HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

Allotment gardens in full bloom -

Social practice theory perspective on allotment gardening in Finnish cities

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Henna Heikkilä
Supervisor: Eva Heiskanen

HELSINGIN YLIOPISTO

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Tiivistelmä - Referat - Abstract

Kiinnostus palstaviljelyä kohtaan on kasvanut merkittävästi viime vuosien aikana, ja tällä hetkellä viljelypalstan saaminen tietyissä Suomen kaupungeissa voi edellyttää monen vuoden jonotusta. Sama ilmiö on havaittavissa myös globaalisti. Kasvaneen kysynnän taustalla vaikuttavat muun muassa ruoan saatavuuteen ja turvallisuuteen liittyvät huolet sekä kestävyyteen liittyvät kysymykset. Tässä maisterintutkielmassa tarkastellaan Suomen suurissa kaupungeissa, etenkin Helsingissä, Espoossa, Turussa ja Tampereella, harjoitettavaa palstaviljelyä. Tutkielman teoreettisena viitekehyksenä toimii käytäntöteoria (*eng. social practice theory*). Käytäntöteorialle on ominaista tutkimuksen painopisteen siirtäminen pois yksilöiden, heidän motiiviensa ja taustansa tutkimisesta ensisijaisena tekijänä kohti kontekstin syvällisempää tutkimista - eli toimintaa ja sosiaalisia käytäntöjä, joihin yksilöt osallistuvat. Osana tutkielmaa hyödynnetään erityisesti Elizabeth Shoven ynnä muiden (2012) luomaa jaottelua, jossa käytäntö koostuu kolmesta keskeisestä elementistä, joita ovat materiaalit, osaaminen sekä merkitykset. Tutkielman keskiössä ovat myös palstaviljelyyn liittyvät paikalliset sekä ajalliset osatekijät. Tämän lisäksi tutkielmassa kartoitetaan osallistujien näkemyksiä keinoista, joilla palstaviljelyä voisi kehittää tulevaisuudessa.

Tutkielman aineisto koostuu 23 puolistrukturoidusta temaattisesta haastattelusta sekä yhdestä kirjallisesta vastauksesta. Tutkimuksen pääasiallisena kohderyhmänä ovat palstaviljelyä harjoittavat henkilöt eri puolilla Suomea. Tutkimuksen aineiston tarkastelussa hyödynnettiin temaattista analyysia, joka oli sekä aineistolähtöistä sekä käytäntöteorian ohjaamaa.

Tutkielmassa saadut tulokset osoittavat, että palstaviljely nähdään tärkeänä ja merkityksellisenä harrastuksena, mutta se ei ole välttämätöntä elannon turvaamisen kannalta. Sen sijaan muut merkitykset, kuten laadukas ja itse kasvatettu ruoka, fyysinen ja henkinen hyvinvointi sekä sosiaalisuus korostuvat. Palstaviljelyn kannalta keskeisimmät tiedot ja taidot linkittyvät maaperään ja sen hyvinvointiin. Paikalliset ja ajalliset osatekijät ovat omalta osaltaan, joko edistämässä tai estämässä palstaviljelyharrastuksen toteutumista. Tutkimuksen tulosten perusteella palstaviljelyyn tulisi tarjota entistä enemmän mahdollisuuksia tulevaisuudessa ja oman ruoan kasvattamista tulisi arvostaa enemmän yhteiskunnassamme.

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Palstaviljely, käytäntöteoria, kestävät ruokajärjestelmät, ruoan omavaraisuus

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Tiivistelmä - Referat - Abstract

Interest in allotment gardening has grown significantly in recent years and currently, in some Finnish cities, getting an allotment might require several years of waiting. The same phenomenon can be observed globally. The increased demand is driven by concerns such as food availability, food security and issues related to sustainability. This Master's thesis examines allotment gardening in major Finnish cities, especially in Helsinki, Espoo, Turku and Tampere. The theoretical framework of the thesis is social practice theory. Practice theoretical research characteristically shifts the focus away from the study of individuals, their motives and background as a primary factor towards a deeper study of the context - that is, the activities and social practices in which individuals engage. As part of the thesis, particular use will be made of the categorization created by Elizabeth Shove and colleagues (2012), where practice consists of three key elements: materials, competences, and meanings. Additionally, the study focuses on the spatial and temporal aspects of allotment gardening. In addition, the study will explore the participants' views on ways to develop allotment gardening in the future.

The data consists of 23 semi-structured thematic interviews and one written response. The main target group of the study was people who are practicing allotment gardening in different parts of Finland. Thematic analysis was used to examine the data, and it was both data-driven and guided by practice theory.

The results obtained in this thesis show that allotment gardening is seen as an important and meaningful hobby, but it is not necessary for securing a livelihood. In contrast, other meanings, such as good quality and self-grown food, physical and mental well-being and social aspects are emphasized. The most important knowledge and skills for allotment gardening are linked to the soil and its well-being. Spatial and temporal factors play their part in either promoting or hindering the accessibility of allotment gardening to potential gardeners. Based on the results of this thesis, more opportunities should be offered for allotment gardening in the future and food self-provisioning should be valued more in our society.

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Allotment gardening, social practice theory, sustainable food systems, food self-provisioning

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1 Introduction

Modern, globalized food systems are largely contributing to the rise of greenhouse gas emissions and to the warming of the climate. It is estimated that around 30% of the total greenhouse gas emissions globally are caused by the food systems (Rosenzweig et al., 2020; Vermeulen et al., 2012). This strong linkage between the food systems and greenhouse gas emissions is emphasized by Clark and colleagues (2020). According to Clack et al. (2020, p. 705) "even if fossil fuel emissions were immediately halted, current trends in global food systems would prevent the achievement of the 1,5°C target and, by the end of the century, threaten the achievement of the 2°C target". To meet the 1,5°C and 2°C targets, Clack et al. (2020) argue that extensive and unprecedented changes to the global food system will be required.

According to UNEP (2016, p. 34), the food sector has "by far the largest impact on natural resource use as well as on the environment" of all economic activities. These environmental challenges to which the food sector is contributing to include, for example, biodiversity loss, freshwater pollution, deforestation and excess nutrient accumulation (Weidner et al., 2018). According to UNEP (2016) it is assessed that food production is causing 60% of global terrestrial biodiversity loss. It is also estimated that only 15–20% of the input of nitrogen and phosphorus fertilizers is accumulated in the cultivated food, highlighting the immense loss of nutrients to the environment (UNEP, 2016). On top of environmental issues, industrial food systems are also leading to economic disparities across the value chain and have detrimental impacts on public health (Albrecht & Wiek, 2021). Additionally, our current food systems do not guarantee sufficient nutrition for everyone (Vermeulen et al., 2020).

As the world population has been growing exponentially, there are now more people living in urban areas than elsewhere. According to the United Nations, in 2018, already 55% of the world's population lived in urban areas and this proportion is expected to increase to 68% by 2050 (United Nations, 2018). As the food systems have become increasingly globalized and urbanization has increased, the gap between production and consumption has widened (Monaco et al., 2017). By centering food production into cities, it could be possible to simultaneously tackle a variety of environmental, social, and human health issues (Weidner et al., 2018). Urban food gardening can be viewed as a means to increase food security, a more sustainable alternative to contemporary food provisioning and a possible response to mass food that is produced in industrialized societies (Dobernig et al., 2016). Even though urban food gardening cannot

possibly provide food for all city's residents, it can be an important source of locally grown food (Speak et al., 2015). With more localized food production taking place in urban areas, there is a possibility to tackle climate change through the reduction in energy consumption owing to the decreased need to process, distribute and package food (Hope & Ellis, 2009). Additionally, the increased use of renewable inputs and the employment of muscular labour in urban food growing contribute to decreasing dependence on fossil matter-energy (Suomalainen et al., 2023).

Urban food gardening has many different forms from small-scale window farming to large-scale rooftop farms and hydroponic greenhouses (Dobernig et al., 2016; Suomalainen et al., 2023). Allotment gardening represents one form of local food production in urban areas, and it has seen a rise in popularity in recent years. Historically, allotment gardening has played a particularly significant role during periods of crisis and economic instability, serving as an essential source of food and livelihood (Ponizy et al., 2021). In modern societies allotment gardening is no longer a means to secure a livelihood but an important hobby and a leisure activity (Jensen & Sørensen, 2020). Thus, it is argued that the underlying meaning related to allotment gardening has changed from subsistence to leisure (Whittaker, 2017). Today's increased demand for allotment gardening is driven by concerns about food production practices, health and nutrition, a wish to preserve existing urban green spaces from further development and an awareness of the importance of fostering a more sustainable environment (Acton, 2011).

