in these studies how exactly health-related effects are produced. Can we really talk about effects or merely associations? Also, it has not always been clear which pathways connect these effects observed in studies to the garden, which are the limitation, or under which conditions do effects occur. This study will therefore try to investigate with qualitative methods into some of these gaps. But to be very clear about the concepts used in this study let me start by providing a preliminary definition of the concepts of health. A closer look with more details connected to my findings will follow in chapter six.

**What is Health?**

Many definitions of health have been formulated. Definitions have not only changed with the specific historical period, but also exist in parallel in different disciplines and different streams of thought in medical philosophy. Currently, I would say, these definitions are operating between two poles. There is the very large and inclusive definition of the WHO of health as a state of complete mental, physical and social well-being not just the absence of disease or infirmity⁷, as formulated in 1946. On the other end there is the so called

---

⁷ The WHO also specifies further that health is a human right “The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.” (WHO, 1948 or http://www.who.int/trade/glossary/story046/en/index.html)
biostatistical definition of health, which treats health as a biological and purely objective concept based on statistical normality and defines health in terms of the absence of disease (Boorse, 1977). However, there is also a middle way of a definition. In a field like urban gardens we need such a middle way to be inclusive enough to capture perceived subjective health-related phenomena, while remaining specific enough to allow operativeness in the field.

Following Canguilhem (1965) I conceptualize health as an inevitably normative concept, meaning that health is intrinsically subjective and value-laden. Inspired by Nordenfelt's holistic theory (e.g. Nordenfelt, 2007), but for my purpose expressed in different terms to operationalise the concept, I define (objective) health in this study as

the mental and bodily capacity to cope with everyday life (under the circumstances and expectations of the ordinary environment) and to fulfil crucial activities and other necessary actions for a person's minimal happiness in life.

Nordenfelt uses the expression of vital goals to define health, which I draw on and modify in my own study. However, to make this concept more easy to grasp I express the same idea by referring to 'crucial activities and other necessary actions for minimal happiness'. Just to mention some of the elements of this definition: it is a holistic theory in the sense that health is a concept that can only be assessed according to the entire person not on the basis of one particular organ, since it is depending on the entire system of the social and individual being. Furthermore, health has in this view a social dimension, where illness and disease are thought of as a disruption of a person's performance of her or his roles and tasks – a thought inspired by Parsons (1951). The theory at hand has hence a clear orientation on action and ability. This approach corresponds with concepts used in health promotion, where health has been considered less as an abstract state of mind and more as a means to an end. Health can be expressed, in functional terms, as a resource permitting people to lead an individually, socially and economically productive life. “Health is a resource for everyday life, not the object of living. It is a positive concept emphasizing social and personal resources as well as physical capabilities.” (WHO, 1986)

---

8 See Nordenfelt's *On the nature of health* (2nd ed. 1995) for a more comprehensive discussion and the original definition. The latest adaptation of definition is “A is completely healthy, if and only if A has the ability to realize all his or her vital goals given standard circumstances.” (Nordenfelt, 2000).

9 Parsons says “health may be defined as the state of optimum capacity of an individual for the effective performance of the roles and tasks for which he has been socialized” (Talcott Parsons. The Social System. New York 1951, p. 431)

10 In 1986 the WHO definition has been amended by the Ottawa Charter “Health promotion is the process of enabling people to increase control over, and to improve their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. [...]Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being” (WHO, 1986).
Nordenfelt’s definition deconstructs the dichotomy of health versus disease and suggests a dimensional concept of health which allows us to think different degrees of health. A similar idea was introduced by Antonovsky, who conceptualises health on a continuum between the poles of health and dis-ease\textsuperscript{11} (Antonovsky, 1979). Both are shifting the attention to a positive concept of health. Nordenfelt is working on the philosophical definition (the nature) of health, whereas Antonovsky focuses more on the 'etiological' factors (origins) of health, which is for him consciously not contradicting the concept of disease or pathogenesis but rather a complementary view. Following both, disease is hence not clearly the opposite of health but “diseases, injuries and defects are such inner processes and states of a human being as tend to limit this person’s health” (Nordenfelt, 1993, p.101). The disability to fulfil one’s vital goals, or non-health (dis-ease), hence the other end of the continuum would be called (objective) illness in Nordenfelt’s theory.

On the basis of this theoretical conceptualisation of the objective concept of health, we can now ask ourselves how this differs from subjective or perceived health, something we are more likely to encounter in interviews\textsuperscript{12}. Nordenfelt (1993) explains three senses (or dimensions) of subjective health, a cognitive one and a feeling or experience one. Being subjectively healthy in the first sense is “to be convinced, or to believe that, one is healthy” and in the second sense to experience “a set of mental states which together define subjective health” (ibid. p.111). This set of mental states means having some feelings that are commonly recognisable as health, such as feeling fit, healthy or strong. A third sense of subjective health is in a way the absence of illness, thus not feeling subjectively ill (not having a mental state associated with illness). However, there is not always congruency between objective and subjective health. Being subjectively healthy can also occur in a case of objective non-health.

With the 'set of mental states', we slowly enter the conceptual realm of feelings of well-being. How does this differ from the complete well-being in the WHO definition of health? In general it can be noted that feelings related to health are a very specific subset of well-being. After Nordenfelt the dimension of emotional reaction to the subjective states of health is not part of the subjective health or illness concept. “To be happy is something over and above being healthy” (Ibid., p.111). A concept that it broad enough to capture all of those feelings of well-being is ‘quality of life’. I will in chapter six come back to this while discussing the outcomes of this study.

\textsuperscript{11} The hyphen is crucial here because, he distances himself to some extent from the biomedical disease concept as opposing health (Antonovsky 1979, p.5)

\textsuperscript{12} Objective health is often to a certain extent hidden to a person, be it because not all of the wants and goals for minimal happiness in life are always consciously contemplated, or be it because we just start to think about health once there is a breakdown and we fell under the level of acceptable health.
CHAPTER 3 METHODS

FROM THE GROUND UP

This chapter will discuss the epistemological roots as well as the methodological foundations, of this study. The study at hand is a qualitative study, conducted in five community gardens in Berlin, Germany and Paris, France. I sought to understand health in urban areas through the lens of concrete representations, meanings, and hence experimental knowledge of actors in community garden projects. Although several studies have been published in the past ten years mentioning health benefits related to community gardens (see Draper and Freedman 2010; Okvat and Zautra 2011 for reviews) all of them stayed rather descriptive and did not tell us much about the underlying mechanisms of eventually observed correlations. Moreover, very few of them started from a focus on health, and if they did, they often discussed only one specific health related aspect (e.g. nutrition or exercise). This study seeks to close the gap in research on European empirical data on this topic and at the same time tries to add a theoretical contribution to better understand the links between health and well-being in community gardens. Hence, the study was initiated with an explorative aim and a theory building approach, therefore a grounded theory method seemed suitable. This means I started from the community garden as setting and a very ordinary life experience (the representations about experiences of health) and from there I try to better understand or theoretically describe the nature and origins of health.

In the 1960s, Anselm Strauss and Barney Glaser developed the grounded theory approach in their study on dying in hospitals. They advocated qualitative research, as it, if pursued with grounded theory methods, provided an alternative approach for scientific and systematic data collection and analysis, which challenged the dominating paradigm of quantitative empirical studies as the only scientific way of collecting data and producing valuable scientific results (Glaser and Strauss 1967, Strauss and Corbin, 1994). It set off something we could call a paradigm shift in methodology and still stays contested (Bryant and Charmaz 2010). In the forty years of its existence and particularly since the methods of the founding fathers took diverging directions, different grounded theory methods have emerged, representing different epistemological positions, spanning from a positivist to constructivist approaches (Charmaz 2000; Mills, Bonner, and Francis 2008). In the following I will explain in some more details my general beliefs about nature and how to conduct research, in order to be clear about the foundations of this study.
Grounded theories hold the promise to use concepts that emerge from the field and to be closer to ‘reality’. This study applies the more constructivist stance, as outlined by Kathy Charmaz (2000), which revises the more or less strongly prominent positivist positions of its founding fathers by accounting for the social construction of reality. In the beginning of the study, I was gladly guided by the systematic and elaborately described techniques, which should allow (even a novice like me) generating a theory from data in a constant comparative approach. I tried to follow the main procedures like theoretical sampling, comparative analysis and systematic coding (Charmaz 2006). In light of the time limits of this project, certain modifications had to be made, which will be explained in detail in the following sections. The main methodological insight from the course of the study is that the field has revealed not one but many different realities that could be described in many different terms and various questions could have been asked from different angles and disciplines. Data analysis cannot rely solely on rigorous synthesizing to result in a grounded theory that explains comprehensively how the link between health, well-being and CGP can be explained, because this bears the risk of reductionism. Thus the aim of this study could not be a comprehensive model of reality but a more ethnographic objective of understanding everyday situations from the actors’ perspectives.

In brief, the field and its actors open many paths and hideaways in the landscape, but it is the researcher who chooses which path to follow and on which bench to sit down to admire the landscape and contemplate the field. What crystallized from the field in the course of my study, and became theoretically intriguing, was the concept of health used by actors in the field. The underlying concepts in the gardeners’ accounts seemed to diverge, appearing to escape standard theoretical definitions. Their ways of presenting the concept of health and well-being thus quickly became an outstanding code in my analysis, bringing me back to a questioning of the very ground of my discipline and of this study. What is health and well-being?

**Sampling and Harvesting Data**

This research is based on observations and in-depth interviews made in two community garden projects in Berlin and three projects in Paris. For this study, the perceived reality of the actors is the most informative outcome. Firstly, as no ‘objective data’ was collected ten years ago when the movement started, we can today rely, at the most, on the experiences made and reported by those who accompanied the movement. Secondly, perceived and subjective health of individuals is in fact the most important proxy we can get in order to approach the complex concept of health. I will thus focus on and reflect upon the representation of experiences of health and well-being of gardeners in their community garden, and the ways in which they explain and make sense of them. For the selection of the
gardens I relied on garden projects which were relatively well established and had existed for several years. By way of studying these gardens, I could make use of memory and experience accumulated in those gardens over time, since the first rush of excitement in the novelty of the project was passed, and participants already had a chance to reflect on the reality of the gardens. All in-depth interviews took place either in the community garden or at the respondent's home.

This study did not set off with a clear number of hypotheses or a closed theoretical framework to deductively test against its empirical material. Rather, the data collection and analysis in the first phase followed the main topics emerging in the interviews. In the entire process I tried to make an effort for maximal openness for the actors perspectives. Throughout the last interviews and analytical phases, different ‘grounded’ concepts have been purposefully emphasised. As categories emerged, questions arose and gaps could be identified in the data. To fill holes and gaps in theory, I tried to apply theoretic sampling as far as possible. This means that analysis and data collection proceeded to a certain extent in parallel and development of first codes and ideas influenced my data collection. For instance, I decided to add a third community garden in Paris after having conducted the first interviews and realising that further variation from the other side of the Seine and a different “quartier” was indispensable. However, I could not apply theoretical sampling in its most rigorous way because I had to travel to reach my field in Berlin and hence I had to plan for a data collection-phase. However, I went back for a second interview phase in October to respond to certain gaps I found in my data. Theoretical sampling is thus one basis of the comparative element of my grounded theory method. Another element is constant comparison of empirical material and theory, which could be conceptualised in an analytic induction approach or abduction13. This implies reflecting the empirical findings in a circular way constantly comparing with already existing theories, literature and my own hypotheses, admitting that all development of theory is always theory guided. A purely inductive approach did not seem to be practicable given conceptual fuzziness around the main concepts. Some might find the turn towards analytic induction a modification of grounded theory methods, especially if we are considering formal grounded theory (Glaser 1998). Nevertheless, I think such a modification can be justified since Strauss and Corbin explain that “if a theory exists already, then it can be elaborated or modified in comparison with the data from the field” (Strauss and Corbin 1994). Also Charmaz suggests that the importance of induction might have been rhetorically overplayed in the original book (Glaser and Strauss 1967).

---

13 In its procedures analytic induction can be understood as explaining in more detail one way of understanding the iterative, constant comparison approach (compare Atkinson & Hammersley, 2007) Although analytic induction has sometimes been treated as an independent model for qualitative research, I follow (Reichert 2009) and think it is applicable within grounded theory.
Processing the Fruits - The Analysis

Now that we have discussed principles of data collection and the nature of data, I will try to explain how the data was treated. Analysis started with revisiting the recordings and transcripts of the interviews. Then, by coding, the interviews and field notes were labelled and categorised, while I tried to thoroughly reflect upon the actors perspectives. Memos were a central element in my analysis to prepare the more theoretical reflections of this study.

Following the general premise to let the actors' concepts speak, the interview guide was developed rather openly to investigate into personal subjective experiences, meaning and assessment of health effects by the gardeners (see appendix). When it made sense, the interviews were transcribed. For some interviews the transcription lost nuances of the meaning, I therefore chose to code some interviews directly in the audio files. I furthermore made written summaries of those interviews, including transcriptions of the most important parts. I translated the quotes used in this report into English and made minor changes to restore grammatically correct sentence structures, preserving as much as possible of the meaning. The actors' concepts that appear in the data presentation are thus equally translated into English equivalent terms. However, while pursuing the aim to preserve the underlying constructions and representations as much as possible I used English codes already from the level of axial coding on. The clusters and concepts reported in the following chapters thus mainly emerged from the codes. In the first place, interviews were coded in very small parts with salient categories; some of them were simply descriptive, but more general categories that mirrored my interpretation of the data line by line - which has been called open coding (Charmaz, 2006). Constant comparisons and questioning of the categories were guided by theoretical sampling and analytic induction. I tried to proceed with selective coding and memo-writing, which lead to describing relationships between the concepts, influences and conditions on the central phenomena which will be discussed in the result section of this paper.

This led me to a description centred on concepts underlying the voices and representations of the respondents. To furthermore proceed to theory building, I decided not to follow a generally reductionist approach. Instead, I turned to a more abductive form of theory development, aiming not at theory but at building 'grounded' hypotheses. A special focus was placed upon carefully understanding links where the data revealed contradictions and divergences in concepts and mechanisms represented. My theoretical contribution will not be a general encompassing theory explaining the complex web of concepts and their relations, but rather an observation from the natural laboratory of community garden to reconsider how health and well-being are understood in urban areas.
Preparing the Ground - Ontological and Epistemological Remarks

I do not believe that a researcher can begin completely without preconceptions, expectations or drawing on existing concepts and certainly not without the constraints of language. For this reason some assumptions will be made as explicit as possible: Neither am I a blank slate, nor are my respondents objective sources of information. I do not believe that there is a theory to be discovered out there in ‘objective data’ in the field. “Whether our respondents ply us with data in interview accounts they recast for our consumption or we record ethnographic stories to reflect experience as best we can recall and narrate, data remain reconstructions” (Charmaz 2000). This constructivist approach denies the aim to theorise the objective truth and is thus not searching for the discovery of one reality, but rather of a possible number of human realities, meanings and what people make from them. Realities can thus be described as constructions of the individual mind and grounded theory hence aims at recognizing the irreducible plurality of representations (Mills, Bonner, and Francis 2008). Thus I see data as reconstructions of experiences, representing what people define as real in the best case, but interviews are not the experience itself.

Furthermore, I (but also Charmaz and many other qualitative researchers) see the persons I study as reflexive beings, having (sociological) interpretations and perspectives of their own, and other actors' actions. The interviewed actors come from different backgrounds, and their interpretations and perceptions, as well as their vocabulary, are diverse. This is the background against which actors make interpretations of the social world. It would be in vain to think that one comprehensive theory can be discovered on this basis to represent reality. All data is already theory-laden. All I can attempt here is to provide accounts from an actor's perspective, which might in turn inspire and inform further thinking on several concepts and several concepts might be worth testing against existing theory.

Knowing that the Aristotelian distinction between theory and practice is today deeply imbedded in western philosophy, I will, however, attempt to resolve this dichotomy to a certain extent. I propose to perceive them closer together. Every practice and social action is interpreted in the light of theory, and sometimes also inspired by it. A theory should therefore have a relation to (at least certain) practices. By doing research we can think theory, research and practice as different dimensions of a phenomenon and seek to find theory behind practice (Glanz, Rimer & Viswanath, 2008). Dewey attempted to resolve the dichotomy by focusing on similarities and continuities between theoretical and practical judgements and inquiries. He described “experimental knowing” essentially as an art that involves a conscious, directed manipulation of objects and situations. We can describe community gardens as experiments in the urban sphere. Consequently, I propose to explore the knowledge and theory used and produced in those gardens as experiential knowledge.
To sum up, I do not think any theory can be produced to state the everlasting and comprehensive truth of every action and reality of this little segment of social life I have been focusing upon. I only claim "to have interpreted a reality, as I understood both our own experience and our subjects' portrayals of theirs" (Charmaz, 2000). The theory, if we want to call it this way, which comes forth out of this approach is grounded in as much as it seeks to understand how concepts are given meanings and producing social life. However, I would prefer not to see it as a theory but rather as a hypothesis, which remains open and will need ever further refinement. This study cannot produce many answers but rather develop further questions.

I chose to use the first person pronoun "I" in some cases in this report, although I am aware that to a reader, who is trained in academic writing this might sound 'unscientific'. I chose this active from of writing to indicate interpretations and choices I made as a researcher. Passive and distant sentence constructions, as they are usually used in academic research to delete the subjective person of the researcher, could result in a very formal style and might give an unjustified impression of truth or objectivity which this study could not provide. I believe that this neither matches the approach and qualitative method explained above, nor does is make the text easier to read.

Moreover, when I use the term gardener, I refer to people that associate themselves with the community garden project. This does, however, not mean that they are all actively involved in working the earth and actual gardening, they could also be members of the gardening associations that mainly participate for social activities. They usually call themselves gardeners. For this reasons the nomination “gardener” will be maintained throughout the study for gardening and non-gardening individuals and for men and women.
CHAPTER 4 DATA PRESENTATION

GARDENS FULL OF FRUITS

The following chapter reports and synthesizes the gardeners' accounts of their experiences related to health and well-being. Although all perceptions and concepts are embedded into personal stories and lives, the presentation will focus mainly on the general concepts and explanations of the gardeners', and less on their biographies and narratives. I will furthermore try not to extensively interpret the concepts or explanations, while presenting them here, but leave this to the following discussion chapter. I try to let the actors speak themselves, but due to limitation in space of this report these will be not all quotes on a certain topic but exemplary quotes. Each quote will be referenced to a respondent in order to allow you to set the direct quotes in at least a minimal context. Although the names are changed to assure anonymity to my respondents, their gender has been kept included and an abbreviation after the fictional name (like AD or RR) will indicate from which garden the interview stems (see list of abbreviations). Let me thus begin by introducing the five garden sites and then give you an idea of the general characteristics of the respondents as of their motives. The main part of this chapter will then be dedicated to report the general phenomena, experiences and representations of effects on quality of life, health and well-being, which manifested themselves in accounts across the cities, the gardens and groups of actors.

The Gardens

This study investigates five CGPs, two in Berlin and three in Paris. In August 2011 in Berlin, and from October to January 2012 in Paris, I participated in community and gardening activities in these gardens, held in-depth interviews, observed, sat on benches and drank tea, coffee and hot wine with gardeners. Many visits and informal talks took place after the main data collection phases to fill gaps in the data collected earlier. In the following I would like to describe the gardens, knowing that this will never be complete. You can find a map of the location of the gardens in the appendix as well as a link to their own websites for more information.

The choice of the respective gardens was overall made with two criteria in mind: First, I included relatively well established gardens, which have been in existence for at least 5 years. Second, I tried to diversify the sample by including relatively different organizational structures. In Berlin I included Rosa Rose, which came forth from the guerrilla tradition, and Wuhlegarten, an intercultural garden – a specific German variant aiming at integration of
people from different cultural backgrounds. In Paris I included the biggest CGP *intra muros* with Aqueduc, a very small garden which has no individual parcels with Jardin Fessart and *Poterne des Peupliers* a CGP carried by small civic associations rather than single individuals. For a map with the locations of the gardens see the appendix.

*Rosa Rose* started in 2004 with an open call initiated by neighbourhood residents to clear three connected plots of wasteland. They transformed the 2000 m² urban dump into a garden, meeting place and a free running space for dogs (later separated by a fence). In 2008 the land was sold to private investors¹⁴, the gardeners were evicted, and a police force protected the grounds when the garden was dug up. However, parts of the plants were rescued and moved to an interim location. This location too was ephemeral, and the garden had to move again. Since April 2010, Rosa Rose has been at its current location – an open green space in a court between two blocks. The garden neighbours a public path and bench where youngsters often meet. It contains several collective lawns, hills, and shared garden parcels. Gardening tools and equipment are kept in a common hut. Work is shared in as much as each gardener waters and keeps an eye on the whole garden and not only on their own parcels. Rosa Rose is situated in the middle of a populated area in Berlin with little green space and in proximity to a busy street. Rosa Rose is always accessible because it has no fence. The organisation is based on democratic ideals (with plenum and decisions taken with equal vote) and there are no formal hierarchies, membership or association.

*Wuhlegarten*, the first intercultural garden in Berlin, was created 2003. This garden is situated in the outskirts of the city along the stream called 'Wuhle'. Originally, the land hosted three allotments, but the district made plans to use these three lots to create a playground. This project was abandoned however because of falling birth rates in the 1990s. The place lay waste for a couple of years, until a network of initiators – amongst others a district council representative, the church and the ISA e.V. an association fostering intercultural dialogue and understanding - initiated the garden, inspired by the intercultural gardens of Göttingen¹⁵. The idea is targeted specifically towards migrants and refugees to cultivate together with locals and bring in their knowledge and skill. At Wuhlegarten, around 20 people from different nationalities cultivate about 5000m² of land collectively. To join the garden and get a parcel of

¹⁴ The land that the gardeners transformed was formerly community land (belonging to the city of Berlin, or more precisely to the Liegenschaftsfond). When a real estate firm was contracted to sell the land, the gardeners where considering buying this land to preserve the garden, however, the criteria for selling was the highest bid. Hence the, agency sold to the private investors, who can naturally invest higher than that of a group of civic volunteers.

¹⁵ The intercultural gardens in Göttingen were created in 1996 by Bosnian refugees. Refugees have in Germany usually not the possibility to work, to improve their situations and because they missed the activities from home this initiative took of as a real success story (awarded with several awards). Today a whole network of intercultural gardens is created and coordinated by the Foundation “Stiftung Interkultur” (see Müller, 2002).
ca. 40m², a gardener is required to pay a fee (of approx. 60 € annually). The garden is open for events and the gardeners all have keys to access the garden at any time.

In Paris, all CGP who want to be (and almost all CGP are) member of the municipal support project ‘Main Verte’ need to be organized in an association. However, internally all projects I chose were organized differently. All three gardens I observed are in predominantly residential areas. Aqueduc is one of the oldest and biggest CGPs in Paris, created in 2004 on a neglected slope next to the railways. The name pays tribute to the aqueduct which was found under the ground and which prevented the construction of a new building. Through engagement of a group of neighbours, the city council agreed to dedicate the land to the CGP. The garden stretches over three levels of terraces cultivating a surface of about 1000m². It hosts individual parcels (≈2m²) of around 102 families and individuals living in the quarter, while some parcels are attributed to associations, children daycare centres, or schools. Next to the parcels, there are a number of community spaces, such as a vineyard, a lavender field, a lake, a large lawn and several tables and benches which invite for recreation, in addition to an area with beehives. In total it has been estimated that between 350-400 individuals are involved in the garden. To become a member, an annual fee of around 20 € must be paid per family. The waiting list is long. The garden is open, whenever a gardener is present. On the weekends opening hours are assured.