Social practice theory is increasingly being applied within the environmental social sciences to gain deeper insights into phenomena such as consumption and its environmental impacts (Spaargaren, 2011; Spaargaren et al., 2016, p. 6). This growing interest can be linked to a broader focus on the concepts of the 'everyday' and the 'life-world' (Reckwitz, 2002, p. 244). Social practice theory and using practices as the central unit of analysis can provide an alternative to individualist and systemic paradigms, approaches that according to Spaargaren (2011) have traditionally dominated research related to environment and climate change. This is why the present thesis applies a social practice framework in its analysis.

The aim of this thesis is to explore allotment gardening in Finnish cities and to deepen the understanding of its significance in the lives of urban residents. Drawing on a theoretical framework that combines previous literature on allotment gardening with social practice theory, this study seeks to gain a more nuanced understanding of how the practice is currently shaped in

contemporary Finland. Adopting a social practice theory perspective allows for a shift away from a narrow focus on food production, offering instead a broader view of the social dynamics embedded in the practice. Accordingly, this thesis moves beyond merely examining the management and organization of allotment gardening or the individual motivations behind it. The goal is to present allotment gardening as a complex phenomenon, consisting of multiple interconnected elements that together form a rich entity.

The research is guided by two main research questions:

1) What are the materials, competences, and meanings related to the social practice of allotment gardening in Finnish cities, and what kind of role do the spatial and temporal elements play in shaping the practice and its accessibility for practitioners?
2) What are the main needs and wishes of the allotment gardeners regarding the future of allotment gardening and food self-provisioning in Finnish context?

This thesis is structured as follows. After this introductory chapter, Chapter 2 presents the background and theoretical framework of the study. It includes an overview of allotment gardening and its historical background, an exploration of the current state of the practice in Finnish context, a summary of social practice theory and its key concepts, and a review of relevant previous research. Chapter 3 outlines the research questions guiding this thesis and briefly discusses how they were formulated. Chapter 4 focuses on the materials and methods used in the study, detailing the data collection and analysis processes, specifically, the use of semi-structured interviews and thematic analysis. This chapter also introduces the research sample and some ethical considerations. Chapter 5 presents the main findings of the research. Chapter 6 discusses these results in relation to the theoretical framework and addresses the study's limitations and suggestions for further research. Finally, Chapter 7 concludes the thesis by summarizing the key insights and findings.

This thesis was conducted as part of the HELSUS Co-Creation Lab, a collaborative and guided process involving master's students, partner organisations and facilitators, with the goal of addressing real-world sustainability challenges. This thesis work was inspired by the topic provided by Martha Association: *"Can growing and foraging your own food be a path towards sustainability in Finland? Food self-sufficiency and human-nature relations in a changing climate."*

2 Background and theoretical framework

"A hobby is an activity that gives a person 'something to love and something in which to find freedom'" (Zweig 1952, 150) (Acton, 2011)

In this chapter, I will begin by introducing allotment gardening as a part of the broader practice of food self-provisioning. Following that, I will explore the concept of allotment gardening in general and then more specifically in the context of Finnish cities. Another objective of this chapter is to present the main theoretical framework, social practice theory. Lastly, I will review previous research that is relevant to the themes and aims of this study.

2.1 Allotment gardening as a form of food self-provisioning

Food self-provisioning can be defined as a process of providing food for oneself, but instead of being limited to only one human individual it can also encompass broader notions of 'self' (Suomalainen et al., 2023). According to Suomalainen et al. (2023) the food self-provisioning can also extend to a household, an organization, or a community. Food self-provisioning can occur on a broad range of spatial scales, and it has various forms (Suomalainen et al., 2023). The different forms vary from small-scale window farming and balconies to allotments and community gardens (Dobernig et al., 2016; Suomalainen et al., 2023). In the scope of this thesis, the focus will be on food self-provisioning that occurs in allotment gardens in Finnish cities.

2.1.1 The definition, properties and history of allotment gardens

An allotment is a small plot of rented land used for cultivating fruits, vegetables, and plants for personal use (Acton, 2011; Jensen & Sørensen, 2020). These individual plots, located within larger allotment sites, are rented by individuals, families, or groups who have the freedom to choose what to grow and how to manage their cultivation (Kwartnik-Pruc & Droj, 2023). Gardeners typically pay an annual fee and are expected to follow internal regulations (Farges, 2015). Allotment gardens often include shared spaces, such as main pathways, which are maintained collectively (Kwartnik-Pruc & Droj, 2023). Across Europe, allotment gardens vary widely in form and function (Martens, 2018). Some feature cottages, while others do not (Nordh et al., 2016), and while some prioritize food production, others emphasize a balance

between cultivation and recreational use for the local community (Calvet-Mir et al., 2016). There are also gardens that are private, whereas others are public, open for all and initiated by municipality (Martens, 2018). As some allotment gardens combine both the private and public spheres, allotment gardens can be described as semipublic spaces. Urban allotment gardens offer a distinctive blend of both productive and leisure spaces for residents in European cities (Ponizy et al., 2021). In this thesis, the term allotment garden refers to an area in which the plots of land are used primarily for food production and that don't feature cottages (Figure 1).

Figure 1. A plot in an allotment garden in Espoo during the summer of 2024. Picture received from a local allotment gardener.

Kwartnik-Pruc and Droj (2023) characterize allotment gardens as spaces encompassing three key dimensions: environmental, social, and urban. The environmental dimension includes green space and the production of natural, organic food. The social dimension involves community building and the promotion of well-being. The urban dimension combines elements of green thinking, sustainability, usability, and aesthetics (Kwartnik-Pruc and Droj, 2023). According to the authors, modern urban gardens, including allotment gardens, are part of a new urban paradigm that emphasizes environmental protection, renewed social interaction, and a reconnection with nature (Kwartnik-Pruc and Droj, 2023).

Ponizy et al. (2021) emphasize that allotment gardens offer a wide range of ecosystem services, encompassing economic, social, and environmental functions, making them a unique component of the urban landscape. While food production is the most apparent provisioning service, allotment gardening also contributes to several other ecosystem services. These include pollination, local climate regulation, noise reduction, air purification, and flood mitigation (Speak et al., 2015). In addition to provisioning services, allotment gardens offer important cultural ecosystem services by providing urban residents with opportunities to socialize, exchange knowledge, and reconnect with nature (Speak et al., 2015). Especially for individuals living in apartment buildings who do not have access to spaces dedicated to cultivation, the allotments are a vital resource and an opportunity to practice gardening (Hope & Ellis, 2009). Speak et al. (2015) also emphasize that allotment gardens bring together individuals from diverse backgrounds who share a common interest in gardening, thereby fostering social cohesion. Crouch (2003) also highlights that allotment gardens are places that are crossing boundaries and transcending monetary and class values. Allotment gardens also serve as educational spaces, promoting learning about nature and food production (Speak et al., 2015). Furthermore, they encourage physical activity, offering notable health benefits (Speak et al., 2015). Additionally, allotments contribute to physical health by promoting healthier and more nutritious diet with easier access to fresh and wholesome food (Hope & Ellis, 2009). Allotment gardens can also be regarded as nature-based solutions. According to Sowińska-Świerkosz et al. (2021) allotment gardens in Poland fulfil most of the requirements of nature-based solutions which are the use of plants and water, solving urgent problems at the local scale and the inclusion of the environmental, social and economic pillars of sustainable development.

Allotment gardens were established in the nineteenth century alongside industrialization and urbanization (Farges, 2015). The primary aim behind the initiation of allotment gardens was to enhance the living conditions and food supply of workers and the underprivileged and to maintain social order (Kwartnik-Pruc & Droj, 2023; Farges, 2015). After their establishment, there have been temporal changes in the demand for allotments and their availability (Acton, 2011), mostly depending on the circumstances in society. The role of allotment gardening has been especially important in times of economic and political crises, for example, during the First and Second World Wars (Ponizy et al., 2021). The food shortages that have appeared because of these crises have acted as an incentive for the resurgence of gardening (Schoen et al., 2021). On the other hand, the economic stabilization and increased living standards have resulted in a

reverse trend when it comes to the popularity of allotment gardening (Ponizy et al., 2021). According to Ponizy et al. (2021) a decrease in the number of gardens was observed in several European countries after the Second World War. As food was more readily available and not as expensive, the plots were no longer a necessary means to feed one's family (Wiltshire & Geoghegan, 2012; Whittaker, 2017). Periods of economic upturn have resulted in more reliance on supplies from commercial food outlets (Burgin, 2018).

According to Acton (2011), the first decade of the 2000s saw a greater demand for allotments than at any time since World War II. This grown demand has resulted from concerns over methods of food production, health and nutritional issues, an aim to preserve urban green spaces and the need to create a more sustainable environment (Acton, 2011). Now the situation might have shifted even more. The COVID-19 pandemic which began in 2020 exacerbated pre-existing problems of food insecurity and underscored the importance of local food production (Hume et al., 2021). Schoen et al. (2021) studied the effects of COVID-19 on community and allotment gardens in the Global North. In their research paper the authors highlighted that the pandemic solidified and strengthened the role of both allotment gardens and community gardens (Schoen et al., 2021). Ravenscroft and colleagues (2012) have summarized the temporal shifts in allotment gardening over the last three centuries. According to the authors, allotment gardening has shifted "from a response to rural poverty to a middle class leisure pursuit to, recently, a localised response to threats of global food scarcity and environmental change" (Ravenscroft et al., 2012, p. 13).

2.1.2 Current state of allotment gardening in Finnish cities

Based on the latest statistics the biggest cities in Finland based on the population are Helsinki (686 595), Espoo (322 180), Tampere (260 455), Vantaa (251 936), Oulu (216 352) and Turku (206 420) (Tilastokeskus, 2025). In this subchapter I will explore the allotment gardening practices in these cities in more detail. I will also provide a quick overview of the most common principles and rules that need to be followed whilst practicing allotment gardening in these cities.

Table 1. General information regarding allotment gardening in the six biggest cities in Finland.

	Helsinki	**Espoo**	**Tampere**	**Vantaa**	**Oulu**	**Turku**
Residents	686 595	322 180	260 455	251 936	216 352	206 420
Administrator	Asso-ciations	City	4H Asso-ciation	Asso-ciations	City	4H Asso-ciation
Number of al-lotments	46	14	14	15	8	15
Total number of plots	n/a	1195	891	n/a	684	n/a
Largest area (plots/area)	250	175	n/a	3,5 ha	196	105
Smallest area (plots/area)	25	25	n/a	0,08 ha	33	8
Price (per year)	20–80 €	50–65 €	13–86 €	30–50 €	24 €	15–25 €
Size range of plots	4–100 m^2	20–100 m^2	25–400 m^2	100 m^2	100 m^2	50–100 m^2
Type of plots	Perennial	Perennial	Perennial & annual	Perennial	Perennial & annual	Perennial & annual
Plots per hou-sehold (max)	1	1	n/a	n/a	n/a	3
Long queues	Mention	Mention	Mention	n/a	n/a	n/a

(Sources: Tilastokeskus, 2025; Helsingin kaupunki, 2025a; Espoo, 2025a; Espoon kaupungin kaupunkitekniikan keskus, 2018; Tampereen 4H-yhdistys, 2025a; Vantaa, 2025a; Rantalainen, 2019; Oulu, 2025a; Turku, 2025; Turun 4H-yhdistys, 2025a)

Next, I will be providing some general information regarding allotment gardens in Helsinki, Espoo, Tampere, Vantaa, Oulu and Turku. The following examples and observations are based on the open information available on the websites of administrators such as cities and associations. Especially in the case of Helsinki and Vantaa, there was some information that could not be accessed as some of the associations responsible for managing the allotments do not have webpages or they might have groups that are available only for their members. Therefore, the following observations should be viewed as illustrative examples rather than comprehensive overview.

The cities of Helsinki and Vantaa are renting land to associations for the use of allotment gardening and the associations in turn rent individual plots to their residents (Helsingin kaupunki, 2025a; Vantaa, 2025a). In Espoo and Oulu, the allotment gardens are administered by the cities (Espoo, 2025a; Oulu, 2025a). In Tampere and Turku, on the other hand, the 4H associations are responsible for the management and allocation of the plots (Tampereen 4H-yhdistys, 2025a;

Turun 4H-yhdistys, 2025a). In Helsinki there are in total 46 allotment areas which is by far the most of all the cities. Vantaa and Turku have both 15 allotment areas, while Espoo and Tampere have 14 allotments. In Oulu there are 8 allotment areas in use currently. All these cities have some larger allotment areas and then some smaller ones based on both the numbers of plots and the total land area. Based on the information that was available, the larger allotments have more than one hundred rented plots, while the smaller ones have around 30 or less. The prices of the plots vary in terms of the city but there are also a lot of different variables that affect the pricing. The size of the plot is the most obvious factor affecting the price. In Espoo, the annual rent includes also irrigation water and the waste management in the allotment which is affecting the price (Espoo, 2025a). In Tampere, the prices vary also based on the type of the "lease" or in other words if the plot is rented for one year or for several years (Tampereen 4H-yhdistys, 2025a).

The most typical size for a plot in all the cities is 100 square meters. Based on the open information, in Helsinki the smallest plots are found in Kuninkaantammi which vary from 4 to 9 square meters (Kuninkaantammen palstaviljelyalue, 2025). On the other hand, in Tampere there are annual plots which are all the way to 400 square meters (Tampereen 4H-yhdistys, 2025b). In the webpages of allotment gardens in Helsinki, Espoo and Tampere there are mentions that currently queues for the allotments are long and that it might take time to gain access to a plot. One allotment gardeners' association in Helsinki has informed in their website that the number of people in the queue to apply for a plot is many times higher than the number of plots that become available during the year. For this reason, they are not accepting new applicants for the time being (Maunulanpuiston palstaviljelijät, 2025). Due to the high demand, some associations in Helsinki have decided to allocate the freed plots by carrying out a draw or a "lottery". This is the case with the plots administered by Hyötykasviyhdistys (Hyötykasviyhdistys, 2025).

Each allotment area has its own set of rules and specific guidelines that must be followed. Complying with these regulations, established by the administrators, is essential for participating in allotment gardening and maintaining the right to cultivate a plot within the area. These rules and instructions also influence the current practice of allotment gardening in Finland, making them a central aspect of this thesis. Next, I will make a quick overview of the most important and noteworthy rules and regulations that are affecting the gardening practices.

According to the rules, the rented plots must be cultivated and kept in good condition. Some allotment areas have specific rules related to the timelines during which the annual cultivation must begin. For example, in the allotments in Helsinki region, cultivation must begin by the end of May and uncultivated allotments are redistributed at the beginning of June (Helsingin kaupunki, 2025b). In addition to cultivating and maintaining the plot, the allotment gardeners are required to upkeep the areas surrounding the plot. This means keeping the drainages and pathways clear so that there is no disturbance to other gardeners or people in the allotment (Helsingin kaupunki, 2025b). Constructing permanent structures such as greenhouses, pergolas or other fixed structures that are difficult to dismantle is prohibited in all the allotment areas. In some allotment areas it is acceptable to enclose the plot with a fence no higher than 120 centimeters (Espoo, 2025b). In addition to fences, easily removable items such as toolboxes, temporary tunnels, gauze and compost frames are allowed in the allotments (Espoo, 2025b). The specific measures and other requirements for these structures are clearly stated in the rules set by each administrative body. The are also specific guidelines in the rules regarding the size of potential shrubs and trees in the plots (Vantaa, 2025b). Additionally, most of the administrators seem to agree that the use of chemical plant protection products or pesticides is prohibited, and that organic farming and products are favoured. Moreover, the planting and growing invasive species in allotments is prohibited (Helsingin kaupunki, 2025b).

2.2 Social practice theory

In this subchapter I will describe social practice theory and its use as a theoretical framework in this thesis. First, I will provide a brief overview of social practice theory and its key principles. Then I will explore more deeply the categorization made by Elizabeth Shove et al. (2012) about the elements of social practices. Additionally, my aim is to link the social practice theory and its elements into the practice of allotment gardening. I will also outline the benefits and potential downsides of using social practice theory and its elements as an analytical framework to explore the empirical data in this research.

2.2.1 Background

Social practice theory is a type of cultural theory. Cultural theories aim to “explain or understand action and social order by referring to symbolic and cognitive structures and their social

construction of reality" (Reckwitz, 2002, p. 246). As there are multiple different forms of cultural theories, there are also many approaches in the field of social practice theory. Social practice theories do not constitute a single, unified theory; instead, they represent a group of approaches that generally focus on social practices as their primary area of study (Reckwitz, 2002, p. 244; Muller, 2024, p. 598). As Spaargaren et al. (2016, p. 4) note, it is distinctive to social practice theory to shift "the research focus away from studying individuals, their motives and background features primarily, towards a more in-depth investigation of 'context', or the activities, the social practices, they engage in".