Poterne de peupliers is a community garden in the backyard of a neighbourhood animation centre in a quarter with many social housing flats (HLM) and most of central Paris' high-rise houses. In 2007, the initiative developed, from an association called Consom'solidaire who also animate the local AMAP – a network of community supported agriculture movements where consumers in cities unite to support small scale organic farmers. After several discussions and plans, the direction of the centre lent the backyard to the association, with each parcel of 9m² cultivated by one association. The garden has no individual parcels, but hosts only associations or groups, such as Consom'solidaire, a neighbourhood exchange association, a children's animation group, a handicapped children's association, a day care centre for handicapped adults, a group of neighbouring residents, and a group enrolled in a gardening course. A centre for homeless people was engaged in the beginning but pauses for now. They garden in raised beds, not in the ground, because there is no soil rather stony basalt at 10cm depth. The rest of the garden is a large open lawn and recently several collective beds for aromatic plants and soft fruits have been created. Some large older trees give shadow. To access the garden one has to cross the neighbourhood animation centre. On the one hand, this brings the garden many visitors, since parents wait in the garden and children play on the lawn before they go home from
their courses in the centre. On the other hand, to access the garden one is dependent on the opening hours of the centre, usually until 10pm.

The third garden is smaller in surface than the others. It lies in the north east of the city, also in a residential area. *Jardin Fessart* is located at the corner of two roads and occupies land where a house had been demolished to avoid being squatted. Since the demolition, a group of neighbours became engaged to transfer this place into general use to the neighbourhood. The district council discussed constructing a school, but this did not come to pass, and after long discussions involving citizens, the district council proposed to install a community garden. The community took over the initiative and the garden was installed in 2006. *Jardin Fessart* has no individual parcels but is organised through collective beds or specific gardening projects. What is used and cultivated is decided by all gardeners in general meetings. For each bed or project at least two gardeners take responsibility. The garden is open on Wednesday and Sunday afternoons, or when a gardener is present. To become a member a fee has to be paid which you can determine yourself (minimum 5€). There are a number of members that are only financially supporting the garden and its idea but do not touch the ground. Those people mainly join for social activities and events. However, everyone who is really gardening is expected to take responsibility to maintain the garden – in particular by assuring the opening hours from time to time.

**The Actors**

Typically, I made first contact with the gardens through a contact person found via the internet or the umbrella organisations ‘Main Verte’ and ‘Stiftung Interkultur’. We discussed the least disruptive way of contacting gardeners and accessing the gardens. Most contact persons invited me to come to the gardens, join in gardener’s meetings, and often introduced me to other gardeners. In *Rosa Rose* the gardeners preferred that I used the email-list to contact interview partners first, rather than approaching people directly in the garden. This was because, they were so submerged with interview requests, since their very mediatised move. Typically, I asked potential respondents for interviews after first engaging in participating observation. I conducted 19 in-depth interviews that lasted between 45’ min and two hours. Since the topic of health and well-being has potential to touch sensitive and personal topics, all respondents were informed of their anonymity in the study before being interviewed. Hence, all names in this report are fictional. Although I tried to diversify the sample as much as possible and take into account sometimes contradictory positions, this study does not claim to be representative. Rather, this chapter tries to present the actors concepts and concerns clustered around major reoccurring topics.
In order to give the reader a little bit more background about the respondents' background and characteristics, I will start with some general descriptives. Many of the respondents have been gardening for a couple of years, with about five respondents at the very beginning of their gardening endeavours, of which some were complete 'newbies'. Amongst the respondents, about seven were involved in the organisation in some administrative or political way such as official affairs, website work, or negotiations with government authorities. Those duties often fell upon those who had been in the garden from the beginning. The involvement of others ranged from daily to very occasional gardening. Agnes was a frequent visitor and had not yet started gardening, while Anja was a former gardener who had stopped some years ago. When it comes to socio-demographic characteristics, I could not detect any specific socio-economic distribution in the gardens, but from what the gardeners say they come from very different socio-economic backgrounds. Occupational statuses seemed to mix, with a rather large group of retired people, but also working people (in higher pay and very high responsibility positions, but also lower wage employment) and unemployed persons. Two demographic tendencies could however be found. First, about two thirds of my respondents were women. Generally there was a tendency that women were slightly more likely to be seen in the everyday activities in the garden. This was already observed in the first intercultural gardens in Göttingen (Müller, 2007) and elsewhere (Meyer-Renschhausen et al., 2002). Second, the majority of respondents were aged between 40 and 60. Whereas in Paris the second largest group were people older than this, in Berlin the second largest group was constituted by younger people. Parents with children seemed to constitute a very much attracted target group. Adolescents were little present. Most actors live in apartments rather close to the garden, one was living in a house with a small private garden. In the following, the data will not be presented in quantifications as this might give an impression of representativeness. However, if not indicated otherwise the concepts mentioned in this chapter were the ones which were reoccurring in both cities and across respondents and gardens. With respect to the experiences and concepts related to health and well-being I could not detect differences or potential points of comparison between Berlin and Paris. Subjective health-related experiences seem to be relatively universal however the multitude of actors and gardens make a comparison in such a small sample very difficult. Therefore, I synthesized themes and actors' concepts recurring across the gardens and cities, as well as the actors' own explanations for these phenomena. I suggest that this general mapping opens new doors for reflection and investigation. Although I could not detect associations due to the small sample, future studies could study the correlations between pathways and participant characteristics, specifically in occupational, civil and social demographic status. Moreover, the organisational modes of each garden and the general political framework seem to influence the frequencies and groups that experience certain of the proposed effects.
The Call into the Garden

"Whatever it is that calls the gardener to the garden, it is strong, primeval and infinitely rewarding." (Springer Ogden, 2000)

There are manifold motivations that inspire the community gardeners, starting from the passion for gardening, wanting to be politically active, preventing another use of the place, producing vegetables, to the prominent wish for more community and social contact (the latter was especially noted in Paris). There is a difference between what motivated actors to start with a project and what effects or benefits they perceive from it. Suffice it here to concisely represent motivations, the main part of this chapter is dedicated, however, to the perceived effects and their explanations. Many other studies have investigated into the question of motivations or are currently doing so (for Berlin see: Rosol, 2006; Jahnke, 2010; in Paris the work of Kaduna Eve Demailly, so far unpublished).

Many actors make explicit that for them having a garden is a necessary element of a happy life. A major motivation for community gardeners is to have a garden even while living in the city. Many gardeners have known gardens from their childhood and miss it since they moved to the city (or their new country of residence). In the city, having a garden is a luxury that mainly private houses in higher income areas can provide. Many of the community gardeners contest this status quo and ask “why shouldn't we also be able to have a garden” (Johanna RR16). So many of my respondents actively searched for possibilities to build up a garden somewhere. Some guerrilla gardened around trees (Anna RR) and/or planted as much as they could in pots in their apartments or on the balcony (Sarah WG, Johanna RR), before they found the CGP. In this way, some gardeners feel that by starting in the community garden they can fulfil an unmet personal need. Others say that they got in touch with the garden by coincidence or for one specific project: like Claudia RR, who saw in the garden a platform to inform about the plantations of genetically modified crops by planting a mini-corn field and information board. Kerstin WG built an inter-religious herbal garden as a meeting place in the garden and invites to activities around it. Christine and Claire JF wanted to oppose a building to be constructed and got engaged in a neighbourhood initiative. Many others just passed by and were fascinated by these unexpected spaces and got involved with something new to them because they liked the idea and where captivated by the lifelines and community.

Not only the motivations and expectations differ from gardener to gardener but also the amount of time and effort each can invest. Some people are in a transition phase (unemployment, parent leave, recovery, retirement, a loss or a move). Suddenly they have

16 To indicate from which garden the statement come, abbreviations will be used behind each name: AD = Aqueduc, JF = Jardin Fessart, PP = Poterne de Peuplier, RR = Rosa Rosa, WG = Wuhlegarten
time, or they lack a social network and spontaneously want to invest themselves in the city. The garden offers a place where they can go, every day if they want. There is always something to do. Hard work does not hold the gardeners back from investing sometimes much time and effort into something which might be thought as a short term project: “When I joined, many reasons were coinciding. I was unemployed, because my contract just ended, I chose to finish my distant studies and when I submitted my dissertation, I just had to wait for three month for the defence. Thus, I had time and it was summer, and after writing for months, I just wanted to move and be outside. I did not have any time to make big plans before because I was so busy then. I thought I could for once just live in the city. I thought, let’s go to the garden project, I haven’t seen anyone there in quite some time, so I could plant something there. […] It was clear to me that this will be extremely hard work, and indeed it was! I was busy for two weeks every day to cart around stones and debris” (Claudia RR).

Other people seek to find hold in a new community, e.g. after a move. And again others are deeply rooted in their neighbourhood and pursue long-term goals and changes, they want to transform and shape their neighbourhood, want to make it more beautiful, liveable and try to build up community ties. These people are often taking on managing tasks and pursue sometimes cumbersome negotiations with local authorities very often with stamina and patience over many years. This little overview of motivations and drivers for engaging in a CGP is far from complete and should not be understood as classification or mutually exclusive categories. Motivations and activity in the garden change. Some of the candidates who come only for one project happen to stick to the project longer. Others that sought for long-term changes might eventually leave. The motives of the actors are diverse and dynamic, but it can be marked that seldom health benefits are expressed as single motivator.

The Fruits – Experiences and Pathways to Well-being

Almost all gardeners reported well-being [‘bien-être / Wohlfühleffekt’] as an effect the CGP had on them. When we read a quote as the one above from Claudia, who cleared a field from stones in two week's daily hard manual labour before she could start planting a small patch, I wonder what is happening in the process that is so rewarding that it can make the gardener continue. They invest time and energy into something that is not their property, often insecure and ephemeral. I was specifically interested in perceived benefits and effects related to health and well-being and how the actors explain them. In other words, this study did not in the first place seek for the ideological or political underpinnings of the actors’ motives but investigated into their subjective experiences and explanations of health and well-being in and through the CGP. The main focus of the interviews was thus on the perceived experiences in the garden. In the following I try to present the results. I therefore cluster the experiences mentioned into three groups, first experiences connected to nature, second connected to community and third to participation and engagement.
"To touch the ground is well-being!" (Henry AD). Respondents say that they have experienced positive effects on their physical and mental well-being through the activity of gardening and the active contact with nature. This happens sensually and cognitively. “In the garden we can reconnect to nature\textsuperscript{17} (Marie JF). In contrast to other green-space in the city, CGPs allow for active interaction and work with the ground and nature. While other urban green spaces (e.g. parks) are also beneficial “you recover passively by being there, enjoying it and letting its magic work on you. Gardens, however, are active, you are doing something, working with the ground. You cultivate, plan and shape and care. That’s a significant difference. [...] This has deeper, more salutary effects” (Karl RR). Table 1 will make a little sketch of some of the recurrent experiences and concepts mentioned by the actor’s as connected to health and well-being. I clustered experiences and similar effects that were mentioned in both cities and in different gardens into groups of recurring experiences, which will be highlighted in bold text.

Table 1: Examples of perceived well-being and health related experiences by the actors in CGPs with respect to nature and the gardening activity

<table>
<thead>
<tr>
<th>Actors' Subjective Experiences</th>
<th>Perceived Outcomes of Nature and Gardening</th>
<th>Proposed Pathways between garden and health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeing something grow</td>
<td>Vitalizing effect</td>
<td>Stress mitigation</td>
</tr>
<tr>
<td>Sensual stimulation and nature</td>
<td>Restorative effect</td>
<td>Contemplation about healthy diet</td>
</tr>
<tr>
<td>Creating and producing</td>
<td>Spiritual experience of nature</td>
<td>Contact with nature strengthens resources and body:</td>
</tr>
<tr>
<td>Observing rhythm of nature</td>
<td>Reconnecting to production of food</td>
<td>Electromagnetic theory</td>
</tr>
<tr>
<td>Taking responsibility for life</td>
<td></td>
<td>Biochemical theory</td>
</tr>
<tr>
<td>Rewarding process and harvest</td>
<td></td>
<td>Physical activity and fresh air</td>
</tr>
<tr>
<td>Eating what you grow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being outside</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The colour green, looking at plants and the colours of flowers, sensational impressions are described as a source of delight not only for the creator – the gardener – but also for neighbours. Gardeners take responsibility for a space that they perceive as degraded or having more potential than is currently used: “Living next to a plot of waste land, where nothing is happening, this is an aggression. […] It is thus a re-appropriation of nature through the city-dweller” (Henry AD). The aspect of greening the city and neighbourhood beautification is both a motive for the gardeners and described as a source of improved

\textsuperscript{17} The French original expression is ‘retrouver la nature’, however, in English it is much more common to say reconnect with nature than find back nature.
quality of life for people directly involved in the CGP but also for passers-by. Furthermore, the sensual experience goes also via smell and aroma of different plants and taste when picking a berry or fruit that grows in the garden.

“If a seed sprouts that is wonderful and that is so much joy” (Sarah WG). Both loosely involved people as well as active gardeners report how they enjoy seeing things grow. Observing nature, life, and seasons seems to have meaning for the gardeners. Some take pleasure and joy from observing nature and sometimes they experience it as giving them back a connection to the rhythm of nature. This changes the perception of time through a feeling for passing of seasons and natural circles. Urban people today “have completely lost the sense for season. You cannot see the seasons anymore” (Claire JF). This is why the garden is perceived as a place to reconnect with nature. People feel good when experiencing the bodily sensation of being outside, experiencing fresh air, weather and sun.

Nevertheless, some elements of the nature contact interpretation are contested by some gardeners. One respondent e.g. points out that not everyone experiences the need for nature when being in the city. “Honestly, I don’t really have this need for nature. I am a real city-dweller” (Christine JF). Many others say that the nature effect experienced in community garden is rather limited due to small surfaces or because it is surrounded by urban life. Hence the experience of nature seems to be experienced as conditioned by the size and the location of the green space/CGP. “I don’t have that nature effect that much in the garden, it is only a mini-substitute because it is close” (Kai WG). To relax and enjoy the benefit of nature many respondents prefer to leave the city or retreat into their personal garden. “It is too small I am missing these wider views, in the garden you are all surrounded by buildings. If I want the recreation effect I go out of the city or go rowing. From the water you have wide views of nature” (Claudia RR). Some CGP, however, offer enough surface to experience some extended space “this garden is special because it is big, and you can really walk in it” (Henry AD). Since wideness and open views seem to play some role, parks can offer an alternative without fleeing from the city. “There is also the park just 20 meters from here there you can go and wander around” (Claire JF).

These nature experiences are thus not specific to CGPs, but could also be true for parks or other contact with nature. Which is thus according to the actors the specific difference between a garden and other green spaces? For some gardeners parks do not offer the same experience because they feel less secure due to the presence of dogs, garbage and limitations since some “people like to do something with their hands” (Florence PP). Karl's RR hypothesis is that through gardening the effects of nature are deeper and more intense, because the gardener is not only passively absorbing but actively shaping. “Park is also nice but I don’t like lying or sitting somewhere, I am not a ‘chiller’ I prefer working and
moving. […] here you do something! While I am gardening I am already productive and the thing which I plant is productive again and might give some result. During the work you already have all those nice impressions, it smells good if you touch the Melissa, and I think this is like receiving thanks or acknowledgement for your work if you see something grow, and if it then even starts having fruits or flowers.” (Anna RR) Thus actively shaping has different dimensions, one of working the ground, another of active interaction and sensual impressions of nature and of creating something that lives and produces. Gardening is socially perceived as meaningful or useful work. Johanna labelled this a pseudo-productive activity. “You know that you will not produce a riches of food but you still feel you have done something useful; you did some exercise, were outside, see plants and you somehow build up strength” (Johanna RR). But it is not only the reward as such but the process and “taking responsibility for something – for life” (Karl RR).

Some gardeners draw furthermore an analogy between the garden and the human body: “Everything you do in the garden has a representation in yourself, in the body and the soul, by working outside in the garden you work on yourself” (Karl PP). This analogy is also the foundation for garden therapy, where it can be tried to improve well-being and self-management through gardening. The concrete example Karl gave is that if you feel emotionally or physically anxious, it is better to rake dirt and make something look tidy than digging up since already inside the person things are dug up and need to be smoothed.

We could hence summarise that the garden is different from other green spaces because it permits to be active, to create, having sensual stimulation, to produce and to heal oneself.

Some of the experiences can also be negative: plants that die, too much sun or too much rain, not to mention the attacks of snails that eat your harvest or mosquitos that eat the gardener. Cultivating and maintaining a garden demands continuous engagement and work. To be really part of a CGP demands more than a membership fee. We find nature only restoring and beautiful when it is tamed and cultivated. Yet, to keep a CGP running, everyone has to invest time and work into the community and the garden this demands care and perseverance. According to the gardeners, a condition to perceive the garden as positive for health and well-being, is that the garden is fun and “salutary as long as it does not become an obligation” (André AD). Some respondents particularly emphasize being free from economic pressure, no pressure for production or the need to get done a lot. For others it is more the flexibility to decide freely when to go to the garden and how to do things their own way. The gardeners mentioned that the advantage of a community garden over a private garden is that one has smaller surfaces to care for on his own and one can be flexible to let it go in more stressful periods. Rita RR said that this is a big advantage of a community garden and sharing a parcel because you know that someone else might water the plants when you are not there or when you get a job next week.
Let us now come back to what the gardeners said about their **harvest** as it is an important motivator. Is it also a perceived benefit or effect? Actors almost univocally believe that the organic way of production is naturally connected to health. “The first thing for your health is what you eat” (Florence PP). All active gardeners report that what you produced yourself and ate directly from the plant tastes differently – ‘so good’. This sensation has different effects, for many it is a sentiment of nostalgia for the good things they experienced in their childhood gardens, for others the experience of eating fresh produce in the garden makes eating vegetables in general more attractive. Knowing how food is produced is believed to influence in particular children's preferences for food. However, many conclude that the output is rather symbolic. “You cannot feed yourself with the garden, it is more amusement to eat from the field. What you consume from the garden is too little to really have an effect on health, those who want that, should go to the organic shop” (Claire JF). Others doubt the causal relation because they were already interested in fresh and organic vegetables before and this is also why they joined the garden: “I already ate organic vegetables before I joined the garden and in the garden all my lettuce was just eaten up by snails, hence buying this stuff in an organic shop is probably easier” (Kai WG). Thus for many it is not only about the harvest but the process and experimenting that stay as experience. “Later I want to live in a commune, and here you learn from the scratch how that works, you can do so much yourself!” (Johanna RR). “The change in the world of consumption, organic food, awakens a desire to see how it grows [...] it makes that people think more of their families and their health. This is what makes people come here” (Henry AD). When the gardeners talk about “finding back one's roots”; I think what they refer to is a sort of nostalgia of the traditional way of production. “Most of the people in the city have come from the rural world, or at least they still know this from grandma. But today the next generation will be cut off the garden tradition and nature here in the city. The generation of parents with little children says now they want to show this to their children, and the old have the know-how, they get a chance to show what they know” (Henry AD). Thus eating what you produced can only in the bigger gardens be a factor of nourishment, but in many CGPs it is presented as a symbol for a bigger change people want to see.

All the above elements seem to be inseparable. That means people cannot tell whether it is more colours, aroma, fresh air, walking on the grass or digging your hands in the ground, or the vegetables they produce, which are responsible for the positive feeling they report. It is rather the complex combination of all aspects. This holistic experience of nature is perceived to have mainly three effects. One cognitive outcome could be labelled as increased awareness for vegetables and fruits. Over and above a **perceived well-being related outcome** is described as a holistic vitalizing feeling. “It is like recharging your batteries” (Anna RR). “I don’t know whether this is true for everyone but I need the earth to find energy”
Moreover, the third outcome is described as a feeling of stress relief, calm and ‘emptying your head’ [vider l’esprit] (Claire JF). This refers to an experience that if you are in the garden, you forget the stress of your everyday life. “Somehow it is as if you are entering a different space, and as soon as you enter all problems that you carried around during the day stay outside. You are caring a bit for your plants and feel more relaxed afterwards” (Rita RR). Some respondents describe this also as meditation. Sarah WG explains how she thinks this works: “You do not need to be very concentrated, therefore you can have free thoughts”. Ultimately, gardening is represented as making you more resilient and helping coping with daily stressors “It brings me down to earth especially in the hectic city life” (Anja RR). Both the **vitalising and the restorative effect** have been represented as a general and long lasting sensation. Four women in the sample describe this also as a **spiritual experience**. “Gardening for me is also something religious and spiritual” (Kerstin WG) “It is Zen” (Johanna RR; Françoise PP).

Each respondent puts emphasis on another aspect of the above mentioned experiences. In order to understand how people made sense of these perceived effects, I investigated further into the underlying indigenous theories and beliefs that could explain origins of this positive feeling. It was remarkable that many respondents, over and above the already mentioned experiences, explained the vitalising effect cognitively through theories and physical processes and some of which were reoccurring in both countries.

Beyond the experiences and elements explained above the first and most prominent explanatory path was to explain that the human body can indeed through direct contact with the ‘natural’ ground receive energy. In German, mostly younger, female gardeners in the beginning or middle of their professional life, used the term “sich erden” to describe this. This expression carries a spiritual, a psychological and a purely technical aspect. In the everyday language it would mostly be understood as re-establishing the contact with reality or to calm down. However, “erden” indeed also refers to the act of connecting an electronic device to the ground. I translate it as earthing or grounding and it is indeed used in its technical reference: “I imagine it as a physical process. We are all **electromagnetic** beings” (Anja RR). Françoise PP explains it with a personal concrete experience “You can receive the energy from the ground. Already walking on the soil gives energy much more than walking on concrete … I experienced that very concretely, when I worked 20 hour shifts in the factory once. In my break I went to the lawn in front of the factory and walked with bare feet on it, that gave me energy to continue.”

Karl RR supports a second theory. He believes in **biochemical** processes that happen when being in contact with earth and dirt. More concretely he explains that there are bacteria in the earth that the human organism needs. And that these microorganisms foster serotonin
production. He referred to a study that found that children who did not play in the dirt were more prone to mental and mood disorders later in life.

A third very common hypothesis was that **physical activity and fresh air** are the mediating factors for improved health. “If you know about health, you know that everyone is better in the garden. Body and mind feel better, because you have exercise and oxygen” (Ying WG).

**Community and Garden**

Some gardeners come to the garden without ever touching the ground. “I don't care about gardening and everyone knows that, the most I do is falling in once if in the summer there is no one for watering the plants. What I see, for myself, is only the social aspect.” (Christine JF). This is not a single case. Many respondents suggest that one of the most important effects of a CGP is the cultivation of community ties. As Henry AD said “The garden is only a pretext to meet each other”. Not every gardener would agree with this statement, for some the social contact is rather a nice side effect. Nonetheless community is a central experience and characteristic of the CGPs.

**Table 2: Examples of experiences by the actors in CGPs with respect to community**

<table>
<thead>
<tr>
<th>Subjective Experiences</th>
<th>Perceived Outcomes</th>
<th>Proposed Pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having everyday conversations</td>
<td>Community cohesion</td>
<td>Recognition</td>
</tr>
<tr>
<td>Getting to know people with</td>
<td>Individual social network</td>
<td>Reference points, security</td>
</tr>
<tr>
<td>similar interests</td>
<td></td>
<td>Strengthening trust</td>
</tr>
<tr>
<td>Learning and exchanging</td>
<td>Strengthening social</td>
<td>Coping with challenges</td>
</tr>
<tr>
<td>Developing pride and capacities</td>
<td>capital and individual resources</td>
<td></td>
</tr>
<tr>
<td>Positive reactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Communication in the anonymity of the city - a reference point**

According to the gardeners the CGP opens a space where interaction happens in a very natural way, other than in many other urban spaces. “Because there is the garden we talk to each other. In fact, it is not that, in the city one does not want to talk to each other in everyday life, it is just that there is no little line to pick up, like 'are the strawberries ripe’” (Christine JF). Especially in the anonymity of bigger cities social bonds are perceived as deteriorating and some people feel isolated. Gardeners perceive the CGP as a place where it is very easy to meet and talk to people, they explain this through having plants and gardens as a legitimate and universal topic to talk about, like having small children or a dog.
The concrete experiences recalled by the gardeners begin at a very trivial level of exchanging glances and greetings between passers-by and gardeners, but there are also people entering and chatting. “They like it, all of them! It is very rare to have a negative reaction” (Maria JF). Every positive reaction means recognition for the gardener's work. Positive reactions are perceived from outside but also from within the group of gardeners. Thus gardeners react to other gardeners and they explain that in both positions there is a potential effect on well-being. “Showing interest in another person's doings feels good and the other feels good as well” (Anna RR).