Social practice theory is being used increasingly within the environmental social sciences to better understand phenomenon, such as consumption and its environmental aspects (Spaargaren, 2011, p. 813; Spaargaren et al., 2016, p. 6). The increasing use of social practice theory can be tied to the growing interest in the 'everyday' and 'life-world' (Reckwitz, 2002, p. 244). With the utilization of practices as central methodological units of research, it is possible to avoid the potential downsides related to the individualist and systemic paradigms which according to Spaargaren (2011, p. 814) are the two paradigms that have been dominant in analyzing environment and climate change. To put these paradigms into more concrete terms, in an individualistic paradigm, the behavioral change of individuals is central to combat environmental change (Hargreaves, 2011, p. 80). On the other hand, with systemic paradigms, the technological innovations within the production sphere are seen as a key for change and thus socio-technical systems serve as central intervention targets (Spaargaren, 2011, p. 814). There are downsides to both of these paradigms. With the individualist paradigm the problem is that increasing the awareness of individuals might not bring the desired results and create actual behavioral changes. This phenomenon is known as the attitude-behavior gap (Gupta & Ogden, 2006). Additionally, the individualistic paradigm is putting high pressure on individual actors (Spaargaren, 2011, p. 814). The systemic paradigm on the other hand, focuses so strongly on the institutional actors, such as companies and organizations, that the individuals no longer matter from an environmental policy-making point of view and the crucial role of human agents might be undermined in processes of environmental change (Spaargaren, 2011, p. 814). Due to these downsides, Spaargaren (2011, p. 815) argues that there is a need for more balanced approach which would take into account both agency and structure, combine both bottom-up and top-down dynamics of change and recognize both human actors and technological infrastructures as mutually influential actors. Practice based approaches are proposed as a well-suited option to fill this gap (Spaargaren 2011, p. 815; Hargreaves, 2011, p. 80 & 82).

2.2.2 Elements of social practices

Analyzing practices as the unit of analysis involves examining the elements or properties that come together in human activity. Practice theorists generally agree on what they are, but they use different terms and offer varying explanations for how these elements contribute to the organization of practices (Spaargaren et al., 2016 p. 7). Reckwitz (2002, p. 249) describes social practices as "a routinized type of behavior which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, things and their use, a background knowledge in the form of understanding, knowhow, states of emotion and motivational knowledge". In this study the focus will be on the categorization created by Elizabeth Shove and colleagues (2012) based on which social practices are formed by three elements which are materials, competences and meanings. According to this definition materials include "things, technologies, tangible physical entities, and the stuff of which objects are made". Competences on the other hand encompass "skill, know-how and technique". Lastly, the meanings entail "symbolic meanings, ideas and aspirations". (Shove et al., 2012, p. 14).

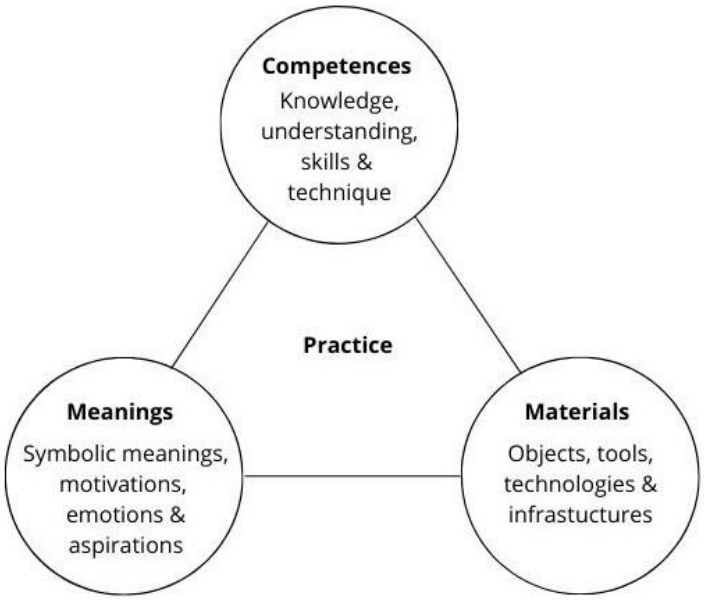

Figure 2. Illustration of the three elements of social practice (adapted from Shove et al., 2012).

Adapting this approach of Shove et al (2012, p. 7), allotment gardening can be described as a complex combination of using tools and other material elements to cultivate a plot of land which require bodily competencies and mental capabilities; the rules and norms that define the practice of allotment gardening; its meanings to practitioners and more widely to the whole

society. According to Reckwitz (2002, p. 250) a practice, such as allotment gardening, shapes a so-called ‘block’ which existence is entirely dependent on the existence and interconnectedness of specific elements. Thus, the practice can’t be reduced to any single element. In practical terms, this means that without the existence of necessary materials, competences or meanings, the practice of allotment gardening cannot be performed.

This brings us to another central conception within social practice theory which is the distinction between practices-as-entities and practices-as-performances. Practice-as-entity fundamentally means that practices such as allotment gardening exist as a “recognizable conjunction of elements” (Shove et al., 2012, p. 7). This means that the activity of allotment gardening has recognizable elements and parameters that distinguish it from other practices. On the other hand, the definition of practices-as-performances essentially means the active integration of elements. Through this active integration, ‘performing’ and doing, the practice-as-entity is reproduced. Through the performing of practices the connections between the elements forming the practice-as-entity are sustained over time (Shove et al., 2012, p. 7). So, it can be stated that allotment gardening survives and is sustained due to repeated enactments by allotment gardeners, who are reproducing the interdependencies that initially shape the practice (Shove et al., 2012, p. 7).

For a practice to be performed, it needs to be weaved into the existing temporal and spatial texture of daily life (Shove et al., 2012, p. 127; Muller, 2024, p. 599). According to Shove et al. (2012, p.127) time can be viewed as a finite resource for which practices compete. In this approach, the idea is that minutes spent on one practice cannot be in invested in any other practice. Due to this, it is essential for the fate and future of the practice, such as allotment gardening, how the practitioners spend their days. This presentation of practitioner-time as a limited and finite resource, highlights that the more time is allocated to a practice, the more dominance it has over other practices (Shove et al., 2012, p. 127). For example, people might be bound to carry specific practices which limits their ability to take part in other practices. Commitments to family or work-related practices are prime examples of such practices which limit the possibilities to take part in other practices. Differences in these commitments might explain why some groups of people have more time and better opportunities to engage with allotment gardening than others. In addition to the temporal element of social practices, “practices also take place in, and consequently require, space” (Shove et al., 2012, p. 130). Whittaker

(2017) describes that the place of the allotment garden is integral to the practice itself. In concrete terms allotment gardening can only take place at the allotment. Also, Whittaker (2017) goes on to highlight that the fabric of the place, such as the soil and vegetation, are physically part of the practice.

Based on the previous notions, it can be concluded that both time and space are present together in the moments when practices are performed. It can be said that performances, such as allotment gardening, demand a share of objective time (minutes, hours) and sufficient practice-space to be able to take place (Shove et al., 2012, p. 134). Thus, allotment gardening appears to have evident temporal and spatial requirements. These include people travelling to the allotment garden to complete specific tasks, over a given period of time (Whittaker, 2017). This means that in order for people to weave a practice such as allotment gardening into their daily routines, they must meet both the temporal and spatial demands of the practice (Muller, 2024, p. 599).

2.2.3 Carriers of practice, recruitment and dynamics of practices

From the perspective of social practice theory, individuals are seen as 'carriers' of practices, performing the practice (Reckwitz, 2002, p. 250; Shove et al., 2012, p. 7). In the context of this thesis, the allotment gardeners are viewed as the carriers of the practice, of allotment gardening. It is noteworthy that individuals are engaged in many practices, and they are constantly taking up and dropping out of different practices as their lives unfold (Shove et al., 2012 p. 65 & 68). As a result of this, the carriers of practice have a crucial role in the fate and the future of the practice. If practices are to survive and continue, they need to capture and retain practitioners, who are essentially keeping the practices alive (Shove et al., 2012 p. 120). As was previously mentioned, allotment gardening in the cities of Finland is rising in popularity and the demand is starting to be higher than there are open allotments. This means that there isn't lack of people who are willing to "carry" the practice and keep it alive and thriving. Thus, the willingness of individuals to carry the practices is of the essence.

When it comes to so-called sustainable practices and diffusion of those, it is imperative to focus on individuals as carriers of practice. This is because the more people adopt sustainable practices such as allotment gardening, the more likely these practices are to spread (Shove et al., 2012; Muller, 2024, p. 596). Essentially, the more people participate in specific practices, the

more they are likely to expand and thus pave way for more sustainable ways of life (Muller, 2024, p. 597). With allotment gardening, this example isn't as straightforward. Some practices can be more easily adopted by numerous people. With allotment gardening, the spatial requirements and the limited number of allotments might be blocking people from participating even though there would be interest. As Muller (2024, p. 607) highlights, there is a varying potential for different practices to spread and gain new practitioners or in other words recruit new carriers of practice. In practice theoretical research, the term recruitment refers to the process by which new individuals begin engaging in and carrying out a particular practice (Shove et al., 2012, p. 63). For allotment gardening, there are certain requirements for who can adopt and carry the practice. As the cultivation of a plot demands certain bodily activities, allotment gardening can be carried out by people who are relatively fit and healthy. This is setting certain limits on who can take part in the practice. This means that allotment gardening is recruiting people from a limited population (Shove et al., 2012, p. 78).

Social practices are seen as constantly evolving and dynamic. Dobernig and colleagues (2016, p. 153) state that practices emerge, merge, evolve and disappear. As has been presented in the literature review, the popularity and the need for the practice of allotment gardening has been fluctuating during its existence. This has been largely based on the circumstances in our society. According to Shove and colleagues (2012, p. 75) gardening is one example of a long-standing leisure pursuit. Despite it decreasing at times, it also has these features that help it withstand changes. For example, in gardening the expertise accumulates through sequences of variously successful accomplishment and one project often begets another. These features contribute to the practice becoming more internally rewarding. Shove et al. (2012, p. 75) also highlight that a practice is more likely to survive time if it has symbolic or normative anchoring and if the practice has some kind of wider significance. In our modern society as values of health and sustainability are being increasingly cherished, the practices of food self-provisioning and allotment gardening might gain even more significance in the eyes of the practitioners and the public. Lastly, if a practice is connected or dependent on other practices, according to Shove et al. (2012, p. 75) this may increase the likelihood to stay with the practice. Allotment gardening has connections to practices such as purchasing food and eating, which are essential and fundamental needs for human beings.

2.2.4 Usefulness in empirical research

The way of distinguishing specific elements of social practices presents a useful analytic framework which is easily transferable to empirical work (Spaargaren et al., 2016, p. 7; Whittaker, 2017). Analysing only tree components is helpful when organizing empirical research (Spaargaren et al., 2016, p. 7). This framework of three elements of practices defined by Shove et al. (2012) has been successfully operationalized in both scientific articles and theses e.g. Dobernig et al., 2016; Stolwijk, 2023 and Touliatos, 2011. Still, it is important to note that despite the usefulness of this framework in research design and conduction, there are certain simplifications that are made in the process (Shove et al., 2012, p. 120). The decision to work with three elements and this framework in question happens at the expense of potential simplifications of what social practices are about (Spaargaren et al., 2016, p. 7). Thus, in addition to the three elements of practice I have decided to focus on the temporal and spatial aspects of allotment gardening to provide a more comprehensive picture of what aspects are affecting participation in allotment gardening.

2.3 Previous research

The most relevant previous research for this thesis includes studies that apply social practice theory or its elements in the context of allotment gardening or comparable forms of urban gardening. Thus, a particularly informative study, is one conducted by Dobernig et al. (2016). In this specific study Dobernig and colleagues (2016) studied different forms of urban gardening, including community gardening, through the lens of social practice theory and the categorization of Shove et al. (2012). In their research it was discovered that the gardening practices studied are generally carried out without the use of advanced technological tools or machinery. Thus, processes such as planting, weeding and watering are conducted with the human bodies and especially with their hands as a central material aspect (Dobernig et al., 2016). Essentially, cultivation and ‘doing the food growing’ happens through manual, muscular labor. Another central material element in urban gardening was the soil. According to Dobernig et al. (2016) soil is the essential medium from which all natural food is coming from. In addition to human bodies and soil, the crops as the ‘produce’ also form a part of the material aspect of urban gardening and thus allotment gardening (Dobernig et al., 2016). In addition to the material aspect of allotment gardening, Jensen and Sørensen (2020) discovered in their research that regarding the consumption of material things, allotment gardeners utilize mostly manual garden tools. These tools have often been inherited either from family members or previous tenants

on the plot (Jensen & Sørensen, 2020). Additionally, many allotment gardeners owned a limited number of tools, or the tools were multifunctional. Still, there were a few exceptions with some gardeners having more of an emphasis on owning diverse set of tools, some of which were also battery-powered and motorized (Jensen & Sørensen, 2020).

The research by Dobernig et al. (2016) also discusses the competences as an element of allotment gardening. The focus is especially on the pathways through which the skills and knowledge are gained. One main pathway to increased competence according to Dobernig et al. (2016) is trial and error. A similar view is shared by Ponizy et al. (2021) according to whom one of the most important ways of acquiring knowledge related to gardening was through "learning by doing". According to trial and error and learning by doing, it is possible to fill the initial gaps in competences (Dobernig et al., 2016). This kind of experimenting is a way to increase people's skills in the course of time. Based on these previous notions, Dobernig et al. (2016, p. 159) conclude that individuals become skilled practitioners by "being engaged in the practice of gardening over a longer period of time". The interactions between the gardeners are also central for the gaining of competence. According to Dobernig et al. (2016) the sharing of experiences and advice between practitioners is a pathway for gardeners to learn from each other. Ponizy and colleagues (2021) also highlight the role of family members as a source of knowledge. In the allotments or other urban gardens, it is possible to gain competence by looking at the plots of fellow gardeners (Dobernig et al., 2016). Finally, books, the press and media also act as a source of knowledge for gardeners (Ponizy et al., 2021).

Dobernig et al. (2016) found that the primary motivations and meanings their research participants associated with gardening were the enjoyment of growing their own food and the chance to engage in their hobby. However, these are not the only meanings that have been identified. Pourias and colleagues (2015) have discovered in their research that gardeners have several motivations for participating in urban collective gardening. This illustrates the multifunctionality of the gardens in the eyes of individual gardeners (Pourias et al., 2015). Even though the food production might be the initial motivation for the gardeners, the research results of Pourias et al. (2015) confirm that the gardens have many other functions, without which the gardeners would perhaps not engage with the practice. As a part of this research, Pourias et al. (2015) were able to highlight eight main functions to urban collective gardens. Additionally to the food production there were seven functions which are social place, health, emancipation from

urban life, contact with nature, leisure, learn and teach, and impact on city and landscape. Similarly, in the research paper by Ponizy et al. (2021) there were several motivations and benefits of gardening presented. According to the authors the main motivations are well-being, physical exercise and outdoor recreation, food production, feelings of connection to nature, creative personal expression, social benefits such as community building, place attachment and empowerment, skill-building and knowledge enhancement (Ponizy et al., 2021).

3 Research questions

In this chapter, I will present the main research questions that are guiding this research. Additionally, I will briefly explain how the process of formulating these questions took place.

The goal of this thesis is to answer the following research questions:

1) What are the materials, competences, and meanings related to the social practice of allotment gardening in Finnish cities, and what kind of role do the spatial and temporal elements play in shaping the practice and its accessibility for practitioners?
2) What are the main needs and wishes of the allotment gardeners regarding the future of allotment gardening and food self-provisioning in Finnish context?

One of the central aims of this thesis is to use the social practice theory and its three elements (Shove et al., 2012) as a tool to learn about the current state of allotment gardening in Finnish cities. Consequently, these three elements, materials, competences and meanings form the basis for the first research question. As was presented in the previous chapter, allotment gardening is a practice which has specific spatial and temporal requirements. Thus, it seemed important to include these aspects into the first research question to grasp the totality of the practice as well as possible. In turn, with the second research question, the aim is to explore what needs and desires the allotment gardeners have in respect of the future of allotment gardening and food self-provisioning in Finnish context. This research question allows for an exploration of which aspects of allotment gardening may still have room from improvement. Additionally, this research question might provide insight into how the allotment gardening and food self-provisioning could be made even more accessible and appealing to people living in Finnish cities.

The formulation of these research questions was mostly supported by existing literature related to allotment gardening, food self-provisioning and the social practice theory. The formulation of these two final research questions also came to be after some data was already collected. One initial topic of interest regarding this thesis had been the recruitment of new practitioners into allotment gardening in Finnish cities. Shortly, after gathering some data, I realized that the demand for allotment gardening is already high in Finland, especially in the Helsinki metropolitan area. Instead, the supply of allotment gardens and cultivation plots is not able to respond to the high demand. As a result, the initial idea of focusing the research question on the recruitment of new allotment gardeners was set aside, and the final research questions were developed accordingly.

4 Materials and methods

In this chapter, I will outline the methods used in this thesis. I will begin by briefly discussing the research methods commonly used in practice theoretical research and how that influenced the methodological choices in this study. Then, I will describe the research sample and the recruitment process for participants. This will be followed by an overview of the data collection, which was conducted through semi-structured interviews. Finally, I will present the approach to data analysis, which was carried out using thematic analysis.