The experience of meeting people and connecting with each other has been perceived by some gardeners as vital. “Everywhere I lived I always tried to connect and be with people. This is how I was educated. In my language there is a verb for spending time together in conviviality. I need that.” (Marie JF). The garden is a way to meet people. However, the social network created in the garden consists of mostly rather loose ties. “The people I meet here in the garden were in the beginning not so important for me I have to admit. But now I see it is good. Especially because they are all very nice. You also support each other with tools, or by watering the plants or just caring, you also get advice. I was not aware of that. Before I did not really want to have the community, I would have liked to make it on my own. But here you have a great community that supports you and it is not obligatory” (Johanna RR). The element of having the choice when to have community and when to be by yourself was mentioned by a number of gardeners as an important and unique characteristic, if not condition for success of CGPs. Some people also experience conflicts or problems, mostly with single members of the group. From the experience of the gardeners they are usually confronted and solved collectively. “Of course there are also conflicts and misunderstandings but they are usually not important” (Sarah WG).

Kai WG points out that projects like CGPs enable an interaction and exchange between very diverse people. You get to know your neighbours but also people you might otherwise never have crossed in everyday life. Some experience it as a reference point and stabilizing feeling to meet always the same people in the garden. André AD expresses how just passing the garden and seeing someone there, having an unplanned conversation creates a feeling of belonging, and social well-being. “Just casually exchanging and small talk about what moves you, or what you find annoying that day. Sometimes you have something that you need to just tell someone, to get rid of it and then there is nobody at that moment. I find this very positive for my psyche to garden with others, like socio-psycho-hygiene” (Karl RR). Some link this fact to mental health in cities and propose that the garden can work against deterioration of it. “We are sometimes like psychologists. Some people get crazy if they are
alone too much. Many people just need to talk, if they come here and talk, they feel a bit better. The garden is a therapy” (Ying WG).

**Recognition**

Gardening was represented as a 'good' activity not only in the eyes of gardener but also by other members of society, who accept and even value this activity. “Older women find this really good … like my boss. So they find this ‘wow’. They think you engage yourself with something good, this is an activity you can tell your parents” (Johanna RR). This experience of **recognition** is one of the outcomes of the CGP which the respondents strongly link to well-being and health, particularly because it carries the potential to strengthen more vulnerable individuals. “Everyone is very proudly showing the garden and what they did, especially their own parcel. Most important is the feeling to achieve something by themselves. This is extremely important, especially since migrants are not actively recruited anymore. We also have some refugees here many of which have experienced war or persecution" (Sandeep WG). He proposes that the recognition in the garden group is a factor of integrating individuals into society. “Little by little you see a transformation [of people that are a bit reclusive]. They open themselves up, they volunteer for certain activities, thereby they gain importance in the view of the others, and they regain, what they had lost or never had, confidence in themselves!” (Henry AD).

But for whom are those gardens? Almost everyone confirms that the garden attracts diverse groups of people and that principally no one would be refused access. In many gardeners' accounts the CGP is presented as a place actively acknowledging diversity. Unlike work, education, or meetings with friends, to go into a CGP you do not need any reference or certain background: “Everyone can just come in. And it is a place with a good circulation, there are no conflicts and, you feel safe and reassured” (Audrey JF). The gardeners explain this by saying that in the garden your social status does not matter. Henry AD links this back to the special mode of communication in the garden; hence, when people first talk to you in the garden, it will often not be about job, social background or other status related topics, but in the garden everyone is in the first place a (potential) gardener. “It is often only after quite a while of gardening together that you get to know more about the background of each other” (Henry AD). Sandeep WG points out that this general openness together with a democratic and voluntary participation based organisation structure in the group can open a potential also for traditionally weaker members of society to participate and bring in knowledge that is in many other contexts not very much acknowledged. “People from Ukraine and Russia know very well how to garden” (Ying WG).
Furthermore gardeners experienced the exchange of knowledge and learning and the exchange of harvest or tools as creating trust and community cohesion. Giving away has also been experienced as a source of joy, pride and life satisfaction. "It is the best thing if you can offer something to your friend that you produced yourself" (Johanna RR). For some gardeners the aspect of sharing the pleasure of harvest and garden with friends seems to be almost equally important as the harvest itself.

However, Claudia RR points out that the strengthening effect of the community is not specific to CGPs: "In every group you feel at home you can grow." A condition for this growth is that you feel generally welcome and useful in the group, and then you can "open up and propose yourself for certain activities" Henry AD. Actors experience also that not everyone is bringing in their capacities, which can also create a negative feeling for those who are more engaged. To a certain extent this is experienced as a natural balance that some can engage more than others. Lack of knowledge, engagement or time can be evened out by the group if there are enough free resources. The equilibrating forces of the CGPs do not stop with sharing workloads and responsibility but also costs are shared. Usually, everybody is paying some admission fees to keep the garden going and pay water and electricity, this alleviates the burden financially for the individual. "I could never afford my own garden" (Karl RR). Kai WG saw in financial solidarity even more potential. Because even the small participation fees might be too high for some, he would propose solidarity fees, so that people who can afford it pay a bit more. By this way accessibility would be even higher for those who could be hold back by costs. The community aspect of the garden is hence also a way to give actors, who might by themselves not be able to maintain a garden, a chance to participate.

However, there have also been reports about people, who decided to leave the group because they "were not fitting in". Although most gardeners perceive personal or community conflicts as either non-existent or minor, for some single individuals there seem to have been different experiences. Mostly, however, the gardeners leave the group when they move, experience major life events that shift their priorities or availabilities. Some people left Rosa Rose after they were evicted from their first garden ground. In Wuhlegarten actors reported that some people left to rent their own allotment together with their children.
**Garden as a Laboratory for Participation and Engagement**

Let us go back to the main question. We wanted to know which positive or negative effects on health and well-being the actors perceive in CGP and through which experiences these effects manifest themselves. In the last section we saw that actors can experience strengthening and growth in the community if they feel accepted. However, there is another dimension of experiences of health and well-being that has not covered so far. Although it is closely related to the community, there is a cluster of experiences distinct from those related to nature or community. These experiences do not take their benefit out of the social links, nor nature but out of engagement, participation or ‘doing good’ as such. For instance the experience of achieving something by yourself is not only relevant for well-being, because it brings recognition from others. The achievement of having a plant that brings fruit and the fact of being engaged into a meaningful project have a value per se. Gardeners perceive this as an experience of contentment or satisfaction. The gardeners often use the terms experiment or laboratory to describe the common basis for these experiences. Therefore, I will now let the actors speak again about the ways in which the gardens have been described as an **experimental ground**. Gardeners refer to experiments about how to cultivate and produce, but also about forms of decision making, participation and shaping the city.

<table>
<thead>
<tr>
<th>Subjective Experiences</th>
<th>Perceived Outcomes</th>
<th>Perceived Pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging for something right</td>
<td>Mental Health</td>
<td><strong>Atmosphere of free space creating possibility and opportunity to put ideas into practice</strong></td>
</tr>
<tr>
<td>Being inspired by others</td>
<td>Life-satisfaction</td>
<td><strong>Participation</strong></td>
</tr>
<tr>
<td>Broadening horizons by learning from others</td>
<td>Strengthening of resources</td>
<td><strong>Self-efficacy</strong></td>
</tr>
<tr>
<td>Solving practical problems innovatively and creatively</td>
<td>Creativity</td>
<td><strong>Flow</strong></td>
</tr>
<tr>
<td>Shaping the local environment</td>
<td>Meaningful action</td>
<td><strong>Doing good</strong></td>
</tr>
</tbody>
</table>

**Avant-garde(n)**

The actors perceive the garden as a base and starting point for thinking about bigger concepts, like biodiversity, nutrition, pollution, agriculture, alternative economies and the right to the city. For Anja RR the garden is also a political space. She sought “efficacy in the city and try to bring in your capacities to the city, feel self-efficiency”. She makes furthermore clear that it is important to keep it as a “free space with a little avant-garde character” (Anja RR). If it works to create such an atmosphere, things are developing. This has been perceived as a positive experience. “In the first location we often had events, that were open to the public, concerts, cinema,…and from time to time there were completely surprising
things happening. Things that I would never expect, like artists writing an email asking to come around and build a sofa out of grass. Why should they do this on this odd lot? They do not have anything to do with us...These things have made me stay. They were a lot of fun” (Claudia RR). But also in gardens that are not that explicitly 'avant garde' there are projects developing within the CGP. Quite often they are related to health and well-being. For instance one gardener, a trained horticultural therapist, is thinking of offering open therapy sessions in the community garden. Other gardens installed raised beds to give people living in situation of handicap the possibility to participate. The inter-religious herbal garden in Wuhlegarten is meant to empower women, to help them regain the knowledge about natural healing which was traditionally a women's task.

Doing right things and doing things right

Most gardeners have testified that for them developing ideas, projects and sharing them is a form of happiness. “Everyone can use that space that I created, and I find it rewarding to share it” (Kerstin WG). But not only are the experiences with public events of special projects described as sources of joy and experimental but also internal group processes. In gardens that have an intercultural orientation experiences of intercultural learning have been described. “Here maximum 50 per cent of the gardeners are German, because we want the biggest possible exchange in the garden. If migrants come here they have conversations in German and this is important” (Kerstin WG). Sandeep WG underlines this perception of an integrative experience for migrants. He adds that in the garden you learn language and even “how democracy works” and how to fit into a group in this part of the world. But you exchange also very practical everyday hints like 'where to find a doctor'. This learning and exchange dimension has been described as enriching and opening horizons, although it creates sometimes cultural misunderstandings or pressure to do things in a certain way.

Some gardeners feel disagreement or discomfort with how certain people do certain things, this is mostly if it concerns tasks for the community like compost etc.. Often the individuals deal with this perceived conflict by instructing people how to do things well or right. “If you have knowledge it is very easy… I know how to keep a garden, all people from my country know how it is right. But for example my neighbour he has always lots of bad weeds, I tell him and teach him how it goes, but he does not want to do it like me ... and then if people come to visit the garden they always ask who has this messy place but he wants other things. That is also not right, he has no idea” (Ying WG).

Learning does not only happen due to different cultural backgrounds, in almost every garden there are experienced and laypeople. Frequently there are one or two garden professionals, who soon become reference persons for the garden knowledge, and in some
gardens also regular courses or special workshops are organized. The CGP is represented as a space for **constant learning**. Through the diversity of people and knowledge the potential topics and lessons are broad. "There is always new ideas and many bring in something to share" (Marie JF). Many of the projects try out new things, find solutions to practical problems or to express creative ideas. Examples for emerging projects were photovoltaic panels on the roof, networks for seed and plant exchange, community based agriculture networks and so forth. "It is sometimes really surprising what kinds of projects are proposed in the garden" (Claudia RR).

**Organizing yourself**

In some gardens the gardeners perceive the dimension of openness and engagement represented in the organisational structure, which is sometimes described as horizontal. Claudia RR explains “for me it is an interesting aspect that we are not an association, we do not have a board that says what needs to be done. You would find that in every sports club, there is always someone who tells you what to do...” Although decisions that concern the whole group need to be negotiated and discussed, every gardener ideally also takes part of the responsibility and decides her/or himself what needs to be done and how to do it. Taking responsibility as a group for a part of the local environment is perceived by some gardeners as an exceptional experience. If the group decides on a limited project this sometimes also gives the individual the possibility to engage more punctually in a long time engagement of planting and cultivating your own lot. "I have to stay flexible, if I find a job next month, I might not be able to come so often anymore" (Rita RR). Gardeners report that if you are feeling not obliged to cultivate a certain amount of land, you have more freedom to decide and create yourself. This gives an actor the opportunity to search for her or his own niche to participate. However, it might in some cases also be difficult to sense what can be done and what can’t be done because not all projects and ideas are welcomed by the group. Thus certain rules and limits are perceived in each garden. Where those limits are depends on the garden and the group and on the way a project has been proposed.

The experience of engagement and participation in the city or in the group in general has been perceived as strengthening and empowering experience: “It came very surprisingly that they asked me to become the president of the new association. In the beginning I would have never thought that I could ever do something like that. But this is how it happens in the garden you sometimes by far exceed you own expectations".
Summary

Bluntly summed up what the actors generally represent as health or well-being related experiences in the garden, there is a nature-effect, a community-effect and a creative inspiring effect reported. All of which can under certain conditions and within certain limitations promote health and well-being. However, the actors’ concepts underlying those big lines are much more detailed and differentiated and some also contested. In this chapter, I presented the actors’ perceived effects, the reported experiences and the gardeners indigenous theories about how CGPs are connected to well-being and health. I tried to map as complete as possible the variety of concepts and everyday experiences brought forth in the interviews. While seeking to give concrete voice to the actors, explanations and theories of pathways to explain hypothesized links were also reported. I try to equally report perceived negative effects or limits of the experiences although these are less prominently reported. I could not identify patterns between the individual or setting characteristics and effects reported. In the following chapter I will discuss and try to synthesize these experiences and bring forth some paths of investigation. In chapter six I will theoretically comment on the outcome concept health and well-being.
In chapter four I mapped the field of representations and concepts of the actors, about what constitutes their health and well-being experience in CGPs. The following two discussion chapters go beyond description. I will attempt to interpret and theoretically frame those results. In order to give more structure to the analysis of the representations and experiences from the actors, I make two propositions:

1) There are three general spaces of impact perceivable in and through CGPs, namely green-, community-, and free-spaces, which have their specific mechanisms and limitations.

2) In order to understand the well-being outcome, we should theoretically handle a holistic concept of health, which allows for a distinction from well-being and happiness but leaves still room to include health experiences.

The first proposition will be explained in this chapter and the second, theoretical part of the discussion, focussing on the concepts of health and well-being, will follow in chapter six. Some readers might now expect a judgement whether there is an effect on health or not. The answer to this question will not be found in this chapter. All I can attempt is a synthesis of the experiences and explanatory pathways presented by the actors. I furthermore analyse the conditioning factors and negative examples of those proposed pathways. Community gardens are in the actors’ stories presented as a context or space, which shapes well-being, health and happiness in the city. I suggest that the actor’s experiences and representations allude to bigger mechanisms at play in the gardens, but also in urban life in general. Three different spaces were cognitively created and are coming together in the CGP, namely a green space, community space and a free/open space.

Comparison Berlin and Paris

Before going into those spaces, I would like to comment on the comparison between Berlin and Paris. The two cities were chosen mainly to broaden the sample and see which aspects might be only specific to one city and which appear more universal. Berlin and Paris are both metropoles with a relatively similar history in small scale gardens. The comparison seems therefore valid and interesting. I found structural and administrational differences between those two cities, particularly with regards to the interaction between city council and garden volunteers. Referring to the focus of this study, however, the accounts of gardeners’
experiences of health and well-being were astonishingly similar in Paris and Berlin. Within
the limitations of the sample, I could find no major differences in the perceived effects and
concrete experiences of health and well-being in CGP. The results and mechanisms
presented in the results and interpreted in the following thus reoccurred in both cities
(although not always in all gardens). The three spaces to be explained in the following thus
seem to be rather universal to both big cities. Nevertheless, slight differences seemed to be
palpable in the prioritization of experiences. In Paris the aspects of community and
neighbourhood strengthening seemed to have slightly more weight than in Berlin, while in
Berlin the aspects of meaning and engagement in free-space seemed to play a relatively
bigger role than in the selected gardens in Paris. But also here the comparison is difficult and
might not hold against a bigger sample because the variance between the different garden
projects and groups might be bigger than the variance between the two cities.

**The community garden as green-space**

The CGP has been physically and conceptually constructed as a green space - a little
island of nature in the middle of urbanity. Nature appears to many people as something
beautiful. The gardeners attest that they enjoy green, and looking at plants and the colours of
flowers makes them happy. “This delights most people” (Marie JF). This is especially true in
unexpected places in the middle of grey urban landscapes, because there surprise makes
the pleasure even bigger18. Beyond pleasure, the concrete health-related outcome is that
more than half of the gardeners experienced the garden and nature as a **vitalising** source of
energy and as having a **conciliating or restorative effect**. Both effects were ascribed to the
contact with nature and/or the active process of gardening.

The starting point for gardeners’ green-space accounts is typically the statement that
people, particularly people living in cities, have a need for contact with nature. “I need the
garden and its nature. If I don’t have the garden to look at it, I get sick. Just as I need the
alternation, I can neither be all the time in the city nor all the time in the country side” (André
AD). This idea is not new. The *human need for nature* has been coined latest with the
biophilia hypothesis by E. O. Wilson in the 1980s19 if not earlier since the Lebensreform (life
reform) movements of the 19th century (remember what we said in chapter two about
allotments and Schreber). Furthermore, in many accounts we find a parallel drawn between
the garden and its plants and the human body. “Plants are like humans, they eat, drink and
need care” (Ying WG). There is the belief that through caring for nature and cultivating the

---

18 Nordenfelt notes that degrees of feeling happy with a particular fact can be boosted to the positive when the
fact or event occurs unexpectedly. (Nordenfelt, 1993, p.62)

19 Wilson, a biologist, defines biophilia as the “innate tendency to focus on life and lifelike processes”, he thus
states far beyond romantic, philosophical or poetic ideals that biologically human beings have this need or
tendency to connect with other life and nature (Wilson 1984)
ground, the gardener can cure and care for her- or himself. “I think that everything you do in the garden has a representation in yourself, in your body and soul. When I cultivate a piece of land, I also cultivate myself. There is a notion coined by Karl Förster 'Begärtnern der Menschenseele' [gardening the human soul], or as Fokooka – a Japanese philosopher – said: Plants are only there for refinement of humans. Hence plants are our means, from our anthropocentric point of view, to make us happy and to serve us" (Karl RR). Thus, through the active care for the garden humans can heal, although they are not directing their attention on themselves but on the garden. To a certain extent the gardener identifies with her/his garden. This is also symbolically shows for integration processes: “We are so many people here from different countries and everyone tries to bring something from their homes. I would like that the plants I took from home, take roots here and get native here, just like me” (Sarah WG). These particular constructions are illustrative of the human tendency to affiliate with nature, they furthermore provide a rationale on how the symbolic representation in gardening could be perceived as therapeutic.

Scientifically a widely recognized study by Ulrich (1984) demonstrated that nature can indeed have a medical relevance. He demonstrated that merely looking at nature through the window already contributes to faster recovery after surgery. In support of that approach, a more recent large-scale ecological study from the Netherlands showed lower risks of poor subjective health for people who had more green space in their environment (Maas et al., 2006; van den Berg, et. al., 2010).

The activity of gardening was by a number of respondents portrayed as vital or “deeper” contact with nature. It gives a bigger ‘dose’ of nature and is an activity that can balance out the strenuous effects of the city. The garden is represented as a way to reconnect or appropriate nature\textsuperscript{20} and was proposed to have an impact on body and mind. In fact, the calming or conciliating effect, explained in chapter four in more detail, has scientifically received quite some attention. Pioneered by psychologists Kaplan and Kaplan (1989) the Attention Restoration Theory states that people can restore their attention, concentrate better and release stress after spending time in nature. They explain the restorative effect through the relatively effortless attention in nature and garden (or on other things that are fascinating), as compared to the directed attention that modern city life asks from its citizens. Anja RR explains that what she has experienced in the CGP is what “has been described today as flow. Concentration on one thing and time and anything around disappears. A very peaceful calm!” Other respondents call the same experience 'meditation'. Be it flow, meditation or effortless attention the outcome is a relief from stress, better concentration, and

\textsuperscript{20} The term appropriate nature (fr: se reapproprier) alludes that nature in urban spaces exists in its wild and neglected variant. But what is understood as salutary nature in the accounts, and hence is called nature in this study, is a coherent nature part of a land populated by plants (Kaplan & Kaplan, 1989)
a feeling of mental and physical recovery. Flow has also been connected to a feeling of happiness (Csikszentmihalyi, 1990). The garden specific stress relief has recently been experimentally confirmed in a population of allotment gardeners (van den Berg & Custers, 2011).

Moreover, there was the electromagnetic theory with the concept of ‘grounding’ proposed as a pathway between the vitalizing effects and gardening. Accounts in both cities and over all locations use similar energy metaphors, just to give one very typical one: “You get plenty of energy, this is like recharging your batteries” (Anna RR). This is mostly directly associated with “getting the hands in the ground”. This theory, which I introduced in chapter four, has been confirmed by recent studies reporting from experimental settings that grounding has potential salubrious effects (Chevalier, 2012; Jamieson, 2011). Directly connecting the human body to the ground makes electron exchange possible and this changes the electromagnetic field in the body.

The second theory proposed by Karl RR (I called it the biochemical hypothesis), is probably based on a study that showed that mice which are put in contact with certain bacteria (associated with soil) a set of similar functions as antidepressants is set off (Lowry et. al., 2007). There is also the hygiene hypothesis, suggesting that decreased contact with microbes (especially those associated with the soil) in developed countries is the cause of the increased rate of chronic inflammatory disorders (allergies, autoimmune diseases). In other words, since the immune system is less stimulated it becomes deregulated. It has been proposed that the chronic inflammations following from that have also a role in making people more vulnerable to depression and anxiety (Rook & Lowry, 2008).

The third hypothesis proposed that physical activity is the mediating factor to the health effect. Many studies have been investigating whether community gardens increased physical activity (Armstrong, 2000; Twiss et. al., 2003; Wakefield, 2007). The results were mostly based on self-reports and have shown no clear results. Apparently in older people physical activity is more likely to be increased. A quantitative study from the Netherlands on the general connection between all kinds of green spaces and health has shown that physical activity could not explain the correlation between self-reported health and green spaces in the living environment (Maas et al., 2006). In my interviews I found very inconsistent experiences with respect to exercise, many gardeners do not perceive to move more, and those who thought they exercised more often reported that a major part of this exercise consists of cycling or walking the way to and from the garden.

---

21 The review article Chevalier et. al. (2011) was only published after the interviews were held. This article indeed refers to health effects of what it scientifically called grounding or earthing, but could not have been known to the respondents at the time. I am not sure to what kind of scientific sources the respondents referred at this moment.
So now we have seen that for some people there seems to be an effect connected to the green-space of CGPs. We can wonder how big the effect is. “However, what you can experience in CGPs is rather a **homeopathic dose** of nature. It works as long as you are stable and you are overall well in the city” (Anja WG, almost the same wording occurs also in Paris in the accounts of André AD). What many gardeners have confirmed is that all these effects described above might not prevent that every now and then the need for nature gets bigger and you have to find a ‘bigger dose’ of nature to restore yourself. André AD has described this as the battery which approaches its state of emptiness. According to him the need for nature can become so preoccupying that it is practically incapacitating. The community garden can do to its limitations not fully cover this need for everyone. CGPs rather function as a buffer to not get ‘sick of the city’ too quickly.

Despite all those hopes for an untapped resource for making citizens healthier and better, we should not fall into an undue idealism of nature because there are also limitations to the reported effects. On the one hand there are also environmental health risks, through pollution of soil and air, which gardeners in the city should be protected from. However, this was not very often perceived as a problem by the gardeners. In many places soil testing has been done before they started gardening. On the other hand, a couple of gardeners contested the link between health and the community garden. Although almost all gardeners generally agreed on the potential health promoting character of nature, they noted that the 'nature effect' experienced in their community garden is absent, or rather limited because the garden is too small or to much prone to nuisances of the city. There are thus conditions to the restorative functioning of the gardens. Kaplan and Kaplan (1989) formulated four properties of restorative environments. These are: being away (escaping everyday hassles and using other brain structures), extent (larger, wider views give more relaxation), fascination (effortless attention discovering, learning, being surprised; whereby extent and fascination are mutually supportive) and compatibility (with the inclinations and actions). This helps to conceptualize why some environments are more restorative than others and why the CGP is for some people more restoring than for others (ibid.) which also has to do with the passion for the gardening activity itself.

Respondents make a distinction between nature, other green spaces and garden. The garden as a piece of nature to actively cultivate, is for some an essential welfare element of higher priority. For others it is a place to realize other goals (socializing, political platform etc.). It could be proposed, that the need or fascination for gardening is more present in people that define themselves as ‘countryside person’ (“Landmenschen”) or those who grew up, or were socialized, with a garden. However, it remains unclear whether the restorative effect of gardening only works for people with this affinity for nature.
Overall, these perceived green space effects need thus to be handled with care and should not be to broadly generalized. On the one hand because each CGP offers different conditions, in terms of surface, size of the garden plots, sense of being away from the city and alternative green spaces in the quarter (Paris in general has a bit less green spaces and is more dense). On the other hand each gardener has different preconditions, needs, inclinations and life situations. Therefore an activity like digging a garden can be relaxing for one individual and very strenuous for the next. Let us not forget that some gardeners do not come for the green-space. “I am really an urban person. I see nothing else than a social aspect in the garden... I don't really know this need for nature” (Christine JF). Hence, not every person frequenting a CGP has known the inclination and intrinsic desire to garden and cultivate. In fact many people frequent the garden without ever touching the ground or doing much physical work.