4.1 Research approach and data collection

This study adopts a qualitative descriptive approach. As Leavy (2017, p. 9) explains, qualitative research emphasizes the exploration of in-depth information and seeks to understand the meanings individuals assign to their experiences. Given that this research aims to describe a specific activity carried out by individuals or groups, it aligns with the descriptive tradition within qualitative research (Leavy, 2017, p. 5). In this approach, descriptions are typically grounded in the perspectives of the participants themselves (Leavy, 2017, p. 5). This understanding informed the choice of data collection method, which will be presented shortly.

4.1.1 Data collection in practice theoretical research

In practice theoretical research, various approaches exist regarding the most effective and reliable methods for data collection. According to Hargreaves (2011, p. 84), since social practice theory is moving the research focus towards the ‘doing’ of everyday practices, it implies the

use of methods that can observe what takes place in the performance of practice. Thus, ethnographic methodologies are suggested, instead of solely relying on the results of surveys or interviews (Hargreaves, 2011, p. 84). This idea is supported by Pink (2012, p. 41) who argues that "research findings that are based solely on participants' verbally reported practices cannot facilitate an analysis of their actual practices and of how these are performed, experienced and involve specific ways of knowing in practice." (Pink, 2012, p. 41). The downside of interviews is that the focus is on the intentions and meanings of the research participants and not as much in the practicalities of what they do (Martens, 2012, 4.15). As a result, there might be inconsistencies between the ways in which individuals describe the practices and how they actually perform them (Martens, 2012, 4.15). Thus, having an ethnographic or observational element as a part of theoretical research is viewed beneficial.

Regardless of the previous information, in this thesis the sole data collection method will be interviews. This is due to several reasons. The first and the most influential reason in this regard is the timeline of this thesis. As the thesis process began in October 2024 and was to continue to the spring or early summer of 2025, the data collection phase was set in December and January. Due to the seasonality of allotment gardening practice in Finland, the winter months are quiet in terms of gardening activity. Thus, observational research methods weren't a viable option. Additionally, as the interest was in getting in-depth knowledge of the current state of allotment gardening in Finnish cities and how to make it more appealing and accessible in the future, it seemed appropriate to inquire into the views of the current practitioners and collect data through interviews.

4.1.2 Choice of research participants

The primary objective when looking for research participants was to contact people who practice allotment gardening in Helsinki metropolitan area or in other bigger cities in Finland. The search happened mainly in Facebook groups which included people who were eligible research participants. I received help from three allotment contact persons in Espoo area and from a representative in Dodo ry. The help I got from the allotment contacts in Espoo included gaining access to Facebook groups and them sharing the research invitation both within these groups and directly with some gardeners. The representative of the Dodo ry helped me by posting the research invitation into two Facebook pages with one having 2 400 members in it and the other having 4 100 followers.

In the research invitation which was forwarded in these previously mentioned channels and ways, I targeted people who had started urban gardening recently, around 2–4 years ago. The initial idea behind focusing on this group of gardeners was to gain insight into the early stages of gardening, including potential barriers and reasons why individuals may have delayed starting the practice. I believed that this group would be best suited to reflect on how their experiences aligned with their expectations and to identify areas they felt could be improved. Still, in my invitation, I highlighted that I appreciate the perspectives related to urban gardening regardless of when it has been started. In the research invitation I used the term urban gardening. As some of the Facebook groups in which the invitation was distributed were communication channels for people practicing allotment gardening in particular, I knew that I would reach people who specifically practice allotment gardening. In the larger Facebook groups with several thousand members and followers, the invitation reached people who practiced allotment gardening but also many people who practiced other forms of urban gardening.

I reached in total 25 people, with one interview featuring two allotment gardeners. Of them, 13 fit the initial criteria of having begun allotment gardening 2–4 years ago. Due to the initial difficulties reaching interviewees and having limited time to gather the sample, I loosened on this criterion and interviewed people despite them having practiced allotment gardening for shorter or longer periods of time. Among the 25 people there were also two interviewees who did not practice allotment gardening in the sense as it has been defined in this thesis. One participant practiced urban gardening in a community garden in Helsinki area and the other did urban gardening in her own backyard in Raisio. These two interviews provided interesting insights into these other forms of urban gardening and their personal experiences were valuable. However, to maintain the clarity of this thesis, these two interviews have been excluded from further analysis.

Table 2. Profiles of the interviewees and the duration of the interviews.

Respondent	Age	Occupation*	Location	Years gardening**	Duration of the interview
1	60	Employed	Espoo	4	54 min
2	66	Retired	Espoo	10	1 h 1min
3	33	Employed	Helsinki	1	29 min
4	40	Employed	Tampere	2	48 min
5	49	Employed	Helsinki	4	1h 30 min
6	37	Maternity l.	Espoo	3	25 min

7	34	Employed	Espoo	2	35 min
8	70	Retired	Espoo	3	58 min
9	73	Retired	Espoo	35	25 min
10	60	Retired	Espoo	4	1 h 8 min
11	28	Employed	Espoo	3	1 h 3 min
12	69	Retired	Espoo	18	50 min
13	40	Employed	Espoo	5	27 min
14	45	Employed	Raisio	n/a	54 min
15	71	Retired	Espoo	24	59 min
16	40	Maternity l.	Espoo	4	34 min
17	70	Retired	Espoo	43	49 min
18	51	Employed	Espoo	1	49 min
19	30	Employed	Helsinki	n/a	47 min
20	73	Retired	Espoo	40	28 min
21	72	Retired	Espoo	42	1 h 3 min
22	68 & 69***	Retired	Espoo	3	59 min
23	29	Student	Turku	2	1 h 4 min
24	42	Student	Espoo	4	n/a

*Maternity l. = maternity leave

**Years of practicing allotment gardening. Other previous experiences of gardening are not included in this number.

***One interview featured two allotment gardeners.

The study included participants from five different cities across Finland, which are Helsinki, Espoo, Tampere, Turku and Raisio. The majority of the research participants, 19 in total, were practicing allotment gardening in the Espoo area, making it the most represented location. In other respects, the participant group was quite diverse. The age range of participants spanned from 28 to 73 years, with relatively balanced representation across different age groups. However, younger individuals were underrepresented, with only two participants under the age of 30. In terms of gender, there were 18 female and 7 male participants. The group also varied in occupation and life situations. The largest occupational categories included retirees with 11 participants and currently employed individuals with 10 participants. Additionally, there were two students and two participants on maternity leave. Participants also differed in their backgrounds: 19 were originally from Finland, while six had moved to Finland from various countries within the past 2 to 13 years. Experience in allotment gardening also varied widely. Four participants had over 30 years of experience, offering valuable insights into long-term changes in the practice. However, the largest group of 15 participants had been gardening for less than five years, resembling the initial target group. Only four participants had between 5 and 30

years of experience. Thus, the participants were heterogeneous based on their age, gender, occupation, origin and gardening experience, but they formed a homogeneous group in terms of all of them having gardening as their hobby.

Table 3. Illustrations of the distributions of participants based on gender, origin, location, age, years of allotment gardening and occupation.

Distribution by gender: Female participants: 18 Male participants: 7	**Distribution by origin:** Originally from Finland: 19 Originally from outside of Finland: 6
Distribution by location: Espoo: 19 Helsinki: 3 Tampere: 1 Turku: 1 Raisio: 1	**Distribution by age:** < 30: 2 30–49: 10 50–69: 7 ≥ 70: 6
Distribution by years of allotment gardening*: < 5: 15 5–30: 4 > 30: 4	**Distribution by occupation:** Retired: 11 Employed: 10 Student: 2 Maternity leave: 2

*Two of the interviewees did not practice allotment gardening as it is defined in this thesis, so they are excluded from this section.

As I had this specific target group in mind when I was looking for research participants, my sampling can be described as non-probability and purposive sampling (Guest et al., 2006). According to Guest et al. (2006) a common element for purposive samples is the choice of participants based on predetermined criteria relevant to a particular research objective. As my thesis aims to explore and describe the practice of allotment gardening, people who are actively engaged in it are the most evident people to include in the sample. As Guest et al. (2006) have presented, in qualitative research which does not strive for statistical generalizability, the utilization of non-probabilistic sample is justified. The sampling in my research also exhibits the characteristics of the snowball approach (Miles & Huberman, 1994; Patton, 2015). In the initial interviews and phases of this research I received contact information of people who were potential interviewees for my study and some of these people were able to participate.

One way to consider the sufficiency of sample size is saturation (Baker & Edwards, 2012, Hennik et al., 2017), which refers to the notion that no new information arises from further data collection. In terms of sample size Hennink et al. (2017) found that approximately nine interviews are sufficient to achieve code saturation, whereas reaching meaning saturation typically requires between 16 and 24 interviews. According to Hennik et al. (2017, p. 594) code saturation is the point when "no additional issues are identified and the codebook begins to stabilize", whereas meaning saturation referred to the point when the topic is thoroughly understood and no further insights can be found. During the data collection phase of this study, coding saturation was reached relatively early, with recurring themes emerging across the interviews. However, since participants had already expressed interest and future interviews were scheduled, data collection continued, ultimately resulting in 23 interviews and one written response. Therefore, the final sample size aligns with the range suggested by Hennink et al. (2017) for achieving meaning saturation.

4.1.3 Semi-structured interviews

As a part of my research, I conducted a total of twenty-three (23) semi-structured interviews. In a few of these interviews there was more than one person attending and for the most part these people were from the same household. The other attendees were, for example, helping with the translation and potential language barriers. In one of the interviews there was a couple who participated equally in gardening and the insights related to allotment gardening came from them both. One answer was received in textual form as it was the preference of the participant. It covered the same themes and answered the same questions and thus it can be viewed just as valid in terms of my research.

The interviews were conducted in December 2024 and January 2025. Eleven (11) of them were conducted via Microsoft Teams and twelve (12) were face-to-face either in a coffee shop or a library. The face-to-face interviews were conducted near the allotment areas where the participants had their plots, but due to the winter season and technical reasons, it was seen most fit to conduct the interview indoors. Interviews were recorded either via MS Teams or through smartphone with the permission of the research participants. Additionally, the participants had been provided with a privacy notice, which contained information on how their personal data is being used and processed as a part of this research. The interviews were conducted both in Finnish and in English. The length of the interviews varied from twenty-five minutes to one

hour and a half. The differing lengths of the interviews were due to some interviewees being more talkative than others. The interviews followed a relatively similar structure and covered the same themes according to the interview guide (see Appendix 2). In the initial phase of the interview the aim was to acquire knowledge of the background of the interviewees in general and then more specifically about the beginning of allotment gardening and the factors that led people to it. Some basic information related to the allotment area was also inquired. The middle part of the interview was dedicated to the elements of practice and the questions were related to the material aspects, knowledge, skills, meanings and motivations of allotment gardening. In the latter part of the interview the focus was on the potential challenges that the interviewees might have faced during the years of allotment gardening and in the ways in which allotment gardening could be developed, enhanced or made more enjoyable. In addition to these themes in the interview guide, I encouraged open dialogue around the topic and asked follow-up questions at times when it felt relevant in terms of my research. From time to time, interviewees seemed to naturally take the conversation towards the topics I was supposed to ask them about, so not all questions were presented in the same manner.

I chose to use semi-structured interviews as the data collection method because such method prompts the interviewee to provide detailed and rich descriptions of their experiences, while the task of interpretation and analysis remains with the researcher (DiCicco-Bloom & Crabtree, 2006, p. 314). In individual in-depth interviews participants are using their own language, they are providing just as long and detailed responses as they choose, and they are allowed to take the conversation in the direction they want (Leavy, 2017, p. 139). This kind of approach enables the formation of a more whole picture of the practice that is researched. After the interviews, the transcription was done manually by listening to the recordings. According to Jenks (2011, p. 25) the choice of the type of transcription and what to include in a transcript should be based on the empirical objective of the research and the data analysis methodology that is used. Since this thesis primarily focuses on the content of the interviews, what was said rather than how it was said, non-verbal cues and tonal markers were not included in the transcriptions. Moreover, some filler words were left out to simplify and clarify the transcripts. According to Jenks (2011, p.17) regardless of the form of transcripts, they are inherently biased and selective as creating them requires interpretation.

4.2 Data analysis

The data corpus, consisting of the transcribed interviews and the answer that was received in written form, was imported to Atlas.ti software which was used as a tool to aid the thematic coding. This initial phase of coding was done inductively, working "bottom-up" to identify meaning from the data without importing ideas (Braun et al., 2019, p. 853). I began with creating quotations which are segments of text highlighted due to their relevance to the topic. These quotations formed initial codes. At this phase I used both in vivo and descriptive coding (see Leavy, 2017 p.151). Additionally, the coding can be described as semantic, meaning that the codes were close to the language the participants used, and they stayed at the "surface" of the data (Braun et al., 2019, p. 853). However, although the initial approach to data analysis was inductive and grounded in the data, as Braun and Clarke (2006, p. 84) point out, coding does not occur in an epistemological vacuum. Since I had already engaged with the theoretical framework at the outset of the thesis process, it may have influenced the way the data was coded.

On the second phase of the analysis, the initial codes were categorized into larger themes. As Braun et al. (2019, p. 845) define it, themes consist of smaller meaning units and those essentially "reflect a pattern of shared meaning" uniting data that might otherwise appear disparate. This part of the analysis was partly guided by the social practice theory and thus can be described as theory driven. Especially the analysis and grouping of data related to the first research question were guided by the practice theoretical framework. Therefore, the latter part of analysis was guided by the specific research objective and theoretical focus, which directed attention toward a more detailed analysis of particular aspects of the data (Braun & Clarke, 2006, p. 84). An example of the coding and thematic analysis produced in this thesis is presented in the coding map below (Figure 3), which demonstrates how codes were organized into broader themes and then linked to the overarching element of social practice.

Thematic analysis was utilized as a method for analysis in this thesis due to its many benefits and suitability related to this research. With the use of thematic analysis, the aim is to identify, analyse and report patterns or themes within the collected data (Braun & Clarke, 2006, p. 79; Vaismoradi et al., 2013, p. 400). Thematic analysis is not tied into a specific theory or epistemology, but it is flexible and can be used independently (Braun & Clarke, 2006, p. 78). Applied

properly, it can generate rich and detailed, yet complex, accounts of data (Braun & Clarke, 2006, p. 78). Additionally, thematic analysis is well suited and often used to describe and summarize participants' experiences (Braun et al., 2019, p. 850), which fits the purposes of this research. The thematic analysis in this research can be described as reflexive (2019, p. 848). This means that the objective of coding and developing themes is to offer a coherent and insightful interpretation of the data, rather than to precisely summarize it or eliminate the role of the researcher's subjectivity (Braun et al., 2019, p. 848).

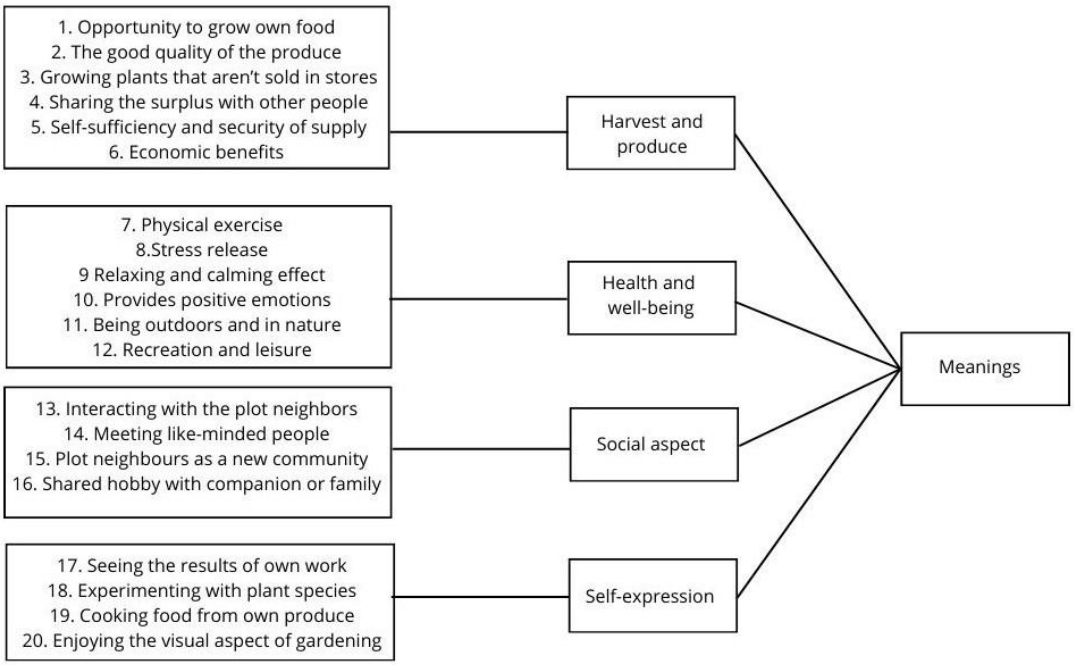

Figure 3. Coding tree illustrating the coding and thematic analysis in this thesis.