Community Gardens as Community Spaces

The claim that CGPs make, besides being a green space, is to be a space of conviviality and great diversity, which is accessible for everyone. As such gardeners argue that CGPs offer chances in particular to more vulnerable groups. This fights isolation and deterioration of social ties in modern cities and helps strengthening individuals in difficulties. The community aspect of the gardens was stressed slightly more in Paris than in Berlin. This could be due to the different discourse about CGPs in Paris in the framework of the Main Verte\textsuperscript{22}, where conviviality and promotion of community and neighbourhood ties is very much emphasized in the political discussion around CGPs.

“It is for me an important concern to come closer together and to talk more to each other. This is more and more lost in cities. Social contacts on the streets become less and less and everyone is passing the other with blinders. There are hardly any spontaneous interactions between people, because all is made by machines” (Karl RR). This statement shows how the gain in freedom and autonomy, which modern cities can provide (compare Durkheim), can foster a feeling of loss in social connectedness. The statement above takes almost a Simmelian perspective. In an essay *The Metropolis and Mental Life*, Simmel (1903) describes the metropolitan mentality as marked by a general social aversion in a city\textsuperscript{23}. For Simmel cities are large impersonal spaces, which are dynamic and fluid. To react to this

\textsuperscript{22} This is the entity organized by the city of Paris to take charge of the promotion of the creation of community gardens.

\textsuperscript{23} “Die geistige Haltung der Großstädter zu einander wird man in formaler Hinsicht als Reserviertheit bezeichnen dürfen. … Ja, wenn ich mich nicht täusche, ist die Innenseite dieser äußeren Reserve nicht nur Gleichgültigkeit, sondern, häufiger als wir es uns zum Bewusstsein bringen, eine leise Aversion, eine gegenseitige Fremdheit und Abstoßung” in this quote Simmel explains a mentality induced by the city that leads to social alienation of one and the other and observes the impossibility of interactions in the density of the city. (Simmel, 1903)
individuals construct their social ties through being part of relatively small and clearly limited social circles. Belonging to a CGP means belonging to such a circle. The physically determined space allows different interactions than the wide city space. Simmel furthermore explains that the individual belongs to a number of such circles which can be organised in different ways. In traditional societies or small towns these circles follow a concentric fashion that start from the biggest and least restraining (nation, city...), to the smallest and closest territory and social belonging (family). All of these levels are inevitably connected with and part of each other from the closest and most intimate circle to the largest affiliation. In this organisation the autonomy of the individual is fairly restricted. In the metropolitan societies however, the social circles do not intersect nor necessarily link to each other, if not in one individual. This leads to a diversification of social circles due to larger and more complex social agglomerations in cities but also as a consequence of the division of labour and specialisation of tasks. Such large juxtaposed circles can assure more individual freedom (from prejudice and social norms). Yet, according to Simmel this freedom need not lead to better quality of life. In the contrary the city person can have a feeling of loneliness and alienation from one another as a result. Based on Simmel's characterisation of metropolitan mentality we understand, how the spacial enclosure in a physical space (the garden itself) and socialisation in a group of gardeners with an own identity and rules, can break the anonymity of cities and tie social bonds. It is like having small children or a dog, which suddenly makes you part of a group (parents or dog holders) in the impersonal space of the city. This leads to sudden interactions and conversations. Thus, in CGPs the group tries to recreate the experiences that one has known from small town- or village life.

This little excursion into sociology explains some of the actors’ experiences that I have presented in chapter four, like the garden as a “great way of meeting people” (Karl RR) and what has been perceived as the openness to talk to each other and communicate. I suggest that this does not only refer to the desire of people to enlarge their social circles and field of efficacy in the Simmelian sense, but also refers to what can be understood through Elias’ conception of affective links. There is the vital need of people to connect with each other and to get to know others (Elias, 1970). “It is a human need to make bonds and laugh together” (Christine JF). This is also described as “this need to have human interactions even if it is only to say hello” (André AD). The decrease of this affective dimension of social links is what many people miss in modern societies.

This concept allows us to make the connection to well-being. If affective links are a primary want/need of the individual, every fulfilled want produces a certain kind of happiness. At least if we describe happiness in terms of a want-equilibrium where the balance between wants and wants fulfilled determines the state of happiness (Nordenfelt, 1998). Moreover, the
ensemble of links, which Elias describes as a network, do not only determine emotional well-being but condition the individual’s identity (Paugam, 2008, p. 57ff). For most gardeners the social network created in the garden consists of rather loose ties and constitutes hence not their most important network. Hence in the CGPs we are not primarily focussing on bonds of close friendships, which can offer protection and social support. A significant part of the want seems already satisfied by everyday casual contacts, as “to talk and to be physically in contact with people” (André AD). These everyday contact sometimes limit themselves to pure courtesy. As we have seen in the section about recognition, gardeners pay attention to the slightest signs of recognition. This could be interpreted as a nostalgia for tighter more concentric networks. “One day I was drinking a coffee with someone passing by in the garden and since then I can greet this person by name when I see him in the street. This is important” (Christine JF). To belong to a community of gardeners can produce social ties that are organized in a more concentric way, since usually these spaces attract people of a certain local proximity and might even act as neighbourhood meeting place.

Respondents perceive their bonds in the garden as supplementary network as a source of joy, decreased isolation and predominantly positive emotions. The social dimension of the garden is thus in the first place perceived as a factor connected to well-being and happiness. Moreover, social capital that can be created in the garden for the individual and on community level can be considered a determinant for health (Rocco & Suhrcke, 2012). In a larger sense, CGPs could be understood as a reaction to Simmel’s ‘metropolitan mentality’. CGPs contest that the autonomy and liberty won in cities must result in the feeling of alienation, they could thus be understood as a laboratory engaging in the balancing act of combining liberty and autonomy of modern urban societies with the social cohesion of traditional societies. Several studies have been able to provide empirical evidence that community gardens in the US could increase the feeling of being connected with the neighbourhood, individual and community social capital (Alaimo, Reischl & Allen, 2010; Comstock et. al., 2010; Glover, Parry & Shinew, 2005).

What has not been discussed much in the scientific literature so far, but which is important to consider, is that not every contact offers an affective tie. “Some will never become my friends they are very serious people” (Christine JF). There are also people in the CGP that one does not particularly like. Moreover, “there are also bad people in the garden” (Ying WG). Thus, some contacts constitute ruptures of social and affectionate ties, because “some people consume energy. Like parasitic plants there exist also parasitic people” (André AD). As in most groups and associations power struggles and personal fights might take place in community gardens that have an impact on well-being but which have not directly to do with the garden. Schmelzkopf (1995) is among the few scientists who addressed the
issue that community spaces also underlie mechanisms of competition between the users and conflict. There is a need for more comprehensive scientific studies on the mechanisms how community garden projects can also give rise to exclusion. Although most community gardens aspire to be an open space that accepts everyone, there are certain factors at play in any establishing group that can exclude people from participating. It would be furthermore interesting how conflicts and selection mechanisms influence the perception of health and well-being benefits.

People have different competencies and resources that make a project like a community garden possible. “Everyone has his or her role in the garden and everyone has other resources or capacities. You know, if you need to know something you go to [this or that person]. They have knowledge that I don't have and I respect that a lot” (Christine JF). It creates autonomy for members of the garden to realize and bring in what they can do, and the relative freedom to pay less attention to the things they cannot do. “In the garden people open up and they start taking responsibility for little things. This way they earn credit and importance in the eyes of the others. And one regains, what one might have lost or never had, the confidence in oneself” (Henry AD). You can talk and show what you have done and usually either other gardeners or visitors examine interestedly what the others are doing and have been doing. Briefly, the CGP offers a context for the experience that showing interest in another person's doings creates a feeling of well-being for you and the other. Recognition does not only come from fellow gardeners, but it was consistently reported that reactions from outsiders, passers-by and people in the personal surrounding are mostly positive. “There are all those that say, it is good because it is pretty [...]. I imagine if one day the garden would need to close and had to set up a petition that it does not close, we would get much more signatures than only from the gardeners. That is important” (Christine JF). After Paugam (2008) recognition can provide the individual with the proof of his or her existence and valorisation in the eyes of the others. In general, gardening is represented as a socially accepted activity that carries a connotation with doing something useful. The gardeners’ accounts suggest that the esteem coming from the activity itself and the social recognition through the social network can be particularly important for people with experiences of marginalization. Some gardeners present stories of persons who they perceived as vulnerable and which in the CGP made a very positive development in their eyes and “re-established themselves”.

Occasionally there are negative reactions in the form of littering or vandalism, which occurs mainly at times when no gardener is in the garden24. We would think that if recognition is so important, the gardeners would be very sensitive to any kind of rejection. Interestingly,

24 Reported only in the Rosa Rose, which does not have a fence.
there seems to be a different mechanism at work when confronted with critique from outside. Karl explains that you have to have an attitude a little bit above criticism to confront negative reactions. Anecdotes report of passers-by or outsiders who express that this is not beautiful or it should be done in a different more organised way. Karl however describes the that the city has so many rules already, that he does not want to be regulated in the community garden which he perceives as his ‘free space’. Convinced of the usefulness of spaces like this, he feels reinforced to defend the way things are done in this space. He perceives this activity as fighting for a greater good and his hypothetical reaction to criticism would be to argue against it. This observation is interesting, because seemingly there is a consciousness amongst the gardeners about different opinions and opposition. This opposition is in the short term demoralizing, but then triggers a defence mechanism that as such seems to be strengthening to a certain extend.

Karl did not experience the negative encounter himself, but he had heard about it from other gardeners. When something like this occurs the collective memory seems to be mobilized and the group reflects together on possible reactions or defines their standpoint. The final collective standpoint or philosophy might not be fully shared by every member of the community. If the collective opinion diverges too much from the individual visions, this can be a reason to leave the CGP or to experience a rupture of social ties. We could speak of a collective conscience that becomes particularly apparent in cases of resistance. This in turn can strengthen the common identity in the group of community of gardeners. But at the same time collective conscience can impose norms and a focalisation on (mostly repressive) laws and regulations to resolve perceived problems. Furthermore the collective philosophy of the group also creates a distinction from others that do for instance not understand the value of this ‘free space’. To sum this up, opposition or negative reactions to the CGP can produce ambiguous experiences, primarily the experience is demoralizing but though active coping this can turn into strengthened capacities and group cohesion.

Every constitution of a social circle does also create outsiders. Respondents, however, stress the openness and diversity encountered in the garden due to CGP’s high accessibility. “Everyone is mingling in the garden, from all horizons” (Henry, Paris). The gardeners reason that diversity is possible though an interactional particularity of the garden: Unlike many other contexts, you do not need any reference person or certain background to enter a community garden, because the interest for the project and the garden is justification enough for showing up. This means, when people first talk to you in the garden it will often not be about your job, your social background or your friends, but in the garden you are first a (potential) gardener. I would say that this is a rather idealised representation. Judgements about others are made in the garden, although they might run more along the lines of being more or less
active in the garden, than along (invisible) socio demographic characteristics. However, if we
followed this logic, this little difference could make a contribution in social links and esteem
for unemployed people for instance, because they typically have more time that can be
invested. This gain in recognition has ultimately the potential to affect the reality of these
people, since “the social status of the poor does partly depend on those social links” and
seemingly in France and Germany unemployment is connected to a decrease in social links
(Paugam, 2005, p. 227). However, seldom are homeless people or other further marginalized
groups intensively involved or even dominating in the garden. Certain judgements about
social appropriateness and contribution to the group are made and social roles are at play.
Even the greatest intended accessibility has limits.

With the beautification and appropriation of the space and the very recognizable work of
volunteers, the gardeners earn control over these urban spaces. As Tissot (2011) shows in
her study of South End Boston, the urban middle class has now adopted a new liking for
diversity in the trend for new sustainable life-styles, but only as long as it remains under their
'control' (Tissot, 2011). We should thus be very attentive which mechanisms are put in place
in the name of diversity. The casual garden talk and inspections about what someone has
just done can turn into a controlling, thus repressive practice. It is a delicate task to balance
diversity, openness and freedom of the individual if one has to keep a project running. “It is
not always easy, people want to come when they want, not have any obligation but we
cannot function if not everyone invests some time” (Christine, Paris). If someone invests less
time and work, she or he might feel an obligation to justify or might quickly fall in the esteem
of the fellow gardeners. It depends both on the group and on the organisational structure,
how much can be absorbed by a group of volunteers without at the end of the count creating
a predominantly negative balance.

In the typology of social ties proposed by Paugam (2008) most of what we described so
far could be categorized as elective participatory links. These links are institutionalised in
some gardens in a formal membership in an association. However, not everyone who defines
him or herself as gardener needs to be member and not every member frequents the garden
regularly or belongs to the group that sustain social relations. There are also members that
come to the garden only for individual gardening, talk to no-one and go home. Thus it is not
always easy to distinguish whether there are links or not. Moreover, within this typology, still
different options exist to operationalize the concept. One characteristic of elective
participatory links is that people chose themselves to participate and can also leave the CGP
when they want. The latter often happens if personal mobility asks the people to change

---

25 Every green space also attracts families and children as a main target group, this is also the case in many
community gardens. Hence, potentially the garden could moderate filiation links (family relationships),
however, in the data at hand this is only a very marginally mentioned.
locations, other events in the personal life make that one changes preferences (couples break up, family members need care) or after encountering conflicts or if the individual feels repulsed. Most gardeners however defended the construct of a relatively well working self-regulating group. “There can be frictions, misunderstandings and conflicts but they are not so bad” (Karl, Berlin). The limits to accessibility in CGPs and the cases of rupture of social ties certainly call for further investigation.

The community garden as free space and open space

Community gardens are ideally open and offer possibilities to engage and participate. The sprouts and fruits of the community garden do not always take form of vegetables and flowers but sometimes they are public events, creative inventions, educational programmes. The topics and projects addressed in those events can reach from gardening courses over education on biodiversity, to much wider topics of sustainable living, art, concerts up to concrete political fights, e.g. against expulsion gardens or other community spaces. Public activities are opening the garden space for much larger public than the gardeners directly involved. Furthermore, those activities give the gardeners the possibility to use the CGP as a platform for their ideas, creativity, ideology and practical skills. This section investigates into the question what mechanisms hide behind these fairly diverse experiences of participating, being free and able to express oneself. This adds an important dimension over and above the effects of nature and community, namely the effect of doing something that you want to do, that you believe has meaning and provides opportunities for self-actualization.

In chapter four I have clustered the actors’ voices around this last third dimension as ‘laboratory’ or ‘experimental spaces’. It has been said that a CGP is not predetermined or limited in its possibilities and therefore projects can emerge that go much beyond the garden lot. I suggest, that the mechanism of impact on well-being could be found in the characteristics of what I call open spaces or free spaces\textsuperscript{26} in general. What do I mean by this? CGPs have some characteristics that set them apart from top-down organized interventions. In the following I will discuss some of these characteristics.

\textit{Flourishing in the garden}

First of all, I will try to come back to the concrete experiences and the contexts in which they evolve. It should be mentioned that all gardens I observed were self-organised projects. That means they usually care for their goals, management, rules, financing, etc. themselves.

\textsuperscript{26} I use ‘free space’ with the German concepts of ‘Freiraum’ in my mind. I use the term to refer what in Britain is mostly called: social centres or community spaces. In German the meaning of Freiraum that I allude to is the freedom of a person or a group to develop and flourish. For the individual this is also the liberty to realize and develop one’s identity. In leftist circles the concept is used as an umbrella term for different self-organised projects.
with all the members. What is concretely done in the garden is a matter of negotiation in the group, but in principle everything someone would like to pursue is worth considering.

Most CGPs start without a concrete formal plan or agenda. Often in the beginning there is merely the overall purpose to create a vegetable garden and use space together. However, for the gardeners involved in this stage the CGP touches at least one issue that is important to them. Those motives can vary from participant to participant (for some it might be the community, for others the bees). Once a CGP is established within its frame new, relatively loose projects can emerge, given that they are close to at least one participant's heart. For instance, most CGPs are in contact with alternative food chain supply networks\textsuperscript{27} in this way they are reacting to their ideals about how food should be produced and organize a supply beyond what they can produce in the garden. In one garden a gardener is thinking of offering open non-commercial garden therapy sessions as a small project in the project. All this strengthens the accessibility of CGPs for non-members of the garden\textsuperscript{28}. But for the gardeners it opens up the possibility to experiment and put into practice the changes that they would like to see (in themselves but also in a group or in the society) on a small experimental scale.

What is it in this mechanism of free space, that the gardeners perceive as related to health and well-being? “I think you learn here and see what works, make experiences and then you might leave the garden stronger and look for something you can do yourself” (Sandeep WG). The gardeners present CGPs as a platform to express ideas, discuss them, become creative, solve problems different from your everyday hassles, be surprised by what others do, and try out things. For many gardeners the feeling of ‘being able to do something yourself’ was a crucial experience. This means using your own capacities to come to some sort of result. The gardeners link this closely to mental health and the feeling of not being depressed. Things that you only knew that they were theoretically possible become a possible resource: “it is the greatest thing, if you have tomatoes that you got from a plant that you saw sprouting form a little seed” (Johanna RR). This goes beyond the fascination of observing life but caries the dimension that you created this life. Pride about achievements can be boosting self-esteem or self-efficacy believes and as such be empowering.

This effect is sometimes used structurally by associations involved in the CGPs. “There are associations that help people in precarious situations through gardening because it is a valorising activity. Their participants have no work, not out of their choice - they want to do something - but just don't know how to get started. Then they start gardening and this helps

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{27} As for example AMAPs in France (most accurately translated with the US concept of community-supported agriculture) or Food-coops in Germany.
\item \textsuperscript{28} In Paris to assure accessibility it is part of the regulatory framework for community gardens, laid down in the Main Verte charta to open the garden regularly to visitors and public. So they organize themselves for having publicly announced opening hours with a gardener present.
\end{itemize}
\end{footnotesize}
to reconstruct yourself, mental health plays enormously here. So they embrace a task and work and they see a result they have achieved. This is the best thing ever if they see the fruit of their doings" (Florence PP). Thus, CGPS can create the contexts for growing and flourishing – in the sense of cultivating but also personally though cultivating strengths and talents, using skills, experience flow and growing experience.

“It had something of shaping your own life environment and everything is still open, there are all possibilities” (Anja RR). As it is free and reactive to the city, people engaged in CGP often see themselves in direct interaction with their city environment. It is thus not only an escape from the city but taking responsibility for the local environment and actively shaping it. This gives gardeners a feeling of contributing to a bigger goal which is meaningful.

Nevertheless, community gardeners may be confronted to many little problems and challenges which can produce negative experiences, like plants that are pulled out, no-one feeling responsible for a task, not getting finances for an envisioned project, etc. Similar to problems described in relation to the community space, negative experiences are often described as short term adversity which can usually be solved or accepted. Smaller challenges, which are not severe enough to produce a rupture in the group, can in the long run sometimes even be strengthening for the individual. Gardener's said they learned how to cope with situations, saw how others deal with the same problem and readapt their strategies. These experiences of mastering challenges provide a source of positive well-being experiences. But also just accepting certain problems, have also been perceived as strengthening in the sense of “well this is not the end of the world” or “I would always defend the way we do things here, I am really convinced that this is good”. This goes even as far as overcoming own physical or personal disabilities, when people become aware that even though they suffer from pain or disability, they still want to go to the garden, participating if possible or at least sitting there on a bench.

I propose that this strengthening mechanism through small challenges could be understood with help of Antonovsky’s concept of sense of coherence. Sense of coherence is a determinant of health, which influences how well people are able to mobilize their general resistance resources to cope with stressors and disability (Antonovsky, 1979). Antonovsky suggests that the sense of coherence is a relatively stable characteristic of personality but can be influenced by major life events. It is of the sort that little stressors and successful coping can strengthen it and major losses or similar events can cause breakdowns. In the way the gardeners describe their experiences, I suggest that CGPs produce possible experiences to strengthen the sense of coherence and therewith the ability to generally manage life and perceive the world as manageable and coherent. The sense of coherence has been shown to be connected to physical and mental health.
To sum this up, some people can exceed their expectations and develop their self-efficacy believes and possible their sense of coherence through experiences in the free space of the CGP. Of course there can be also defeats, things demand much more work and effort than expected or cannot be finished. It is also clear that there are tasks involved that are neither very rewarding nor boosting creativity that simply need to be done to keep the garden working. Self-organisation is challenging, but this carries the two faces of the same coin: one strengthening and one demanding to burdening.

Limitations of free and community spaces

It would be naïve to think that free spaces produce only positive effects. Self-organisation can be very time and discussion intensive. Some people might be deterred from joining a garden by the mere imagination of the processes involved. It is clear that maintaining and managing a garden is linked to a lot of work and responsibility, the low maintenance garden is an illusion (Springer Ogden, 2000). Obligatory meetings and activities are sometimes perceived negatively. At the same time it is also perceived negatively if it is always the same people involved and doing the work. In all groups there are different levels of involvement. Finding a balance in valuing everyone’s strengths, liberty, limits and abilities and not overstraining the group of highly involved individuals is not always possible. Just as highly involved or knowledgeable people can be perceived as too demanding and patronizing, lowly involved actors can cause stress or strains on the others. Finding a balance often takes form of having a formal leadership group or putting down rules and obligations for everyone, thus in practice there are often certain power structures at play and free spaces become limited. What this means concretely for perceived well-being effects was not entirely clear and certainly needs further studies.

What are the conditions under which free space and strengthening can happen? Much of what happens in and around the garden happens rather unplanned or unexpectedly for others but also for gardeners themselves. Respondents found themselves being asked to be president of an association, programming websites, giving workshops, organizing public events or having a big harvest you can share with others. It has been suggested that this personal and/or group development can happen only as long as everyone is free to choose what she wants to do, when to do it and how to do it and when she can stop as soon as there is a negative feeling about it. Many of the negative experiences are connected to feelings of obligation. I suggest that the liberty of a free space should be large enough to include the possibility to fail or lay quiet with a project until a new inspiration or trigger animates the CGP.

So we have seen that in the free and community space of CGPs the actors create the rules, plans and distribute responsibilities themselves. The conditions for freedom of
organisation ideally is a relatively flat hierarchical structure. This means that important issues can be raised by each participant equally. Ideas can be proposed, discussed and decided by everyone, although this can also happen in subgroups. The result can be that participants feel engaged and empowered by this process but it can also be that people perceive the process as a lot of work. In many CGPs there is an attempt to value, bring to the light and use the potential of everyone who is motivated to contribute. However, not every community garden succeeds in creating a flourishing free space and not all ideas are carried by the whole group and can thus be put into practice.

The underlying conditions that make free spaces open and creative can be enlightened, I believe, with what has been researched about so called open space meetings\(^{29}\). Open spaces aim to foster creative new solutions while involving every individual's potential. Owen (1997) found in open space meetings several principles of open space that I think could be helpful to guide community gardeners how to welcome free and open spaces in the CGP\(^{30}\).

Furthermore, CGPs and those projects inside the CGPs carry a political and transformative dimension that cannot be neglected. It is thus not only about the process of being engaged and empowered as such but about the ends. Some people search for possibilities to change the world. So it is also about accomplishments, meaningful social change and to arrive there, sometimes gardeners get engaged in activities they don't enjoy in themselves but they do it because it is necessary to make a project work. This creates a sense of meaning and contributing to something larger than oneself.

However, some of the problems and challenges encountered in CGPs cannot be interpreted as ultimately strengthening. From the accounts it can be inferred that particularly (1) personal conflicts can decrease well-being (which often relates to power struggles) inside the garden and (2) pressure from outside (especially over the security of land and the free space). These are the two major factors of negative well-being and possibly health effects. Personal struggles often cause actors to at least partially withdraw from the project.

\(^{29}\) The term 'open space’ is borrowed from Harrison Owens paradigms of self-organisation and Open Space Technology (Owen, 1997). Open Space Technology exists since 1985 and was a new way of convening meetings and problem solving for pressing issues in shortest time. I am aware that I use the term open space out of its original context of usually business meetings as such you will not find all elements of these concepts one hundred percent accurately happening in CGPs. However, I believe that due to the common basis of self-organisation, it is a useful analogy.

\(^{30}\) Principles after Owen (1998) are e.g. 1) \textit{Whoever comes is the right people}: The size of the group is not decisive for the result of a group. If people come to offer voluntarily their time and effort for something, that means they care for it and than something can get done. 2) \textit{Whatever happens is the only thing that could have}, if participants of a group focus less on the past and could-have-beens, then the creative potential of the here-and-now is more likely to be valued. 3) \textit{Whenever it starts is the right time}: there should be no time or performance pressure for creating any result. Lastly what Owen called the \textit{Law of Two Feet}, states simply, “if at any time you find yourself in any situation when you are neither learning nor contributing - use you two feet and move to some place more to you liking” (Owen, 1998). For some people this means leaving the garden, or getting engaged in a different project, for others this means dealing differently with problems.
Pressures from outside, like the threat of evictions, can turn the effects of free spaces into their opposites. Actors have seen breakdowns (in Antonovsky's sense of falling ill). "After the eviction in 2008 I fell into a very deep depression" (Anja RR). This was not only because of the garden but because in the course of the years before she experienced some negative life events but the garden had given her a space that was important to her and helped her cope with problems. "I interpret it in a way that in my unstable situation in those days, it was the breaking away of the garden that kicked away the last leg to stand on" (Anja RR). A hypothesis emerging from this could be that in the case of forceful abolishment of a project it is the health and well-being of the most vulnerable that suffers most. But also in less extreme situations CGPs are sensitive to pressure from outside. Even though it can unite the core group even more to defend a project against threats, it raises at the same time and potential for conflict in the group. Both can cause ruptures in the group and lead to overburdening gardeners.

Although the rules and threats from outside can put lots of strain on CGPs, actor's mainly agree that it is positive to have a certain framework of institutional support and acceptance of decision-makers (such as e.g. Main Verte). In this, it is mainly important to have a responsible contact person in the local government and a clear positioning on city council level to support the legal use of ground for community gardening. The close collaboration directly with the actors is crucial. For governments the challenge is to give the actors the freedom to make their own rules, while supporting them with knowledge, tools and sometimes financially to enable a CGP to be an open and free space and have the potential to foster well-being and mental health. Moreover, a crucial need is to be treated by local governments as equal partners and that their work and effect of the garden is acknowledged not only at their creation but equally in other urban planning phases. The support needs of CGPs seem to be rather universal. A study from Toronto reported very similar needs for appreciation and infrastructural support by decision-makers (Wakefield et. al., 2007). On the side of the actors, biggest possible tolerance of weakness, openness in processes (but also of results), and particularly reflexivity of the groups about the processes seems to be a condition to well-being in a CGP.

The gardeners add another crucial condition for well-being "only if you don't have to live from it can you use it for recreation and healing" (Karl RR). This means that if CGPs are expected to produce or pay rent this might hinder inspired performance and genuine creativity. For some garden in Paris the rules from outside made by the Main Verte to organize opening hours regularly already puts much strain. In this way I support the argument of Rosol (2006) that CGP cannot be seen as a cheaper way of caring for urban public green spaces.
**Accessibility versus Protection**

Another condition and a crucial determinant to who is benefiting from the effects is accessibility. Accessibility is important, not only because it gives legitimisation to the CGP to use public ground but also because it determines the composition of the group and the social function of the project. How can a CGP stay open to the public, new ideas and developments and not become only an outdoor extension the living room for the most engaged core group? This is a challenge that needs to be addressed in each CGP group. In most gardens there are formal limits for participation, like the number of individual plots available or quotas (qua nationality or proximity to the garden) that might hinder the possibility to join and in some cases create long waiting lists. Moreover, informal elements like the composition of the group already active play an important role to attract or put off people to frequent the space. Adolescents, for example say: “the association is not made for us, so we only come when we are invited”. Some CGPs address special groups, such as intercultural gardens. “The composition of the garden is consciously made so that no group is in a majority […] so that [the locals] do not dominate we make sure that at least half of the gardeners have a different cultural affiliation or migration background” (Kerstin WG). The example from Rosa Rose, which is public without a fence, shows that openness can mean more than having opening hours. In this garden to some extent cohabitation happened with former users of the place, such as youngsters or drug users. The gardeners judge that they tolerate each other but in fact there is not much interaction with them. However, it reminds us that urban wastelands are often no empty spaces and their transformation into a CGP might exclude the former users. The ideal of being open and public also reflects the active interaction with the city and its most vulnerable inhabitants.

In contrast to the ideal of openness is the need for a protected and safe place. “I had an attack on the street, since then I was very anxious … but here I know everyone I don't have any fear here” (Ying WG). In accounts like this it becomes clear that the garden can only function as it does because they feel it is protecting from city’s nuisances (dogs, litter, violence, noise). Hence in line with this need to protect the space the ideal of accessibility might be compromised. As it happens in most gardens dogs are forbidden and most (though not all) gardens have a fence to protect from vandalism and in most gardens only the gardeners have a key.

---

31 There was a very interesting discourse in this garden about the former or alternative users of waste land in the city. How do community gardens push other users like youth or drug users away from this ground. Some of the gardeners have been conscious of this and they try to be tolerant to enable cohabitation on the same ground while protecting themselves against potential risks (talking about installing syringe disposal boxes). In most cases there was not much interaction between gardeners and other users of waste land.

32 With this personal background, this respondent until today locks the door if she is alone in the garden and would let people in she knew, in this way the fence is absolutely necessary for her participation (especially in the beginning).
TOWARDS A THEORY OF WELL-BEING, HEALTH AND HAPPINESS

"Recipes for a healthier society must be clear about what they mean by 'health', and what aspect of health they are directed to " (Mildred Blaxter, 1990)

Chapter five revisited the actors' representations of pathways and links between health, well-being and CGPs. I proposed that the experiences reported in CGPs allow us to describe some characteristics and mechanisms of three general environments or spaces that shape well-being. This chapter will add a more theoretical reflection on the outcome concepts – health and well-being. I start from the observation that the health concepts, underlying the explicit accounts of health-related experiences in CGPs, diverge in the accounts of the gardeners'. Health takes different delimitations. This second discussion chapter will hence work towards a philosophical proposition for a general theoretical understanding of well-being and health in CGPs. I suggest that to conceptualize health a holistic theory is helpful. Within this theory the subjective health concept used to understand the outcomes of voluntary action should be narrow enough to make a clear delimitation from happiness.

Confronting the Fuzziness around Health

While discussing the various health and well-being related experiences in community gardens a major conceptual fuzziness around the concept of health became apparent. Although we generally presuppose health as a universal concept related to concrete human experiences, the exact experience and representations people give when they talk about health might differ. As the word is commonly used in everyday language, we might not be aware of the conceptual differences because we always think we understand what health means. Nevertheless, I, a gardener, or you - the reader, might handle a specific concept of health and we only become aware of it once we are confronted with a specific question or when we have to judge a specific situation. Amongst the respondents the use of the concept of health and well-being was not consistent. This not only manifests itself in the divergence of the gardener’s final conclusions about the health effects of CGPs and their classification what counts as health related experience. But several gardeners also developed several dimensions of the concept while thinking about health.

“With reference to my health, I can't really say...maybe not...after all if you think health in a broader perspective as well-being, yes, evidently the fact of going to and being in a nice place is good for health. But if it was not for the oxygen, I don't know...such a small square...”
(Audrey JF). Audrey is thinking out loud, and seemingly she switches back and forth between a broad and a narrower concept of health. One concept allows including the experiences she made in the place, the other seems to count only parameters and logical physical pathways that apparently escape her judgement. There dilemma between health as a perceivable state of being and health as a rather scientific category. This is not only a philosophical challenge, but also a difficulty encountered in the empirical material. The focus of this study was to understand experiences of positive health mainly. Usually, people find it much easier to describe experiences of illness. But it is not only this focus that makes it difficult. “The common notion of health, like all highly abstract and general concepts, is notoriously vague. The borders of the concept are fuzzy. In particular the exact line between health and ill-health is hopelessly difficult to draw from a conceptual analysis only” (Nordenfelt, 1993b). This is why this more phenomenological study might be able to add some points of reflection to the existing theories of health. I suggest that in further studies of health and well-being in CGPs the concepts used should be very carefully explained and operationalized.

The basic theoretical concepts are explained in chapter two, here I want to apply those foundations to my CGP's data. In many gardeners' accounts health seemed to be presented as more limited than well-being. Handling a concept of health which is broadly holistic and unspecific like the WHO definition, would thus risk being too inclusive. In general, handling the WHO concept for evaluating bottom-up social and human activity is very likely to lead to the insight, that health would be one of the major outcomes and is thus influenced by basically everything. Knowing that all respondents engage voluntary in the CGP, basically all links conceptualized by the gardeners could be relevant for health, they all refer to a certain dimension of well-being. Otherwise they would not invest their time and energy in a project like this. Would this in consequence mean that every gardener necessarily has a better subjective health? Some of the gardeners don't feel that they have a better health. How to deal furthermore with respondents who described positive impacts on their well-being but stated that the garden was unrelated to their health? I suggest to conceptually differentiate between well-being and health.

A manner of doing this would be to base the analysis on the bio-statistical theory of health, which sees health as absence of disease and thus clearly more restraint than well-being. This would, however, bring us into even bigger conceptual troubles, because only few accounts referred to the absence of disease as a reference point for health and none to statistical normality. Most of the accounts of health related experiences in the garden refer to an overall judgement of physiological and mental capacities and not of the functioning of a specific organ. These experiences made by the actors described in terms of positive health
A possible way mediating between the two positions would be to adopt a holistic theory of health, but specific enough to make a distinction between health and well-being, like to be found in Nordenfelt (1993). This middle-range theory allows including both the positive and negative representations of the link between CGP and health. Positive in the way that we could analyse experiences like “I am healthier since I have the garden. […] the body and mind feel more alive in the garden” (Ying WG), because we can conceptualize health as a holistic concept connected to abilities. Negative representations in the way that we can explain why other people conclude “For me personally the health aspects are not relevant in the garden, I see only the social side. For me this is fun and I can laugh” (Françoise JF). The aspect of being in social relation with people might here be an aspect of well-being and happiness, but this does not mean that she automatically is or feels healthier.

**Constructing Health on an Urban Plot of Green**

I defined health earlier as “the mental and bodily capacity to cope with everyday life (under the circumstances and expectations of the ordinary environment) and to fulfil crucial activities and other necessary actions for a person's minimal happiness in life” (compare chapter 2). Let us now try to see how this provisional concept is able to capture the data and where it fails.

**Subjective health**

Accounts from the field are based on personal experiences and feelings of health and well-being in CGPs; we are hence talking about subjective health. Nevertheless, through the general conclusions they draw, sometimes little windows are opened to get a glimpse of what the actors objectively construct as health. Let us look at subjective health:

“I simply feel healthier if I come here in the garden. I am not young anymore, especially with my blood pressure and all the other problems of the age. And when I come here I feel better. […] I think that is in not only for the moment but in general” (Sarah WG).

This account is one example referring to subjective health effects perceived. Health is described as a bodily sensation of feeling healthier, in the sense of being fit or having a feeling of vitality, this could arguably fall under the set of “privileged mental states, which together define subjective health” (Nordenfelt, 1993a, p. 111). This is one of the three dimensions, to be seen as part of subjective health, when following Nordenfelt's dimensions of subjective health (ibid.). The respondent feels better which means there is a reference group for the comparison which is probably the usual ability to function within the limitation of
age. Thus feeling better can mean feeling stronger or capable of doing more things than normal or feeling less ill. Age is build up as a reference frame, within which health perceptions or limitations are weighted, which we could call standard circumstances.

Above the sensory level of feeling healthy we also find a second cognitive dimension in this account: the respondent believes herself to be healthy. Although blood pressure is typically determined through measurement and diagnosis by professionals and not always directly experienced and felt as health or illness, she knows about her high-blood pressure. Since she feels more energetic she might assume and believe that the gardening activity is good for that. Yet this is a hint to the second dimension of subjective health, namely the awareness of being healthy or ill, which is a cognitive dimension. In many accounts this cognitive dimension was rather strongly present.

When thinking about health-related effects a first story that often prompted was a belief that one is healthy if one lives healthily. The actors referred prominently to health related behaviours, like nutrition and exercise. This is a very common representation of health (Laverack, 2008). Let us take the example of nutrition. Nutrition in CGP is believed to be an important aspect to mention when it comes to health and many respondents represented food as the major direct determinant of their health. “For health the most important thing is what you eat!” (Florence PP). Most respondents cultivate for a substantial part vegetables and eatables in their garden. In spite of a very limited harvest and little direct consumption of the organic vegetables which the gardeners grow themselves, the topic of what to eat and where food comes from is a prominent topic associated with CGPs. Referring to subjective health, we could say that the cognitive sense not only consists of the belief whether you are healthy or ill, but could be broadened to the awareness of determinants of health. How you behave in respect to these determinants and whether you believe what you do is good for your health, could also influence how you judge your subjective health.

Of course this functions also in the negative relation. One respondent cognitively deconstructs the health effect. “The garden has had no effect on my health”, since “I already ate organic vegetables before and I do not move more than before” (Kai WG). So also for Kai health is mainly displayed as a result of heeding right health behaviours. We will come back later in this chapter to experiences of no health effect or the deconstruction of health. The tendency for a healthy person to focus on health behaviours is not surprising, if we consider the activities of health promotion and health education in the last decades and the high frequency of health messages. Those tell you to eat five portions of fruit and vegetables, and exercise at least half an hour a day, otherwise you threaten your health and engage in risk behaviour, thus you are facing the constant risk to live unhealthily. This orientation correlates with a similar orientation in health sciences. Health research typically investigates into
determinants, disease and risk factors, but very seldom into experiences of health. The result is a tendency to focus on the dichotomy between health and disease, the more gradual differences between for instance good health and excellent health might get lost in this account.

The third dimension of subjective health is eliminative and is constituted simply of the absence of illness. In short, if a person does not feel ill or less ill, s/he might subjectively feel healthy or healthier. Indeed this is a third way of argumentation that we encounter in the accounts. “I have always constant pain, but if I think about it just gets worse. You know, why I am in the garden? Because, here, look at flowers, see the plants, and talk to everyone a little bit and then I do not feel the pain so much” (Ying WG). The respondent here talks about feeling healthier and less in pain because, while in the garden she is engaged with other activities, and not focussing on the pain.

However, not all subjective experiences in CGPs are positive, there is another dimension to add on the negative experiences with regards to health and well-being in CGP. “The garden project is not exclusively positive I already thought of quitting, because sometimes you do not feel capable anymore of discussing, or frictions that can despite all occur every now and then. Or sometimes there are problems with the neighbours when some vandal thinks she had to stamp on every plant. This does not promote my health, hence these are also effects on my health” (Claudia RR). From this account we can sense that subjective health can also decrease with experiences of conflict and negative feelings and these negative feelings are not only associated with subjective illness. This becomes clearer if we admit that health is a normative concept and a desirable outcome in general (Canguilhem, 1966). The logic about the aetiology of health in this account is that if the garden is positive it leads to health or well-being (a positive outcome), but since not everything in the garden is good it can also not always lead to health (feeling bad cannot lead to being healthy and good).

Objective health

With respect to objective health, these statements allow only a limited conclusion. This is because certain aspects of objective health are ignored, for instance because they happen unconsciously. There might furthermore be links that are constructed mostly cognitively, coming forth of certain preconceived ideas or theories of the world. Therefore it is crucial to define the very concept of health in every qualitative analysis of health and well-being related experiences. This allows also for transparency about the aspects of narratives that are extracted by the researcher to define health. I define health, as proposed earlier, with Nordenfelt’s action theoretic and holistic concept. The narratives give some hints that this

---

33 As defined by Nordenfelt (1993a, p.106ff)
definition is not too far away from how some actors themselves define health. Sarah shows this quite concisely: “My health is in general good. I walk much and I can still work – of course not regularly seen my age, I am 69 – and I write and program my website that I care for myself” (Sarah WG). Here we see that her reference point for good health is *ability*, having the capacity to function in daily life. Hence she is able to perform a certain number of tasks that are important to her, in the intensity that she believes can be hoped for given her age, which constitutes the standard circumstances and expectations of the ordinary environment. To come to a conclusion about health Sarah starts from a general all-encompassing judgement of her bodily and mental state as a whole person. She is thus applying what Nordenfelt called a *holistic perspective* (Nordenfelt, 1993, p.86/92).

**The holistic perspective**

The basic idea in building up a theory of health from a holistic perspective is to determine health objectively as a state of the whole person. Assessing health is assessing how well the person is able to realize vital goals given standard circumstances. For the study of the concept of health in CGP, this changes that, we can include also positive health representations which are based on a holistic perspective. Furthermore, this also reflects the perspective of the respondents that their health can be considered in relation to its environment. Disabilities or diseases, in contrast, might affect one particular organ, but the feeling of health is not specifically localized. In the representations of the gardeners this holistic perspective is especially prominent when they construct the pathways of the perceived effects of the CGP on health. Karl RR expresses this particularly clear: “In fact it is a holistic strengthening of the human organism – body, mind and soul all together. This is only possible in nature”. Karl is convinced that the garden can strengthen something in the complex system which finally makes the gardener healthier as a whole.

Health is thus both a resource for leading a good and meaningful life but health is also an outcome and goal as health is necessary to cope with our tasks and everyday life. I therefore suggest that a holistic theory of health allows us to reflect the complexity and diversity of accounts encountered in the field and helps to disentangle complex statements. Let me show this again in one example:

---

34 Nordenfelt (1993, p.92) argues “that it is here at this level and only here that we are able to ascribe health or non-health to people.”

35 For Nordenfelt standard circumstances mean that the circumstances should be neither artificially created and maintained, nor extraordinary (Nordenfelt, 1993). However, I find this concept still a bit vague. The total set of circumstances is determined by many factors, Nordenfelt mentions the cultural situation (ibid., p.100, we could go further and ask in how far living in cities can still be considered standard circumstances and for whom. Many Respondents for example said that since they grew up in the country side the city life puts extraordinary strains on them and their health. Would we consider them sick because they can at times not cope with stressors of the city or would we say it is a normal reaction to get sick in a sick environment (compare e.g. Sternberg, 2009)

“Since I am in garden I noticed that I feel healthier than before. I lost 10 kilos [...] If you know about health, you know this is because it is good to move and having fresh air. I come every day with the bicycle back and forth and then a bit gardening here. The body feels much better and also the head. Before I was often very sad, with pain and I lost so much with my business. I always felt like dead and at home I cried a lot. My child was very worried for me. The garden has been therapy, I feel much better now” (Ying WG).

This rich statement summarizes the dimensions discussed before. It starts with a holistic judgement, followed by all three dimensions of subjective health, first the cognitive (in its behavioural additional) sense, second the sensual experience and third the relief of a feeling of illness. Moreover it refers to two points we have not yet discussed. She mentions the social ability to function as a mother (my child was very worried). This is an indication that before joining the garden she felt not in state to cope well enough with this function to reach her minimal happiness. However, her abilities seem to have changed through the garden, thus seemingly she moved so far up the health continuum that she passed the threshold between illness and health. This might be an explanation why as a conclusion she refers to the CGP as therapy.

Those individuals who saw a strong link between their activity in the community garden and their health outcome, also often reported a certain deception with certain factors of the health care sector. The most prominent points of complaint were lacking a holistic perspective though lack of time and attention in doctors encounters and doctors that could not find the problem or cure needed for the complaints of the person. Some gardeners thus came to the conclusion that they themselves are the main actor for their health. Accounts and experiences of health in CGPs make this explicit, just remember the discussion about nutrition and exercise, the garden as a therapy and self-efficacy. One statement is very explicit on this shift:

“I believe people create their own health, ergo it does not necessarily need a doctor, that makes me healthy. I think more and more that we get away from that. But for me personally this is also because even doctors are prone to commercialisation, they do not have health protection as their sole premise and therefore doctors and physicians get away from their real vocation and their proper abilities. It is not the healing person anymore that I go to, that I first tell for half an hour my story and who knows who and how I am, but he rather immediately prescribes some kind of medication and does not examine me anymore nor deal with me as an individual person. This is why for me it is the precondition that people have to take health in their own hands. I also believe that in only few cases humans need medication of chemical nature, nature holds or most common diseases healing substances, herbs and medication at my disposal to keep me or o make me healthy” (Karl RR).
For a long time people have trusted in welfare systems and skilled professionals to provide us with the conditions that permit us to attain our full potential of health and to cure us when the equilibrium got out of balance. However, it seems that something in this system and in doctor and patient roles is in the process of changing. Welfare states are under attack of austerity policies, and certain health care needs become an issue of buying services. Also the demand for alternative or complementary medicine is steadily growing. This implies a particular vision on being or becoming an actor on one's own well-being, health and happiness.

**The community garden as a therapy**

Some respondents perceive health as an effect of CGPs. Several go as far as describing the garden as therapy or therapeutic. Therapy is in everyday language used as a word for a treatment intended to relieve or heal a disorder. Usually therapy is decided (or nowadays agreed upon in partnership with the patient) by a health specialist, be it a doctor, a psychologist or a nurse and it presupposes that there is some sort of disease or malady diagnosed that is intended to be cured\(^\text{37}\). For some respondents the therapeutic character of the garden literally refers to its medicinal properties, of herbs and fruits that can be used for natural healing. But mostly the notion of therapy is based on the combination of many possible effects. Therapy in the context of CGP is hence not constituted of specialist treatment and medication, but it is a self-administered dosage of gardening or just frequentation of this space which is manipulating body or mind in order to cure. The question is, what is healed and who decides who needs therapy?

Organizers of the gardens mainly use the notion of therapeutic effects as one of the elements that are at work in the population of vulnerable individuals who are part of the CGP.

“They are quite some people in the garden who have experienced incredible things, especially refugees and other migrants and many are still suffering mental health problems. For them the garden is also a therapy” (Sandeep WG). In many gardens there is a special attention to vulnerable individuals. For instance for individuals with reduced mobility raised beds are installed etc. Hence, the representation of the garden as a therapy is to be found in statements of people that talk about others. It refers to the observation that the garden has health effects on other people, who are vulnerable. Gardening is by the gardeners perceived as strengthening capacities and benefiting health of the other and therefore it is classified as a therapy. What I call vulnerable people here, is directed at different target groups. It refers to fellow gardeners, who sometimes have known labels of being ill, likewise groups of disabled people that cultivate together with social workers; or labels of vulnerability like refugees, who are represented as vulnerable to mental health. Moreover this statement can be directed at

\(^{37}\) Definition from the common sense definition of the term taken from the Oxford Dictionary accessed April, 5 2012
passers-by that openly talk about health problems, like in this case: “There is also one woman of 72. She always passes by and says that she is always very happy when she comes here. She already had two cardiac attacks and now she always comes to talk to me at the fence. Then she already feels much better. Some people only need to talk. We are sometimes like psychologists. Some people go crazy when they are too much alone. The garden is therapy” (Ying WG). But also friends, or complete strangers that are perceived as a vulnerable: “There are some people that could use this more than me, like occupational therapy. [...] when people have depressions or feelings of it, then it is good if they just get out a bit to get motivation for something. Especially when one does not have a job then it is even more important to have a task and a place where you can go every day and do something. The girl that had this, also wanted to come with me right away and she really liked it. She also offered to take over for me, if I am not there, on vacation or so” (Johanna RR).

Most gardeners however used the word therapeutic to explain the effect on themselves. They thus discovered or prescribed the garden as a therapy for themselves. Interesting is, that only one of these persons mentioned what disease or malady she intends to cure with this ‘therapy’, in this case it was chronic pain: “The garden is my doctor if I come here and be friendly with everyone, I forget the pain. If you are always alone your illness gets worse” (Ying WG). So how can we understand therapy for gardeners, who describe themselves as generally healthy people, but who still represented the garden as therapy without having a defined clear illness to fight? I will attempt one possible explanation. First, let us state that the perfectly healthy individual rarely exists. It could be proposed that many people, also those commonly labelled as healthy, actually carry some sort of distress or little illnesses or some vital goals that they might not be capable of fulfilling from their own force. Most of the time those single factors do not turn up as illness (or pathological) because they are on their own not incapacitating\(^\text{38}\). Canguilhem (1998) argues illness can only be determined in equilibrium with the environment and it is always the totality of the organism that eventually reacts catastrophically to its environment to the extent that it cannot realise its most essential activities anymore (ibid.). But until this disequilibrium is reached we have perturbations accumulating inside the body (e.g. every stress reaction releases a level of cortisol that if it is sustained over a longer period of time it can lead to hypertension, ulcers etc). The garden can be therapeutic in as much as it can release some inner tensions and be directed at reaching a higher state of health. In less theoretical terms we could also describe it as the psychological sense of therapy, which often involves learning how to better cope with everyday life and deal with certain conditions or stressors\(^\text{39}\). The therapeutical garden is

---

\(^{38}\) “the pathological can be distinguished as such, that is, as an alteration of the normal state, only at the level of organic totality” Canguilhem in Delaporte, 1994, p. 335

\(^{39}\) I think that Antonovsky's concept of resources and Sense of Coherence could be helpful here to understand effects and determinants.
physically and/or mentally strengthening and can this way contribute to staying healthy or even re-establishing health in the sense of strengthening resilience to adapt to new environments and challenges (Milligan, Gatrell, & Bingley, 2004). This quality of the garden could alternatively described as resilience effect of CGP as in Okvat & Zautra (2011).

A second way of reading this is to construct the therapeutical effect the other way around. This time we don’t start with the potential disease or illness in the individual but rather the abnormal conditions of the environment in the city, that do not permit vitality for the individual who would in other circumstances be able to fulfil all potentials. The garden is thus as a sanctuary that permits an escape from usual city life, from the problems and the stress of work and life and from grey, noisy, hot and energy straining city environments. It is thus more the environment (thus the city) that is ill or creating disabling conditions where fulfilling vital goals and basic needs become more difficult. In Nordenfelt’s terms, the individual is healthy as soon as it possesses the ability to fulfil vital goals but sometimes it does not have the practical opportunities given the urban environment. The garden is in the sense therapeutic that it enables a capacity to be fulfilled.

**Deconstructing Health**

The core conclusion that can be drawn from the social constructions of health is that describing health as a holistic concept is the conceptual key to capture the respondent’s representations. However, not every feeling or representation that is connected to well-being needs to automatically be a health outcome. Feeling well can mean either to be happy or to be healthy, or both. While a number of gardeners clearly concluded that the garden had a positive effect on their personal health, in around a quarter of the interviews respondents concluded that the garden had no link with their health or only “if you think health in a broader perspective as well-being” 40. This is of interest here especially in the latter variant, because those statements not plainly contradict what has been said so far. I suggest that this adds different dimensions or elements to the concept of health itself.

Many accounts described effects of feeling well but they referred to having fun, having good social relations, or developing one’s creativity. For some respondents these aspects were conceptually not connected to health. Part of the gardeners who in the interview denied the health effect of CGPs, did this mainly because they handled a concept of health that differentiated health from “pleasure” (Claire JF), “feeling happy” (Françoise JF), “feeling reassured, socially and individually” (Agnes JF) etc. However, they perceive them as aspects of well-being and what has become labelled quality of life 41. Furthermore, not all proposed

---

40 Agnes JF, as cited at the beginning of the chapter.
41 “Having gardens is for me an essential factor for quality of life. Having access to green spaces around me. And in fact consciousness should be raised that without it is not possible to live” Karl RR.
pathways are always perceived or described by every gardener. A gardener might experience a health outcome e.g. in the green space but not in the community space. The community space might for her instead be more closely linked to happiness than to health. For another gardener it might be just the other way around. This nuance should be taken seriously. In order to find out more about which mechanisms promote health for which individual, I would thus argue that we would benefit from more clearly distinguishing the health concept from happiness or other aspects of well-being or quality of life. The next section will make a proposition for a conceptualisation.

Well-being and Happiness

Even though, health is conceptually connected to happiness, the two concepts can be theoretically distinguished and one is not even a necessary condition for the other. So now that we talked quite a bit about health we could have an idea what health is and that it is different from happiness or the more general term well-being. But what is happiness then? Some scientists say that objective happiness is a state of mind that can be measured, be it by brain activity or based on the intensity and duration of positive/negative affect measured in real time (Kahnemann, 1999). Others argue that happiness always involves some subjective weighting of different aspects belonging to experiences. Generally, we tend to take a longish view to judge our happiness (Layard, 2005) - hence not only momentary pleasure. The latter subjective approach understands happiness as a judgement made by an individual about certain experiences and therefore tries to take into account important cognitive and moral dimensions (e.g. Alexandrova, 2005). Philosophically, happiness can be described as equilibrium of, on the one hand, how one would like things to be and, on the other hand, how one believes things are (Nordenfelt, 1993). Being happy and feeling happy must, however, not be the same, since we are not always paying attention to this dimension, although people can usually say whether they are happy or not when you ask them (Layard, 2005). Just like health, happiness is not a dichotomous but a dimensional concept, and can thus take place on different levels. We could even ask ourselves whether we can be unhappy and happy at the same time, however, studies have shown that positive feelings of happiness directly negate unhappiness and vice versa and that a conceptualization of happiness as only one dimension is the most sensible (Ibid.).

Despite the conclusion that not all effects on well-being might be direct health effects, we can note that well-being and health are in many ways interconnected. Well-being could be used as an umbrella term for different kinds of perceptions and judgements of being in positive functional personal states, such as health and happiness (Nordenfelt, 1993). Although distinct concepts, there are conceptual and causal relations between health and happiness. First, conceptually Nordenfelt connects health to (at least minimal) happiness. I
followed this and defined health as the capacity to fulfil crucial activities for a person's minimal happiness in life. This implies that health is not the greater good or aim in itself but it is mainly a resource or ability of the individual for striving for a greater good. We would be in good company to call this greater good happiness, as did Aristotle and Bentham and more recently Layard (2005), or quality of life which in different literatures the probably more common concept (Sen, 1993; Veenhoven, 2004). Second, causal relationships between happiness and health have been proposed, which is happiness as a determinant of health.

To illustrate the latter, happiness as a determinant of health, I would like to give an example from the field. Claudia RR refers to the garden-unrelated experience she made with her elderly neighbour who takes pleasure and happiness in keeping the good contact and social exchange. "I see that it has a positive impact on his health that we understand each other quite well since a couple of years and have an interesting exchange". "He says it makes him so happy and this is how I would say the health effect works also in the garden but not only there" (Claudia RR). Thus Claudia proposes that the positive emotions that good social relationships can produce can also have an influence on health in the long run.

Let us now look into the conceptual relation in more detail. In Nordenfelt's terms “to be healthy is tantamount to having the ability, given standard circumstances, to realize one's minimal happiness” (1993, p.98). The term minimal happiness is of importance here, because not all degrees and kinds of happiness are related to health according to Nordenfelt. For instance, health would thus not mean that one has to be in a state of complete happiness – the state of equilibrium of perceived wants and reality. It is rather minimal happiness that is at stake, hence the state when a person's wants with the highest priority (vital goals) are fulfilled, so that the person finds her or his state acceptable (compare Nordenfelt, 1993, p.59). Health would hence be the ability of realizing this state out of one's own capacities. This does not mean that health and happiness are always congruent. There can be happiness without health (e.g. through realizing vital goals with the help of another person or devices) and health without happiness (we can still choose not to fulfil the goals necessary for minimal happiness even though we would have the ability).

What does it mean to be happy? I had defined it earlier in terms of Nordenfelt's want-equilibrium, meaning that we are happy, if the world we perceive corresponds with what we

---

42 This interpreted from “Thus, health has its value, according to my view, from being instrumental with regard to the individual’s quality of life.” (Nordenfelt, 2000, p.16)

43 What we commonly understand as happiness, as a blissful state of mind, might not correspond with what Aristotle had in mind with eudaimonia, which means more leading a good life, but is today however often translated as happiness.

44 More on the state of complete happiness can be found in Nordenfelt, 1993, p.44 ff
would like the world to be. In its broadest sense happiness is thus the same as well-being or quality of life, the satisfaction with life as a whole (Veenhoven, 2004). In a narrower sense, when limiting to the individual qualities and excluding health, it would be equivalent to subjective well-being or appreciation of life (ibid.) Veenhoven calls them, both exterior like the liveability of the environment or the interior ability to live, which I would call health (compare Veenhoven, 2000 and see appendix).

Furthermore there are outcomes, or life results, Veenhoven (2000) distinguishes utility of life (the external value of life) and life-satisfaction (the internal valuation of life). He argues that life-satisfaction is the most suitable end-goal and most important concept (this would also widely overlay with the Benthamian concept of health). To measure life satisfaction the focus lies not on momentary pleasures but on the more enduring sort of satisfaction or an average happiness and it has been argued that this concept can very well be captured in self-reports (Layard, 2005; Veenhoven, 2004). For my analysis however, I suggest that not only the outcome in the life-satisfaction sense but also the second more external concept are at play in the garden, which is what Veenhoven calls life-utility. I call it engagement or accomplishment in life (this would go more into the Aristotelian concept of eudemonia – the good life). I propose we should analyse both life satisfaction and engagement, in further studies that try to define in more detail the relation between well-being and health and CGP and health.

Accounts from the CGP testify that happiness as perceived in the garden is to an important extent constituted by the social contact and social relations. This approach would in most cases fall into the category of happiness as life satisfaction, in as much as many respondents explicitly expressed the general want to come socially closer together again in cities. Furthermore, the accounts speak of fun and happiness that can be taken from being out in the CGP, encountering nature and fellow gardeners which constitutes an immediate rewarding and pleasurable experience, which is seen to give an enduring effect (thus satisfaction continues even after leaving the garden). All this would fall into life satisfaction. Also more general notions like “the gardens are real luxury for anyone here” (informal talk in AD), falls into the life satisfaction category. In densely populated cities like Paris, and even in

45 With the concept of happiness we touch another holistic perspective, hence one cannot be happy only in one part of the body or mind. It has been noted that happiness has only one dimension so if we are unhappy in one domain it can suppress happiness in other domains too (Layard, 2005).

46 Veenhoven (2000) made a useful analysis of the concept well-being or quality of life and suggests to apprehend it in a matrix, distinguishing four different meanings, namely two life chances 1) livability of the environment, 2) life-ability of the person and two life results 3) utility of life for the environment, and 4) appreciation of life by the person, see his schema in the appendix. He argues that meaning 4) is the most important concept and goes together with subjective happiness or well-being.

47 This represents that “a good life must be good for something more than itself.” (Veenhoven, 2004)
Berlin, the individual house with garden is a dream\textsuperscript{48} that is beyond reach for the big majority of the population. Making this ‘luxury’ of gardening independent from property has become one of the major inspirations for guerrilla gardening (Reynolds, 2008, p.43). Thus overcoming to a certain extent this scarcity of garden space and gaining another place in the city constitutes a gain in quality of life. The garden might in this scheme be part of the conditions for well-being or life chances, and an element of liveability – the external good living conditions.

Over and above life-satisfaction, sharing vegetables, knowledge and joy played an important role in the accounts of the gardeners just as the fact of being engaged for the development of the neighbourhood. This refers to the other more eudaimonian happiness at play in the garden. It is a notion of doing something “good”, being engaged, sharing or creating something that is bigger than only your own pleasure and happiness. This can for instance take the form of organizing seminars of biodiversity or organic gardening, gifts or harvest given away to make others happy, or taking over more work than planned to keep the project going and making it possible for others to participate. All this can be conceptualized as efficacy, which is connected to meaning in life and engagement as such (or the ‘good life’). This more Aristotelian concept of happiness has unfortunately not been much developed in Nordenfelt’s theory. I would argue that also this form of happiness is connected to health. I suggest that this connection could be approached through Antonovsky’s concept of sense of coherence. As sense of coherence has dimensions of perceiving the world as coherent and manageable. However, the association between leading a ‘good life’ and health is tricky and should in further empirical and theoretical studies be investigated.

\textbf{Summary of the Discussion}

CPG are a base and platform to act on health, but also on happiness. City life produces stressors on the quality of life and health of city dwellers, so does migration or unemployment. Gardeners have expressed a certain critique of urban life for its anonymous atmosphere, isolation and health risks. Some might see those urban spaces as a mere idealisation and nostalgia for nature and community. I argue that Community Garden Projects do not dismiss city, modernity and individuality, while longing for small changes. They rather form an experimental space to combine characteristics of both modern and traditional societies - individualism and freedom of modern societies and the collective memory, social cohesion and pleasure of habits of more village-like social systems. Furthermore, individuals search ways to deal with stressors in their daily life and stay healthy. For some gardeners the community garden project constitutes part of this strategy.

\textsuperscript{48} This house (le pavillion) has become in the 20\textsuperscript{th} century a universal dream of middle class Frenchman as Florence Weber describes in her wonderful book in which she also shows how the garden can become a part of the pride and mirror of the identity of the gardener (Weber, 1998). The same could hold true in Germany.
In this chapter I have tried to show the practical use of Nordenfelt’s theory of health for investigating into perceived effects of community gardens. I thereby argued that Nordenfelt’s concept of health is better suited than a bio-statistical, or a broadly holist model to capture the concepts and health related experiences of the actors’ made in CGP. Starting from the positive health accounts that were the predominant representations we could grasp the concept of objective and subjective health. Based on the analysis of respondents that denied or questioned health link with the gardens, I argued that it is useful to make a distinction between health and happiness within the reported effects on well-being. I have shown that health is conceptually distinct from happiness although they are logically connected. On the one hand because health can be a resource or determinant to happiness and on the other hand has happiness in the accounts been described as a possible pathway to health. The representations of therapeutic gardens and the notion of happiness as engagement the good life, showed us that people themselves care for their and other's well-being and health. CGP are spaces which enable the individual to actively shape their own quality of life (health and happiness). They become actors on their own liveability and life utility (and the garden is part of this) and shape the welfare of others by taking over responsibility to make the garden accessible for weaker parts of society.

**Limitations of this study**

This study certainly has a number of limitations. Let us start with those related to the data collected. I proposed that the data obtained in interviews can give us some valuable representation of the experience of community gardeners the effects they perceive. A premise, when using this interview based data, is that the actors are able to analyse themselves, describe their and others situations and that their accounts give a representation of their subjective perception of reality. And indeed many gardeners have made experiences, which they relate to health and well-being. They proposed a number of explanatory theories or possible hints that they developed from observing themselves, others and spontaneously when being asked to interpret their experiences. Nevertheless, there are limitations of what the actor's know about their health, about what I can know about them and what they tell me. Because we are only talking about subjective data here, this study has not been able to answer the question whether urban community gardens can promote health. However, I was able to present what the actors have to say on this matter and to provide some theoretical pathways which need to be further investigated. There was a big degree of reflexivity in the actors’ accounts. The depth, honesty and self-critical character of the interviews surprised me.

I based my research question on the historical parallel and on claims that have been made in scientific studies recently. Although most gardeners were very responsive to this
connection, not every gardener found it an evident connection or had already reflected on health in CGPs. Thus I could not claim that the topic and questioning emerged from the field. Furthermore, also for the people that find the connection evident, the data can be problematic because, the expectations about health effects might be like a self-fulfilling prophecy creating experiences and reports. Another limiting factor is that people, who consider their health already as good, might have difficulties in perceiving positive changes in health. I tried to voice the actor’s representations and concerns as much as possible (using in vivo concepts though transformed though translation). This does not mean that the task of the researcher ends in representing and incorporating the actors view into a theory. On the contrary, it is necessary to go beyond these representations: “Researchers assume further responsibility of interpreting what is observed, heard or read” (Strauss and Corbin 1994, p. 274). Therefore I not only describe but also read between the lines and reflect the daily actions observed with what has been said.

This confronted me with the task to interpret discursive data, concepts, contradictions and make sense of an enormously rich base for comparisons: different people (often of different socio-demographic and cultural backgrounds), different contexts, settings, quarters; cities; countries; actors and collectives; forms of organisation and so forth. For some readers some of the possible comparisons have definitely not sufficiently been discussed, e.g. I have only very sparsely commented on the comparison between Berlin and Paris. This was mainly because the data collected did not provide many findings for making a meaningful comparison without overgeneralising single accounts. The gardens are so different from project to project that the complexity of this comparison would demand either a bigger sample or a smaller research question to construct a meaningful comparison. Due to the major limitations in time and capacity I was also not able to make the sample bigger. Therefore I decided to not focus on the comparison between the two cities but rather on the common issues and main concepts brought forward by the gardeners in both cities and across the sites.

As a researcher dealing with subjective data, we also have to ask ourselves in how far we can follow the concepts and interpretations of the respondents or whether we should contradict them when we think they underly fallacies. I tried in the interviews to stimulate the respondents to think beyond their own concepts. And I chose to take every account as valid experience and report the concept once they were brought forward at least twice or seemed theoretically closing a gap. In the more philosophical discussion however I left the path of analytic induction and went following the spirit of abduction beyond the data from the field.

---

49 In spite Strauss and Corbin’s rather objectivist view on grounded theory, they seem to roughly agree with/on this aspect of the position of the actors and formulate a rather postmodern stand. The interpretation made should be “giving the actors voice” (Strauss and Corbin 1994).
propose a theoretical grasp of the central concepts, a way to analyse and understand health and well-being in a further study, without claiming that this would be the conceptualization that the actors would choose. I try to proceed through comparisons of similarities between cases and concepts. In order to account for plurality and to present the variety of realities possible I pay special attention to negative cases and challenges in the emerging concepts (compare Kaufmann 2011).

Not only the subjective data but also I, as a person and researcher, bring certain limitations to this study. I was first reluctant in entering the field and felt insecure how much I can ask from a garden organizer and how I could approach gardeners. I presented myself as a student. I started with observations and only after some observation of the social dynamics and when people had seen me before, I asked them for an interview. This is a time consuming process and might have lead to a relatively small number of interviews. Throughout the study, I felt some dilemmas of the role of a researcher in a field of volunteers and activists. Taking time from those people seemed sometimes a non-reciprocal demand because they do not necessarily have an advantage from my work. However, from the feedback I got and the level of confidence many respondents shared with me, I am confident that for many respondents the interview was interesting, too. Although I tried to free as much time as possible, I think, spending even more time doing ethnographic work directly in the gardens could provide more insights about how some of the mechanisms reported are handled in practice, in everyday interactions.

Furthermore, I am sure that there might be some scientific studies done also in Europe that escaped my attention, mainly because most students’ studies remained unpublished. Personal contacts that I finally, after almost one year in this field, build up allow me to guess that there might be even work done that touches health. However, the scope of this project and limited time did not allow me to follow up on some possible sources of further information.

The grounded theory method used in this study has also shown certain limits. In the end it was for me more like a general aspiration than as a clear cut method that I used to rigorously guide every step of my analysis. I combined the method with philosophy of health. While grounded theory methods helped me to deal with the complexity of the field, it rather lead to a description or map of the major representations or experiences made by actors in the field than to building a general theory. I admit that rigorously following grounded theory methods for some more time in this field might have had the potential to reach a dense and rich theory of all concepts and relations. However, we have to ask ourselves what the use of an elaborated model-like concept map could be, because it will and can never be complete and only depict certain realities and certain parts of people’s worlds. The theoretical
The contribution of this study therefore stems more from an abductive logic (Reichertz, 2009). The value is a more ethnological understanding of the representations related to health and well-being in those contexts. Furthermore, I make a number of propositions or questionings, that come forth of gaps in this field, how the perceived effects could be scientifically approached and which possible paths of explanations could be further explored in subsequent studies. Future studies into this domain should consider a more lengthy observational and participatory phase revealing more depth of the social reality, as this would enable a focus on unspoken and underlying commonplaces (compare Garfinkel, 1967).

It is always easier to get interviews with gardeners who are frequently present and who like to talk about their activities, as it happens these are often people, who take much responsibility and in the garden. My study will certainly not be free from this convenience bias. Yet, I am very confident that I approached very different gardeners to diversify my sample as much as possible. I would have loved to provide some more information about the characteristics of each respondents, however for the sake of protecting their anonymity I tried to hold descriptions of the actors rather general. Leaving out most of the respondents personal background and stories furthermore was a precaution against the leaning to generalize to much. The findings presented in this study are very illustrative of the different experiences but the sample is not designed to be representative for any or a certain group. I participated in activities and observed social dynamics before contacting my interviewees. None of the gardeners I approached for an interview refused. Sampling typically ends with the so-called ‘point of saturation’, where no new information is gained in further interviews. What is problematic though is that this point depends on the choices a researcher makes for the theory emerging. The concept of health and well-being were chosen as main concepts, and I can not say with certainty that saturation was reached at the end of the study. However, in the last interviews, all information fit into the complex web of categories developed and no new codes emerged. Nevertheless, I could have surely further diversified the sample and at least new aspects would have been found, especially investigating more special groups, or special gardens (jardins d'insertion, hospital gardens etc.).

All together we could ask in how far with all these limitations this actor approach could help to come closer to a theoretical understanding of the phenomenon of community garden projects. I would argue that the actor focussed approach brings us much further in understanding the realities of city dwellers and their health. Many of the limitations mirror the complexity of social life and of well-being. Some theories proposed by the actor's to interpret their experiences appear astonishingly close to scientific explanations. The scientific and political discourse certainly also influences the perception in the field. To this date health and well-being have in Europe, other than in the US, not been a topic in the discourse around
CGPs. I, however, argue that from a health perspective CGPs offer a rich source of experiences and data about many unsolved puzzles, ie. The pathways between health and environment, health and well-being, and health and participation and personal engagement. In this we see I argue that research to accompany citizens actions and CGPs can be crucial and conductive into both directions. Researchers can learn from the experimental knowledge of the actors as theory seeks to understand what is happening in those spaces and maybe to evaluate their potential and translate these findings into other contexts. But theory can also influence the reality of the gardeners as far as it might influence the political discourse about the gardens and give practical guidance by comparing the CGPs and give practice examples from other gardens. “The craftsman perfects his art, not by comparing his product to some ‘ideal’ model, but by the cumulative results of experience – experience which benefits from tried and tested procedures but always involves risk and novelty” (Bernstein, 1971). Community gardens are experiments in the urban sphere and I suggest that we - researchers and actors - can learn from it. This is why I think that the exploration into the knowledge and theories used and produced by the actors to explain their experiences in these experimental spaces will help us to rethink our own theories and practices.
CONCLUSIONS

“Cultivators of the earth are the most valuable citizens.” (Thomas Jefferson, 1785)

Community garden projects, in Europe still a little bit hidden phenomena, are gaining ever more attention and followers in France and Germany. In the context of self-management and local responsiveness of the so-called new urban social movements (Castells, 1983; Lawson, 2005), actors take responsibility for their neighbourhood, nature and their own quality of life or well-being. However, urban gardens have a long tradition in both countries. Since the 19th century, allotment gardens were initiated from non-governmental side which sought to improve living conditions of the poor and by this way also to promote health and morals in cities and industrialized areas according to hygienist’s or Schreberian ideologies. The current community gardening movement could be interpreted as a reawakening of their Hippocratic focus on local environment, diet and habits. Nevertheless, the foundations for the concerns have changed and with that the underlying ideologies diverge. In the late 19th century the concern was rooted in the threats of industrialisation - poverty, pollution, pandemics, poor sanitation. At the beginning of the new millennium, however, the call for equity and sustainability has marked the generation. Community garden projects (CGPs) have been emerging in Europe since the 1990s, motivated by an environmentalist thought and concern about sustainability. By claiming spaces and creating community the movement seeks for an active contribution to and interaction with the city. Instead of retreating from modernity CGPs experiment with improved ways of living the assets of modernity while combining them with nostalgic elements. They attempt to create a micro cohesive system in a more unconnected anonymous society of the city, thus an experiment to live a miniature of rural nature and village like connectedness in the middle of the city.

It seems that health promotion is seldom an explicit primary motive for engaging in a community garden in Europe. In the scientific literature on CGPs, health has been discussed but only in studies from outside Europe. Studies of community gardens, mostly originating from the USA and Canada, support the health promoting potential of community gardens (Armstrong, 2000; Okvat & Zautra, 2011; Wakefield et. al., 2007). This study is the first study, that I know of, which investigates into health and well-being in the French and German community garden movement. I show that in gardens in Berlin and Paris health and well-being related experiences are often presented as one of the effects perceived by the gardeners. This study set out to better understand the links between health and well-being in urban community garden projects by investigating into concrete experiences and actors’ notions. In the absence of longitudinal surveys in these spaces, a qualitative study based
mainly on interviews can give us some valuable insights into the accumulated experience of gardeners and the meanings they attach to what they perceive.

As we could see from the gardeners' accounts, everyone who is active in the garden relates some sort of well-being or health effect with the CGP, although not all of the experiences are positive. This result adds a well-being dimension to the field of scientific discussion around community gardens, which so far has mainly focussed on the political and social structural dimensions of CGPs (Rosol, 2006; Meyer-Renschhausen & Holl, 2000; Müller, 2012; Reynolds, 2008). Rather than discussing the gardeners' motivations, I draw the attention to concrete experiences and perceived health in CGPs. Future studies would benefit from shifting this focus even further to investigate into the tacit mechanisms and conditions underlying the effects in those spaces. It varies from gardener to gardener which well-being and health effect they expect and gain from her/his engagement. It is also highly subjective how the experiences are interpreted and which outcome is perceived as most important.

I argued in a more philosophical discussion that we should carefully revise and define the underlying concepts. I found that some gardeners' accounts contested the health link with the gardens. This was not only because their experiences differed but it was also closely linked to what experiences they associated with health, hence what concepts of health they handled. In the interviews the concept of health is used ambiguously. Mainly because actors made a difference what for them is health and what is well-being in terms of pleasure, meaning and happiness. Following these perspectives, we should make a theoretical distinction between the concepts of health and happiness. This differentiation also helps to come to a less idealised picture and reflects better the variety of judgements by the actors. From a conceptual analysis of the concept of health, I suggest that a holistic concept might be theoretically most suitable to investigate into health in CGP and I present Nordenfelt's concept of health as a possible reference point (Nordenfelt, 1995). Furthermore I found two distinct forms of happiness at play in the actors' accounts of the CGP. One happiness is more related to the internal valuation of life, life satisfaction. The other happiness is simply doing something, that is commonly and by yourself considered as 'good'; I called this efficacy. Researchers in this field should hence carefully define the concepts used in each study before they draw a conclusion. The differentiation between health and happiness might broaden the potential to investigate into characteristics of the actors and their perceived effects (positive and negative), thus the different effect for different individuals and social groups.

Furthermore, the experiences made in CGPs allow us to perceive more general mechanisms and characteristics of urban spaces, which can influence well-being and health.
The mechanisms behind the well-being benefits of community gardens could be understood in terms of three different spaces, namely as green-, social- and free- space. Special about CGPs is that all these spaces can overlap. Thus green spaces inviting to breathe and stay, are combined with community, and can offer possibilities for participation and engagement. Ideally everyone can choose in which of these dimensions to invest, but all of these spaces are considered having a potential to improve the quality of life. The green space of a garden has been presented by the actors as a place to enjoy but also actively interact with nature. The actors link it logically to health to see green, be in a restorative environment, move, breathe fresh air, get the hands in the ground and grow presumably healthy food. According to the gardeners this nature and garden experience creates a vitalizing and balancing effect on body and mind. However, not everyone perceives those effects equally beneficial. Above cultivating plants, community gardens are for many gardeners in the first place a space to cultivate community. Opening a natural path to connect with people, meet at the same level, share and cooperate, community gardens were perceived as offering reward, recognition and belonging. Respondents furthermore suggest that CGPs through their bottom-up character and self-organization, offer possibilities for participation, enable creative potential and make new initiatives emerge. This is why, I called CGPs free spaces, for the members to experiment with their ideas, skills and self-actualisation. Actively shaping a part of the local environment and that of others is a strong motivation for the gardeners. At the same time the free space is perceived as effect on well-being by way of boosting self-efficacy, providing a fortifying sense of achievement and responsibility and by providing a feeling of happiness and satisfaction through doing ‘good’. In the CGP the actor is not only shaping her or his environment but equally their own identity, capacity and well-being. From this sample we can only conclude that people currently involved in CGPs usually see the positive effects on well-being prevail. However, these benefits do not just grow naturally in the community gardens, but they demand a lot of work and care and they certainly underlie conditions and certain threats.

Looking at the scientific studies on well-being and health in CGP we find a confirmation that CGPs “are the sites, and gardening the practical path, of individual, social and spatial transformation” (Pudup, 2008, p.1228). In most studies this change is presented to lead exclusively to the positive. Studies mostly get stuck on negative aspects or conditions for these effects by mentioning the struggles around insecurity of land. However, it would be naïve to think that community gardens are indeed open to everyone, without hierarchies and providing possibilities for really everyone to participate. Limits to the integrative capacities of CGPs are the balance between very engaged individuals and the accumulative amount of work load, special needs and responsibility that group of volunteers can practically handle. Every group runs the risk of exclusion or imposing underlying norms and obligations in their
daily interactions intended or not. Scientists run the risk to take over the slightly idealized vision of the actors on their projects or even to simplify them, without questioning the underlying concepts and conditions. I have shown in this study that negative experiences for the gardeners are often connected to personal conflicts. Furthermore I have pointed out that every of the pathways to positive effects also has its limits. Restorative qualities of green spaces and gardens might not work for people who are not interested in plants and gardens, we do not know. Also in the free space there might be limits to which and whose ideas can be put into practise. Some individuals might not find a place in the group. All this can constitute a threat to the well-being effects. Further studies should deepen these observations. Since the spaces are typically small and auto-reflexivity in CGPs is mostly high, different strategies of action and reaction can be observed to face some of the challenges. Gardens for instance organize themselves differently to address exclusion or to regulate the tension between freedom and obligation. A comparative approach might help to see how different ways of management and contexts shape not only the discourse but also the practice of CGPs. However due to the huge diversity of organisational forms and group characteristics comparative approaches are tricky in this field.

My conclusion from these results and discussions is that the concrete observations on the micro level of the community garden project can open doors and spaces for interesting reflections about bigger mechanisms of urban health and sociology. In CGPs citizens are not only escaping from the city but rather seeking to transform the city. By cultivating urban plots of land city dwellers take their well-being in their own hands and maybe that of others, too. This happens in the bigger context of doing something good for the earth. Now, 20 and 15 years after the Rio Summit and the Development conference, people have not seen big governmental actions or the changes necessary to mitigate climate change, or eradicate hunger or suffering on a big scale. Many actors have lost faith in the big international institutions. CGPs combine a mixture of this lost faith in big institutions, and the individual search for different solutions for post-material societies combined with a pursuit of well-being including values as health, happiness and the good-life. The community garden then presents a rather low barrier possibility to become part of the 'new people' (Dubost & Lizet, 2003). Those who respect themselves, others and nature. These people try to transform their life style, to be a responsible and exemplary individual. Similar concepts have been described in the terms of ecocitizenship (Jacqué, 2003) or Lifestyles of Health and Sustainability (LOHAS)\textsuperscript{50}.

\textsuperscript{50} Lifestyles of Health and Sustainability (LOHAS) has been described by marketing specialist to describe a new group of conscious consumers that take over a considerable market share (Cortese, 2003). The idealogical foundations of what has been called a movement are probably best described in \textit{Cultural Creatives} (Anderson & Ray, 2000)
In the community garden we encountered stories about healing oneself through the garden and to give others the possibility to participate and flourish in life. These experiences raise questions about who is actor on and responsible for health and happiness of the citizens. In this way Thomas Jefferson’s words about the value of the cultivator could take a new meaning – the community gardener as a representative of this concerned and self-help oriented individual. City life produces stressors to the quality of life and health of city dwellers, so does migration or unemployment. Gardeners have expressed a certain critique of urban life for its anonymous atmosphere, isolation and health risks. The hypothesis coming forth of the analysis of the actors’ experiences is that the community garden cannot be understood as a cure for the unhealthy influences of urban areas but actors perceive predominantly positive effects, which could serve as a buffer against risks and strengthen well-being or determinants of health. Dubost & Lizet (2003, translated by me) described it like this: “To the will to manage social tensions, comes the idea of a necessary change in relations between human and nature, and the obligation to repair nature that it regains its restorative role”.

Gardeners have expressed a certain critique of urban life for its anonymous atmosphere, and risks for isolation and mental health problems. Some might see community gardens as a mere idealisation and nostalgia for community or rural life. I however argue that CGPs do not dismiss individuality and autonomy, while longing for more community cohesion. They rather form an experimental space to combine characteristics of individualism and freedom of modern societies, collective memory, social cohesion and pleasure of habits of more village-like social systems. Furthermore, individuals are searching ways to deal with stressors in their daily life in order to stay healthy. For some gardeners the community garden project constitutes some part of this strategy. For others it is more the quest for happiness.

The orientation to become an actor was generally criticised by Pudup (2008). She connected the rise of gardens “as organized projects specifically designed as spaces of neoliberal governmentality, that is, spaces in which gardening puts individuals in charge of their own adjustment(s) to economic restructuring and social dislocation through self-help technologies centered on personal contact with nature” (p. 1229). This is an interesting warning which should be kept in mind. However, we should not forget that also in spaces like community gardens bigger structures and frameworks play a big role. Benefits are produced by the unpaid forces of volunteers and engaged citizens. But this power is not inexhaustible. Structures of community gardens are fragile. They need on the one hand the freedom to define their own rules and to be independent from political ideologies. On the other hand they need support (financial, practical and ideological). One of the biggest threats to community cohesion and well-being effects in the CGP is external pressure or evictions from the land. It is not easy to explain to the responsible and self-managing citizen, that the project has to
close down because there is a more profitable use of the ground. From a well-being and health perspective those actions have the potential to cause breakdowns and to make well-being effects turn to the negative. The scientific community could accompany those bottom-up projects, to understand the benefits, but also to observe underlying internal and external mechanisms that threaten well-being. By this I also mean to understand who is not benefiting from the benefits of those spaces.

It could not be the task of this study to evaluate health effects of community gardens and present them exhaustively. This was not its purpose. While closing a gap in empirical data for CGPs and health in Europe, this study has added new reflections. Most importantly I showed paths to scientifically approach the question of well-being in a CGP: first, by the discussions on the concept of well-being as an outcome and second, on the pathways, conditions and larger sociological mechanisms behind the links between CGP and well-being. Looking through the community garden's lens, we can reach a different questioning and understanding about the concept of health and we perceive otherwise hidden issues of places which shape health in the city. What can be drawn from this study depends on the interest and focus of the person reading it.

In the study at hand there are a number of broad empirical and theoretical paths for investigation sketched. Further research should consider investigating into some of them but not all at the same time. Promising appears to be the question for which actor, which pathway provides which specific experience. This could enlighten us about who can become an actor on her or his own health and well-being. Overall studying the everyday realities and representations of actor’s from a micro perspective in community gardens might offer a keyhole to glance at the mechanisms and strategies of how individuals try to stay healthy in densely populated urban areas in the face of the stressors of modern societies. Moreover, this study lays the foundation for a quantitative study in this field, as major pathways and concepts that were proposed by the actors have been mapped and the outcome variables have been discussed. For such a qualitative study, I suggest including a control group and longitudinal measures. There is also potential to pick one of the proposed spaces and compare the perceived effects in CGP with different local projects that provide comparable access to green-, community- or free spaces. The questioning about happiness and health and the relation between the two concepts might be crucial to come to a differentiated conclusion in both of those research strategies. However, I would explicitly argue for further qualitative studies seeking to better understand the underlying mechanisms, unspoken norms and limits that make that some people benefit differently of those spaces than others and under which conditions.
References


Dow, C. L. (2006). *Benefits and Barriers to Implementing and Managing Well Rooted Community Gardens in Waterloo Region, Ontario. A report submitted to the School of Urban and Regional Planning at Queen’s University in conformity with the requirements for the degree of Master of Urban and Regional Planning (M. Pl.). Queen’s University, Kingston, Ontario, Canada (Aug)*. Queen’s University, Kingston, Ontario, Canada.


Appendix A
Locations of Community Gardens in Berlin and Paris 2012 and selected gardens

Berlin

1. Rosa Rose
http://www.rosarose-garten.net

2. Wuhlegarten
There is a new website at
http://wuhlegarten.de.
Paris

3. Jardin Aqueduc
   http://jardin-fessart.over-blog.com

4. Poterne des Peupliers
   http://aujardin.jimdo.com

5. Jardin Fessart
Appendix B  INTERVIEWGUIDE IN ENGLISH

BRIEFING

Thank you for the willingness to participate and to be interviewed.
- Introduction (my name, my affiliation, I doing research on community gardens for my Master’s Thesis)
- I am doing interviews in Community Gardens in Berlin and Paris. It will be mainly about your personal experiences in the Community Garden
- You have the right to withdraw from the interview at any time.
- Do you have any objecting that I record the interview so that it is easier for me to analyze the material?
- We will be talking maybe about your private experiences and health, I will in my report change your name so that you will be anonymous. And of course I will treat this interview confidential.
- Do you have any questions before we begin?

INTERVIEW

<table>
<thead>
<tr>
<th>Main Question</th>
<th>Complementary Questions</th>
<th>Clarification</th>
</tr>
</thead>
</table>
| o  When you remember back when you first joined the garden can you remember what your main motivation was? | o  What were expectations?  
  o  Did they come true? | o  Would it be accurate to summarize that you mainly joined the garden for....? |
| o  With respect to your health, can you describe to me in as much detail as possible what you feel what has changed since you are a member of the garden?  
  OR  
  o  What have you experiences as the effect of the CGP on your health and well-being?  
  Benefits and adverse effects | o  What has changed thinking of:  
  - Aspects of actual or diagnosed diseases  
  - Feeling well, capability of doing more, realize of their abilities (ability to fulfil and manage daily affairs and crucial activities/necessary actions for a harmonious life)  
  - Well-Being  
  o  Do you think the garden is good for your health? | o  You mentioned … can you explain a bit more?  
  o  What do you mean by...  
  o  How did this feel?  
  o  Can you give me an example? |
| o  Where there also negative effects?  
  o  Are there times when the garden feels more of | o  What are the disadvantages?  
  o  Are there moments when it does not feel like |
<table>
<thead>
<tr>
<th>Question</th>
<th>This?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- How is the garden linked to health? What is it about the garden that makes this happen, what you explained before?</td>
<td>- How is the garden linked to health?</td>
</tr>
<tr>
<td>- How do you think this is working for you?</td>
<td>- What is special about the community garden compared to Allotments, parks, etc.?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>This?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Did you experience any obstacles, that prevent you from fully enjoying the benefits of the garden?</td>
<td>- perceived barriers</td>
</tr>
<tr>
<td>- In general what do you think is necessary that the garden can be beneficial to people</td>
<td>- needs</td>
</tr>
</tbody>
</table>

**Debriefing**

<table>
<thead>
<tr>
<th>Question</th>
<th>This?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I have no further questions. Is there something that I forgot to ask about well-being in the community garden?</td>
<td>- Evtl. Short summary of the main points. With possibility for feedback.</td>
</tr>
<tr>
<td>- Are there other things that you would like to add?</td>
<td>- Now, I will go on with interviewing for two more months. If you want I can send you my thesis via email, when it is ready and I will also provide one hard copy to XY.</td>
</tr>
<tr>
<td>- Are there other things that you think are relevant in this context that we have not yet discussed?</td>
<td>- Can you give me your contact information in case I have any more questions later?</td>
</tr>
<tr>
<td>- Do you have any questions before we finish?</td>
<td>- Here is my email address if you need to reach me</td>
</tr>
<tr>
<td>- Do you have any questions before we finish?</td>
<td>- How did you feel being interviewed and talking about this?</td>
</tr>
</tbody>
</table>
## Appendix Literature Review

### Annotated Bibliography

<table>
<thead>
<tr>
<th>Original Studies</th>
<th>Population</th>
<th>Methods</th>
<th>Variables</th>
<th>Findings</th>
<th>Conditions or Recommendations</th>
<th>Limitations and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alaimo, K., Packnett, E., Miles, R. A., &amp; Kruger, D. J. (2008).</strong> Fruit and vegetable intake among urban community gardeners. <em>Journal of Nutrition Education and Behavior, 40</em>(2), 94-101.</td>
<td>(n=766) people living in Flint, USA (15% participating in CGP N=116) telephone administered survey from 2003</td>
<td>Quant. Cross-sectional, correlational quantitative study using random phone survey Binary Associations and regression analyses</td>
<td>Assessing self reported dietary intake of fruit and vegetables Controlled for demographic variables</td>
<td>It was found that community gardeners were more likely to eat fruit and vegetables at least 5 times a day. (OR = 3.5) CGP have the potential to mitigate cost and transportation barriers, thus could provide an affordable and convenient access to fresh produce.</td>
<td>Causal relationship is unclear. Data is relying on self reports gained through telephone, (it could also be a selection process rather than an effective intervention) Intervention study is recommended</td>
<td></td>
</tr>
<tr>
<td><strong>Alaimo, K., Reischl, T. M., &amp; Allen, J. O. (2010).</strong> Community gardening, neighborhood meetings, and social capital. <em>Journal of Community Psychology, 38</em>(4), 497–514.</td>
<td>N=1916 Flint michigan (USA) Cross sectional Telephone survey random sample from 2001</td>
<td>Quant. Cross-sectional data Community based participatory research approach (CBPR) Regression analysis with census block groups</td>
<td>Participation in CGP/ beautification and/or neighbourhood meetings and their association with perceptions of social capital (individual and neighborhood)</td>
<td>individual level: household involvement in CGP activities were associated with residents' perceptions of bonding social capital, linking social capital, and neighborhood norms and values. Household involvement in gardening/beautification and meetings had stronger associations with residents' perceptions of social capital than did neighborhood-level involvement measures. Neighborhood community gardens’ impact on neighborhood residents' perceptions of social capital can be enhanced by neighborhood-wide meetings</td>
<td>Participation in neighbourhood beautification activities had the similar effect as CGP participation however participation in both had a stronger effect in other studies is has also be proposed that social ties benefit already from having “green common spaces” so the green could account for some of the variation</td>
<td></td>
</tr>
<tr>
<td><strong>Allen, J. O., Alaimo, K., Elam, D., &amp; Perry, E. (2008).</strong> Growing vegetables and values: Benefits of neighborhood-based community gardens for youth development and nutrition. <em>Journal of Hunger and Environmental Nutrition, 3</em>(4), 418-439. *</td>
<td>two neighborhood based CGP with youth programs interviews with adult gardeners, neighbors, youth, and community police officers USA</td>
<td>Qualitative case study: participant observation &amp; in-depth interviews exploratory study</td>
<td>Benefits for youth development and nutrition</td>
<td>Results suggest that the garden programs provided opportunities for constructive activities, contributions to the community, relationship and interpersonal skill development, informal social control, exploring cognitive and behavioral competence, and improved nutrition. This corresponds with opportunities for the development of bonding, bridging, and linking social capital Community gardens promoted developmental assets for involved youth while improving their access to and consumption of healthy foods.</td>
<td>This qualitative study focused primarily on gathering insight from the individuals who were themselves participating in neighborhood activities. findings evoked additional questions that we could not answer with our qualitative data. Neighborhood organisations seemed to play a role to ensure the creation of social capital</td>
<td></td>
</tr>
<tr>
<td><strong>Armstrong, D. (2000).</strong> A survey of community gardens in upstate New York: Implications for health promotion and community development. <em>Health &amp; Place, 6</em>, 430-440.</td>
<td>20 Community garden coordinators overviewing in total 63</td>
<td>Standardized telephone interviews in 1997/1998 with the coordinators</td>
<td>Motivation and reason to participate in CGP organisation</td>
<td>In urban gardens most common reason for participation in CGP was better access to fresh/tasty food, enjoy nature and mental health, next to lack of land to cultivate at least 5 times a day. (OR = 3.5) CGP have the potential to mitigate cost and transportation barriers, thus could provide an affordable and convenient access to fresh produce.</td>
<td>“additional research on the potential benefits of CG to promote and improve public health is needed” (p.) Interviews held only with coordinators</td>
<td></td>
</tr>
</tbody>
</table>
| 319-327. | community gardens (urban and rural) in upstate New York, USA | (30 min to 3h) descriptive study | characteristics of gardens community benefits | CGP improves attitudes towards neighbourhood, CGP seemed to facilitate social networks and organisational capacity especially in low income neighbourhoods ability of the garden to act as a catalyst for residents to begin to address issues collectively | not with individual gardeners
Problems encountered in urban areas are vandalism, in 7 gardens relate to danger of land loss |
<p>| Blaine, T. W., Grewal, P. S., Dawes, A., &amp; Snider, D. (2010). Profiling community gardeners. <em>Journal of Extension, 48</em>(6), 1–12. | Cleveland Ohio, 390 community gardeners contacted response rate 32% (124 complete usable surveys) telephone survey in 2009 random selection of contacts from extension registry mostly descriptive and few correlations (regression analysis) descriptive study | Demographics of gardeners behavioral measures dietary changes | All age groups involved, relative gender equality although slightly more women, participation crosses all income groups although it tends to diminish with higher incomes, proximity is important most respondents walk to their plots, ≈70% reported a change in diet (44% of those though it was significant) cave: the percentage is roughly the same of people that in their first year expect that a change will happen. | Definition of community garden includes allotments and probably also we don't know for sure it is mostly about allotment gardeners - high rate of non response - relatively ungrounded questionnaire |
| Brown, K. H., &amp; Jameton, A. L. (2000). Public health implications or urban agriculture. <em>Journal of public health policy, 21</em>(1), 20–39. | - | Public policy analysis | Potential for public health, reviewed from some general studies | The article argues for stronger public policies in support of urban gardening as a means to improve public health and control of adverse effects (like pollution) It considers several beneficial aspects of gardening, such as food security, economic development, exercise, psychological and community well-being. | No own data, analysis is not very specific about conditions and forms of engagement with nature, as it mixes green space effects with gardening |
| Comstock, N., Dickinson, L. M., Marshall, J. A., Soobader, M.-J., Turbin, M. S., Buchenau, M., et al. (2010). Neighborhood attachment and its correlates Exploring neighborhood conditions, collective efficacy, and gardening. <em>JOURNAL OF ENVIRONMENTAL PSYCHOLOGY, 30</em>(4), 435-442. | Denver Colorado (USA) N=410 | Combination of data sources, neighbourhood audit, face-to-face interviews, Population survey and comparison of gardeners and non gardeners hierarchical linear modeling techniques | Neighborhood attachment, (as correlated with behaviour change to nutrition and physical activity) as dependent of participation in CGP | Community garden participation are associated with neighborhood attachment, when accounted for all other neighborhood attachment relevant variable (length of residency etc.) | No clear definition of health outcomes only rather distal factors like neighbourhood cohesion. Gardening variable is assessed both Any form of gardening and specific form of gardening. Not very clear what is meant by community gardening Further research is warranted to consider neighborhood attachment as an intervening mechanism through which gardens and other outdoor everyday places may influence health behavior change. |
| Corrigan, M. P. (2011). Growing what you eat: Developing community gardens in Baltimore, Maryland. <em>Applied Geography, 31</em>(4), 1232–1241. | Baltimore, Maryland and Athens, Ohio (USA) | Qualitative data from In-depth interviews and field observations descriptive study | Food security challenges of community gardening involvement within the food system | “It is evident that community gardens contribute to engagement and involvement within food systems; however additional assistance such as education, policy, and funding is needed to increase food security.” financial and educational needs ↑ awareness of issues of food security | Recommendation: Interviews with non-gardeners are needed questions about effectiveness of NGOs is raised but cannot be answered in this study |</p>
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Study Type</th>
<th>Source</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow, C. L. (2006).</td>
<td>Benefits and Barriers to Implementing and Managing Well Rooted Community Gardens in Waterloo Region, Ontario. A report submitted to the School of Urban and Regional Planning at Queen’s University in conformity with the requirements for the degree of Master of Urban and Regional Planning (M. Pl.). Queen’s University, Kingston, Ontario, Canada (Aug). Retrieved May 3, 2011, from <a href="http://homepage.mac.com/cityfarmer/CHERYLFINAL.pdf">http://homepage.mac.com/cityfarmer/CHERYLFINAL.pdf</a>.</td>
<td>Qualitative study Interviews (semi-structured)</td>
<td>Regional: beautification of Region, gardens supporting communities, fostering healthy citizens. • Community: friendships, enhanced sense of community, family bonding, building neighbourliness, increasing feelings of safety, creating community pride, promoting sharing. • Individual: stress relief, education, exercise, independence, skill development, pride, food security, and economic savings. • Environmental: reduction in energy costs, creating biodiversity, increasing pervious surfaces, improving air and water quality, reducing driving trips, beautifying the environment and promoting sustainability. • Food Security: inexpensive local organic food fosters independence among vulnerable groups, local food production becomes possible for community gardeners. • Faith: foster community outreach, create a stable volunteer base. • Health: foster connections with natural processes, create opportunities for physical exercise, relaxation, and stress relief.</td>
<td>Not peer reviewed publication. There are recommendations for planners and gardeners to foster well rooted gardens in the region.</td>
</tr>
<tr>
<td>Krasny, M. E., &amp; Tidball, K. G. (2009).</td>
<td>Applying a Resilience Systems Framework to Urban Environmental Education. Environmental Education Research, 15(4), 465–482.</td>
<td>Analysis of community gardens as environmental action / education programmes</td>
<td>Civic ecology practices, such as community gardening, community forestry, and watershed restoration, foster multiple attributes of resilient social-ecological systems. Civic Ecology practices also provide a setting for EE programmes. EE programmes situated in civic ecology practices enhance those practices and thus further foster the resilience attributes characterizing desirable social-ecological systems.</td>
<td></td>
</tr>
<tr>
<td>Flachs, A. (2010).</td>
<td>Food for thought: The social impact of community gardens in the greater Cleveland area. Electronic Green Journal, (30).</td>
<td>Qualitative Fieldwork as a participant (during 8 weeks in different sites) and informal interviews</td>
<td>Gardening is shown to have a multitude of motivating factors, including economic, environmental, political, social, and nutritional.</td>
<td></td>
</tr>
<tr>
<td>Ferris, J., Norman, C., &amp; Sempik, J. (2001).</td>
<td>People, land and sustainability: Community gardens and the social dimension of sustainable development. Social Policy and Administration, 35(5), 559-568.</td>
<td>Survey the range of community gardens to find types, and interviews to find underlying purposes</td>
<td>&quot;The community garden movement in the USA is, in part, one of the positive responses in the struggle to restore damaged neighbourhoods to ecological and social health.&quot; &quot;urban green spaces and community gardens (allotments in Europe) can be very positively linked to the</td>
<td>Contains Classification of Community gardens. Data does not go very much in detail of the benefits and does not explain pathways.</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community development, food security</td>
<td>Implementation of Local Agenda 21 and sustainability policies and at the same time used to promote environmental equity. The participants collectively reconfigured the events that led to the completed garden and endowed those events with meaning and continuity. The stories, which were aggregated into a single community narrative, illustrate how a collective leisure pursuit can be part of a grassroots effort, address urban decline, and reshape collective identity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community garden leaders</td>
<td>Resource mobilization and social ties in community gardens</td>
<td>The findings suggest “leisure episodes” are particularly important to building strong ties, a common source of social capital, and therefore serve as the social lubricant for social capital production.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community garden leaders and non garden leaders (USA)</td>
<td>Qualitative research comparing garden leaders and non garden leaders</td>
<td>Democratic values To „understand the democratic effects of participation in community gardening.” The results support Putnam’s (2000) assertion that the intensity of membership in voluntary associations is important to the development of democratic citizens. Moreover, the findings reveal the salience of context, namely a leisure-oriented context, in imbuing democratic values. Time spent in a community garden was a stronger, albeit weak, predictor of political citizenship orientations than was time spent talking and visiting with other community gardeners, which implied the significance of the garden space and its public sphere effects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner-city community and urban residents of West Philadelphia Non privileged neighborhood Mantua - part of Philadelphia Field Project (USA)</td>
<td>Qualitative study Observation and visits and 44 interviews</td>
<td>Benefits of gardening Urban gardens serve as community greenspace, providing fresh produce, baring economic potential, and a basis for organizing inner-city neighborhoods. Strengthening social networks and increase overall community well-being helping people and communities see hope in difficult situations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hansen-Ketchum, P. a, Marck, P.</td>
<td>8 parents of qualitative data</td>
<td>The experiences Nature has the potential to be a key detailed recommendations for research</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reutter, L., &amp; Halpenny, E. (2011). Strengthening access to restorative places: findings from a participatory study on engaging with nature in the promotion of health. Health &amp; place, 17(2), 558-71. Elsevier. doi: 10.1016/j.healthplace.2010.12.014.</strong></td>
<td>young children and 16 practitioners and decision-makers, Atlantic (Canada)</td>
<td>collection two-phase study phase one: photo-narration and photo-elicitation interviews and focus groups, In phase two, photo-elicitation focus groups</td>
<td>of engaging with nature (1) How do parents of young children care for and engage with nature to promote their individual and family health?; and (2) How do health practitioners and decision-makers use evidence on the health benefits of engaging with nature to design community-based health promotion interventions?</td>
<td>resource for health promotion and for upstream initiatives aimed at improving quality of life for people and the planet. Citizen narratives were connected to the perspectives of practitioners, decision-makers, and members of community advocacy groups to examine the multi-level barriers and facilitators of engaging with nature in the promotion of health. The study findings illuminated how people engaged with nature in their daily lives and provided critical insights into possibilities for nature-based health promotion within a rural community;</td>
</tr>
<tr>
<td><strong>Hopkins, L., &amp; Holben, D. (2010). Community Gardening Is Positively Associated with Improved Produce Intake and Decreased Food Spending among Rural Food Insecure Households. Journal of the American Dietetic Association, 110(9), A68-A68. Elsevier Inc.</strong></td>
<td>n=50 community gardeners n rural Appalachian Ohio Ohio (USA)</td>
<td>Quantitative assessment Electronic survey (121 approached 50 responded) pilot study</td>
<td>relationship of household food security, produce intake and behaviors, health, and social capital among community gardeners</td>
<td>Participants reported to eat more produce (76%), make better choices about eating (74%), spend less money on food (74%), be more physically active (66%), and have made new friends (74%). 34 (74%) and 29 (58%) reported their health and diet, respectively, to be very good or excellent. Food insecurity was associated with eating more fruits and vegetables and spending less money on food due to the produce from the garden. However, it was not significantly related to other parameters. Community gardening appears to be positively associated with both improved produce intake and decreased food spending among food insecure households, which warrants further exploration</td>
</tr>
<tr>
<td><strong>Irvine, S., Johnson, L., &amp; Peters, K. (1999). Community gardens and sustainable land use planning: a case-study of the Alex Wilson Community Garden. Local Environment. Retrieved May 2, 2011, from <a href="http://www.informaworld.com/index/770585813.pdf">http://www.informaworld.com/index/770585813.pdf</a>.</strong></td>
<td>South Los Angeles (USA)</td>
<td>Qualitative fieldwork</td>
<td>racial composition of gardens Environmental justice Legal advantages and disadvantages</td>
<td>This article analyzes its epic as a landscape of resistance to discriminatory legal and planning practices and tries to establish preservation rationales for those gardens. It presents CGP creation and maintenance as an issue of environmental justice, Gardens are increasing the value of adjacent properties and being a catalyst for neighborhood revitalization, provide</td>
</tr>
<tr>
<td>Authors</td>
<td>Title and Source</td>
<td>Methodology</td>
<td>Findings</td>
<td>Implications</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>-------------</td>
<td>----------</td>
<td>--------------</td>
</tr>
<tr>
<td>Kingsley, J. 'Yotti', Townsend, M., &amp; Henderson-Wilson, C. (2009).</td>
<td>Cultivating health and wellbeing: members’ perceptions of the health benefits of a Port Melbourne community garden. LEISURE STUDIES, 28(2), 207-219.</td>
<td>10 gardeners of the ‘Dig in’ newly established community garden in Melbourne (AUS) Qualitative Semi structured interviews Snowball sampling motives for and wellbeing benefits of gardening from a members perspective</td>
<td>Gardens provide a sanctuary and escape from stress; a supportive environment and had social benefits including building close social networks. Individual benefits included: improved exercise and fitness (though getting to the garden) and nutrition benefits, setting for learning, social connections, share experiences and information more than gardening related beautifying the area, spirituality. Self-development, empowerment through sense of achievement. “Hence community gardens offer a grass roots strategy for improving Australian urban population health and wellbeing”</td>
<td>Sample lacks diversity Future research could explore the membership profile, while considering organizational factors such as membership application processes. Potentials for community members with disabilities. Comparison between community gardening and other gardening options. In particular, in light of the ageing of Australia’s population and in the face of increasing ethnic and cultural diversity, it would be interesting to study the effects of community gardens on different socio-economic groups, cultures and age groups.</td>
</tr>
<tr>
<td>Kuo &amp; Sullivan, 2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Krasny, M. E., &amp; Tidball, K. G. (2009).</td>
<td>Applying a Resilience Systems Framework to Urban Environmental Education. Environmental Education Research, 15(4), 465–482.</td>
<td>Theoretical paper and partly Qualitative research project with youth interviewing immigrant and African-American gardeners about their knowledge of plants, planting practices, and the connection of plants to their cultural traditions. Results are Focusing on environmental education and implications of a growing urban environmental stewardship movement for environmental education Attributes of resilient social-ecological systems</td>
<td>They present new ideas about the cross-over between natural resources management and education. And system thinking through resilience „urban community gardening is an example of resource management that integrates social and ecological values, it provides an opportunity for environmental learning situated within local practice.“ CGP contribute to resilience of systems through diversity (biological and knowledge) and self-organisation „Community gardens may provide the only opportunity for residents in some urban neighbourhoods to experience biodiversity or nature“ „The actions of city residents who reach a critical mass of shared frustration with the status quo, and organize themselves to take initiative to remove rubble and replace it with soil to grow crops and trees, embodies a form of community-based self-organization that presents an alternative to dependence on formal institutions“</td>
<td>Explores from an educational perspective, however there is not much data provided</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Journal/Publication</td>
<td>Methods</td>
<td>Findings/Results</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>---------------------</td>
<td>---------</td>
<td>------------------</td>
</tr>
<tr>
<td>Wals, Arjen (editor)</td>
<td>Cities and the Environment Learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Learning Towards a more Sustainable World</td>
<td>Wageningen Academic Publishers, Wageningen, The Netherlands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Krause, M., Lowitt, P., &amp; Peck, S.</td>
<td>Green roofs mean: The potential is there for creating new types of employment</td>
<td>Planning, 76(4), 16-18</td>
<td>Qualitative research</td>
<td>Job potential and benefits of urban green</td>
</tr>
<tr>
<td>Larsen, E. L., &amp; Stock, C.</td>
<td>Capturing contrasted realities: integrating multiple perspectives of Danish community life in health promotion</td>
<td>Health promotion international, 26(1), 14-22</td>
<td>Ethnographic fieldwork</td>
<td>Nursing the community gardens was a frequent community activity that could be classified as an interaction based on a shared activity</td>
</tr>
<tr>
<td>Lautenschlager, L., &amp; Smith, C.</td>
<td>Beliefs, knowledge, and values held by inner-city youth about gardening, nutrition, and cooking</td>
<td>Agriculture and Human</td>
<td>Qualitative study with Focus groups</td>
<td>Findings indicate that youth garden program participants were more willing to eat nutritious food and try ethnic and unfamiliar food than those not in the program. Additionally, it was apparent that</td>
</tr>
<tr>
<td>Values, 24(2), 245-258.</td>
<td>n=40 (USA)</td>
<td>behaviors, values and beliefs, and cooking and gardening behaviors.</td>
<td>garden participants had a stronger appreciation for other individuals and cultures and were more likely to cook and garden on their own than youth not involved in a garden program. The findings suggest that garden programs positively impact youth garden habits, food choice, social skills, nutrition knowledge, and cooking skills.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Empowerment and increased capacities were perceived as important project outcomes. “we suggest that the project can be seen as an example of what decolonizing health</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Country</td>
<td>Study Type</td>
<td>Findings</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td>------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Pudup, M. B. (2008). It takes a garden: Cultivating citizen-subjects in organized garden projects. Geoforum, 39(3), 1228-1240.</td>
<td>USA</td>
<td>Theoretical article presenting a number of case studies</td>
<td>“Organized garden projects” is the preferable term over community gardens. He describes those as “specific form of social, political, and cultural practice through which society has responded to capitalist restructuring.” Through their productive labor and public engagement, the capacity exists at the Garden Project for the production of citizen-subjects who develop a capacity for re-claiming the public sphere as a place where social risks are shared on the basis of citizen rights and collectives obligations.</td>
<td></td>
</tr>
<tr>
<td>Saldivar-Tanaka, L., &amp; Krasny, M. E. (2004). Culturing community development, neighborhood open space, and civic agriculture: The case of Latino community gardens in New York City. AGRICULTURE AND HUMAN VALUES, 21(4), 399-412.</td>
<td>USA</td>
<td>Qualitative, interviews and observations in 20 Latino community gardens in NYC and 11 NGO workers USA</td>
<td>CGP cost-effectively address a multitude of the challenges facing inner-city, poor, and minority communities. They are sites for production, host numerous social, educational, and cultural events, and sometimes also promote community activism. “Although the role of the Latino gardens in community development appears to be more important than their role in open space or agricultural production, the gardens can also be viewed as unique “participatory landscapes” that combine aspects of all three movements, as well as provide a connection between immigrants and their cultural heritage.”</td>
<td></td>
</tr>
<tr>
<td>Teig, E., Amulya, J., Bardwell, L., Buchenau, M., Marshall, J. A., &amp; Litt, J. S. (2009). Collective N total= 67 in 29 gardens in Denver</td>
<td>Qualitative, semi-structured interviews: 15</td>
<td>Collective efficacy: findings indicate that CGP serve as a positive social influence within neighborhoods and also as a catalyst for...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>Setting</td>
<td>Methodology</td>
<td>Findings</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-------------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>Tranel &amp; Handlin, 2006</td>
<td>Texas, USA</td>
<td>Single interviews with gardeners and 14 in groups</td>
<td>Strengthening neighborhoods and health through community gardens.</td>
<td>53 community gardens in St. Louis, USA, Quantitative study; census data from 1990 and 2000 and GIS. Better property maintenance and values, abandoned buildings, greater rates of home ownership, adaptive reuse of vacant lots. “Garden Impact Areas [GIAs] improved in indicators of resident quality of life and neighborhood conditions.” GIAs retained a higher percentage of their 1990 population over the decade, increased the rate of home ownership on average by over 50%, and retained a high percentage of residents who lived in the area long enough to pay off their mortgage. No access to this study it is not clear whether they mention health benefit and whether they really discuss CG or allotments. Processes can be fostered through community gardens through key activities such as volunteerism, leadership, neighborhood activities and recruitment.</td>
</tr>
<tr>
<td>Twiss, J., Dickinson, J., Duma, S., Kleinman, T., Paulsen, H., &amp; Rilveria, L. (2003). Community gardens: lessons learned from California Healthy Cities and Communities. American journal of public health, 93(9), 1435-8.</td>
<td>California, USA</td>
<td>Data from the California Healthy Cities and Communities California, USA, Case studies and General characteristics data</td>
<td>Effects range from knowledge and skill enhancement to behavioral and systems change. Crucial elements for success of the initiative where commitment of local leadership and staffing, involvement of volunteers and community partners, and availability of skill-building opportunities for participants. The dearth of data on the positive impacts of community gardens hinders the ability to make a convincing argument when re- sources (e.g., funding, land, water) are at stake. User-friendly, multilingual, and adaptable evaluation tools are needed. The development of strategies to measure the benefits of community gardens would sustain and promote this activity within an active living agenda.</td>
<td></td>
</tr>
<tr>
<td>Van Den Berg, A. E., &amp; Custers, M. H. G. (2011). Gardening promotes neuroendocrine and affective restoration from stress. Journal of health psychology, 16(1), 3-11.</td>
<td>The Netherlands</td>
<td>Quantitative intervention study</td>
<td>Gardening can promote restoration from stress. Cortisol levels decreased to a greater extent in the gardening than in the reading condition. Post-activity positive mood was significantly higher in the gardening group than in the reading group. This study is not investigating into community but allotment gardening. However it provides evidence for a pathway that might explain the positive effects of gardening in low SES groups.</td>
<td></td>
</tr>
<tr>
<td>Wakefield, S., Yeudall, F., Taron, C., Reynolds, J., &amp; Skinner, A. (2007). Growing urban health: community gardening in South-East Toronto. Health promotion international, 22(2), 92-101.</td>
<td>Canada</td>
<td>Qualitative study participant observation, focus groups and in-depth interviews.</td>
<td>Perceived health related benefits of CGP and challenges. CGP were perceived to improve access to (culturally appropriate) food, improve nutrition, increase physical activity and improve mental health. CGP were also seen to promote social health and community cohesion. Challenges were insecure land tenure and access, bureaucratic resistance, concerns about soil contamination and a lack of awareness and understanding by community members and decision-makers. Results also highlight the need for ongoing resources to support gardens in these many roles.</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Citation</td>
<td>Methods</td>
<td>Findings</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
<td>----------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>Wills, J., Chinemana, F., &amp; Rudolph, M. (2010).</td>
<td>Growing or connecting? An urban food garden in Johannesburg. Health promotion international, 25(1), 33-41.</td>
<td>Siyakhana community garden project in Johannesburg South Africa started since 2006 in partnership with University and maintained by 9 small NGOs</td>
<td>Evaluation study: 1st: A workshop with project stakeholders and some participants came together to develop criteria for evaluations 2nd 19 narratives were collected from garden participants</td>
<td>Participants tell about a beneficial health effect, gain through knowledge and self care through herbal garden; addition to food security; Increase self-confidence, re-connection with rural life; networking: bonding among homogenous but separate third-sector organizations, social capital in the form of ubuntu: trust, reciprocity, leaning and resource exchange. Activism and community involvement = doing and giving something to the community and giving away produce to children gives a feeling of making a difference. This builds capacities</td>
</tr>
<tr>
<td>Draper C. Freedman, D. (2010).</td>
<td>Review and analysis of the benefits, purposes, and motivations associated with community gardening in the United States. Journal of Community Practice, 18(4), 458-492.</td>
<td>55 Studies, published in peer reviewed journals between 1999 and 2010 on CG from the USA</td>
<td>Literature study 40% quantitative 49% qualitative. Analysing results and common themes including purposes, benefits and motivations</td>
<td>Study claims that benefits from CG goes beyond nutrition and youth involvement Health is mentioned in the Motivations for gardening 50% of the reviewed studies report health benefits mainly these are improved dietary habits and food preferences, furthermore emotional scores and physical activity are mentioned</td>
</tr>
<tr>
<td>Hansen-Ketchum, P. a, &amp; Halpeny, E. a. (2010).</td>
<td>Engaging with nature to promote health: bridging research silos to examine the evidence. Health promotion international, 26(1), 100-108. doi: 10.1093/heapro/daq053.</td>
<td>15 Studies on nature based health promotion peer-reviewed</td>
<td>Literature study (horticultural therapies were excluded)</td>
<td>Outcome of engaging with nature on human and ecosystem health „Further to this, there are implications that spill over into organizational and community levels where networking with members of the health care team and partner- ing with representatives from urban planning, recreation, the local botanical garden and department of transportation, for instance, can enable access and equity of resources for engagement with nature in consideration of dis- parities in patients’ incomes, location of residence and support network among others.”</td>
</tr>
<tr>
<td>McCormack, L. A., Laska, M. N., Larson, N. I., &amp; Story, M. (2010).</td>
<td>Review of the Nutritional Implications of Farmers’ Markets and Community Gardens: A Call for Evaluation and Research Efforts. JOURNAL OF THE AMERICAN DIETETIC</td>
<td>16 Studies published between January 1980 and January 2009 from the USA</td>
<td>Literature review</td>
<td>Implications of farmers’ market programs and community gardens (n=4) on nutrition-related outcomes in findings reveal that few well-designed research studies (eg, those incorporating control groups) utilizing valid and reliable dietary assessment methods to evaluate the influence of farmers’ markets and community gardens on nutrition-related outcomes have been completed.</td>
</tr>
<tr>
<td>Okvat, H. a, &amp; Zautra, A. J. (2011). Community gardening: a parsimonious path to individual, community, and environmental resilience. American journal of community psychology, 47(3-4), 374-87.</td>
<td>No clear statement</td>
<td>Literature review Sample of literature on CG per se was too limited so studies on take contact with plants as independent variable are included</td>
<td>Benefits of community gardens for well-being (human and earth) against climate change And testing social ecological models of community resilience</td>
<td>They identified positive effects on individual well-being like affective, cognitive and social benefits improved nutrition and physical activity though community gardening. Furthermore effects on community wellbeing, social networks, multicultural relations, crime reduction, community empowerment, economic benefits. Also environmental benefits and contribution to climate change mitigation could be linked to gardening</td>
</tr>
</tbody>
</table>

* Full article was not accessible to me, only found the abstract and secondary discussion of this Grey Text means that the article does either not really treat community gardens or not really health but they are still marginally relevant articles
Appendix D The four qualities of life after Veenhoven

Scheme 1

<table>
<thead>
<tr>
<th>Four qualities of life</th>
<th>Outer qualities</th>
<th>Inner qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life chances</td>
<td>Livability of environment</td>
<td>Life-ability of the person</td>
</tr>
<tr>
<td>Life results</td>
<td>Utility of life</td>
<td>Appreciation of life</td>
</tr>
</tbody>
</table>

Some sub-meaning within quality-quadrants

<table>
<thead>
<tr>
<th></th>
<th>Outer qualities</th>
<th>Inner qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life chances</td>
<td>Livability of environment</td>
<td>Life-ability of the person</td>
</tr>
<tr>
<td></td>
<td>• Ecological</td>
<td>• Physical health</td>
</tr>
<tr>
<td></td>
<td>e.g., moderate climate, clean air, spacious housing.</td>
<td>negative: free of disease</td>
</tr>
<tr>
<td></td>
<td>• Social</td>
<td>positive: energetic, resilient</td>
</tr>
<tr>
<td></td>
<td>e.g., freedom, equality and brotherhood</td>
<td>• Mental health</td>
</tr>
<tr>
<td></td>
<td>• Economical</td>
<td>negative: free of mental defects</td>
</tr>
<tr>
<td></td>
<td>e.g., wealthy nation, generous social security, smooth economic development</td>
<td>positive: autonomous, creative</td>
</tr>
<tr>
<td></td>
<td>• Cultural</td>
<td>• Knowledge</td>
</tr>
<tr>
<td></td>
<td>e.g., flourishing of arts and sciences, mass education</td>
<td>e.g., literacy, schooling</td>
</tr>
<tr>
<td></td>
<td>• Etc…</td>
<td>• Skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e.g., intelligence, manners</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Art of living</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e.g., varied lifestyle, differentiated taste</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Etc…</td>
</tr>
<tr>
<td>Life results</td>
<td>Objective utility of life</td>
<td>Subjective appreciation of life</td>
</tr>
<tr>
<td></td>
<td>• External utility</td>
<td>• appraisal of life-aspects</td>
</tr>
<tr>
<td></td>
<td>e.g., For intimates: rearing children, care for friends</td>
<td>e.g., Satisfaction with job</td>
</tr>
<tr>
<td></td>
<td>e.g., For society: being a good citizen</td>
<td>e.g., satisfaction with variety</td>
</tr>
<tr>
<td></td>
<td>e.g., for mankind: leaving an invention</td>
<td>• Prevailing moods</td>
</tr>
<tr>
<td></td>
<td>• Moral perfection</td>
<td>e.g., Depression, ennui</td>
</tr>
<tr>
<td></td>
<td>• e.g., authenticity, compassion, originality</td>
<td>e.g., zest</td>
</tr>
<tr>
<td></td>
<td>• Etc…</td>
<td>• Overall appraisals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Affective: general mood-level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cognitive: contentment with life</td>
</tr>
</tbody>
</table>