4.3 Ethical considerations

As the data collection was conducted through interviews with individual allotment gardeners, ethical considerations were central to the research design. Thus, when designing this research, I carefully considered the ethical implications particularly regarding data collection, storage and analysis. To recruit participants, an invitation was sent to relevant Facebook groups (see Appendix 1). In this invitation I aimed at providing clear and sufficient information to enable individuals to make an informed decision about whether to participate. When individuals contacted me directly to express their interest in participating, I made efforts to arrange interviews

at times and in places (either in-person or virtual) that were most convenient and comfortable for them. Participants were also provided with the University of Helsinki's data protection and privacy notice, which is based on the EU General Data Protection Regulation (GDPR). This document informed participants about how their personal data would be processed as part of the research. I also emphasized that participation was entirely voluntary and that participants had the right to withdraw from the study at any time. Furthermore, participants were given the opportunity to ask questions and seek clarification regarding the research process and its details. In terms of data collection, I chose to gather only information directly relevant to the study, deliberately excluding background details that did not contribute meaningfully to the research aims, thus adhering to the principle of data minimization. The data collected was stored securely, and I was the only person who had access to it. Ensuring participant anonymity and confidentiality was a key priority. In presenting participant profiles in subchapter 4.1, I was mindful that the combination of details shared, such as age, occupation, location, and length of gardening experience, would not be sufficient to identify individuals, especially given the large number of allotment gardeners in the cities studied. As a researcher, I have acknowledged my responsibility to handle the data with integrity throughout the analytical process. I have ensured that all interpretations and conclusions are firmly grounded in the interview material and have avoided making any unsupported or speculative claims.

5 Results

In this chapter, I present the research findings, organized according to the elements of social practice theory, which serves as the theoretical framework for this thesis. The first three subchapters focus on the key materials, competences, and meanings associated with allotment gardening. The fourth subchapter explores the spatial and temporal dimensions of the practice. Lastly, the fifth subchapter outlines the needs and aspirations of allotment gardeners concerning the future of allotment gardening and food self-provisioning in Finland.

5.1 Materials in allotment gardening

This subchapter outlines the key material dimensions of allotment gardening. For illustrative purposes, I categorize these materials into two broad groups: living and non-living. I begin by

examining the role of soil, which forms the foundation of the entire gardening practice. This is followed by a brief discussion of seeds and plants. Turning to non-living materials, I first consider the wide array of tools essential for cultivation, addressing both their functional significance and sources. Finally, I explore the physical structures present in the plots.

5.1.1 Living materials in allotment gardens: soil, seeds and plants

Soil is a fundamental material in the practice of allotment gardening. Many of the other materials mentioned by interviewees were closely connected to maintaining and improving soil health. Several participants noted that the soil in their allotment plots contains a high amount of clay, which contributes to its dense and compact texture. As a result, many interviewees highlighted that the soil requires enhancement using materials such as compost, store-bought soil, peat and sand. One participant shared that over the three years she has been cultivating her plot, she has purchased at least 50 bags of soil, possibly even more. Several interviewees also mentioned that allotment administrators supply sand for gardeners to use. This was particularly highlighted by participants from Espoo and this initiative was met with appreciation from the gardeners. Also lime and natural fertilizers such as horse and chicken manure were used by many to nourish the soil and to make it more optimal for growing plants. In the Espoo area, the plot coordinators were organizing larger orders of fertilizers such as chicken manure for the gardeners. There was also a lot of variation in how much the interviewees have had to improve the soil after gaining access to the plot. Some had received a plot that had been well taken care of, which is why the beginning was relatively easy. For some, on the other hand, it took a considerable amount of time to get their plots in suitable condition for gardening. In many cases, the starting point had been quite challenging, as the plots had been left unused for an extended period.

> "There was very much to work on. It had not been in cultivation or at least it had become so degraded -- It was a total jungle." (R17)

Seeds and plants play a crucial role in allotment gardening, forming an essential part of the material aspect of the practice. The important role of seeds was mentioned most often by the interviewees who were originally outside of Finland. This was because they mentioned acquiring seeds from their home countries, either through personally bringing them along or having friends to deliver or send them. These seeds enabled the allotment gardeners to grow plants

that were originally from their culture. Additionally, the variety of different plant species cultivated by the participants was vast, with the number of species on each individual plot varying. Some gardeners aimed at growing a diverse range of plants, while others preferred to focus on the species they most enjoy cultivating.

> "Rather ask what I don't have there. I have everything. Sometimes I've counted that I have about a hundred varieties there." (R2)

Some of the most cultivated species which were mentioned in the interviews were potatoes, onions, zucchinis, squashes, cucumbers, tomatoes, salads, herbs, different kinds of beans and root vegetables such as carrots and beetroots. Some of the participants also grew more exotic species, for instance peaches, watermelons, and chilies. All the interviewees in this study were cultivating perennial plots, rented over several years, allowing them to cultivate perennial plants. Thus, having berry shrubs such as redcurrant, blackcurrant and gooseberry on the plots was typical. In addition to growing berries and vegetables, some participants were also cultivating flowering plants on their plots. Some grew flowers to deter insects, others aimed to create as diverse a plot as possible, while some simply had a fondness for certain species that they particularly enjoyed growing.

5.1.2 Non-living materials: tools and physical structures

Based on the interviews, the tools used for allotment gardening were largely similar among the gardeners. Several interviewees highlighted that gardening doesn't require a large assortment of tools as those can be used for many purposes and to cultivate a wide variety of plants. Conversely, a few gardeners with more extensive experience mentioned possessing many tools, noting that their collection had grown over time. Despite the total number of tools the interviewees owned, the most essential tool seemed to be the shovel, which was the most frequently mentioned tool.

> "The shovel is number one and you can't do without it. You can go a long way with that, with just a shovel." (R2)

Also, essential for gardening according to the interviewees was to have some kind of system for the watering of the plants. It seemed to be quite common to have both watering cans and a watering hose. A few interviewees mentioned that with the help of watering hoses they don't

need to use the watering cans or carry the water. In a few plots there were also barrels for water. Other important tools seemed to be mattock, gardening fork and rake. Some tools that were mentioned in several interviews but less frequently than the previous ones were wheelbarrows, iron rod, garden shears and scythes. Some interviewees mentioned also having these tools in many different sizes and forms, such as bigger and smaller shovels and mattocks. In addition, frost cloth, along with frames and sticks used to support plants, were also mentioned among the tools and materials associated with gardening practices. Some interviewees noted that their tools were being stored on the plot in designated toolboxes. A few participants gardening in Espoo mentioned that having such a toolbox was mandatory and thus stated in the allotment rules. The interviewees highlighted that the tools they use were mostly manual. The use of primarily manual tools means that essential material aspects in allotment gardening are human bodies and hands especially. The only automatized tool that was mentioned in several interviews was the trimmer. It was seen beneficial especially in maintaining the edges of the plot with less work.

> "A trimmer is pretty much a must in Espoo, because you have to take care of the edges of the plot also -- when the grass starts to take over the edges you have to keep them low, because the city inspects them. With scissors and just your hands it is difficult." (R2)

Many of the interviewees mentioned that they had gained the tools they have as recycled. A few interviewees mentioned that the previous tenants had left all their tools to the plot, which is why they didn't need to buy tools themselves and this saved them time, effort and money. Many of the interviewees had also received tools from their family members or relatives. Some were also lending tools from their plot neighbors. Purchasing tools or other materials to the plot as recycled was also practiced by many of the interviewees.

Fences surrounding the plot can be regarded as physical structures that are part of the material sphere of allotment gardening. There were different approaches to the building of fences in different allotment areas, and this was largely guided by the rules which are set by the administrative body. An interviewee gardening in Turku mentioned that the rules prohibit fences in their allotment area. In the allotment areas of Espoo, the building of fences seems to be a normal code of conduct currently according to the interviews. However, this has not always been the norm, as the practice of building fences is a relatively recent development. People who have

been gardening in the Espoo area the longest mentioned that they didn't have fences when they began the gardening and then fences weren't even allowed. According to the interviews this shift occurred as deer and rabbit populations in the area grew. Apparently, thefts and vandalism were another cause for the fences becoming mainstream in the area.

> "Back in the early days it was that you couldn't put up fences. But then when these animals came and there were thefts, then the fences started to come in. Now pretty much everyone has fences." (R21)

In a few interviews it came up that the fence worked well in their plot and prevented the animals from accessing it. On the other hand, several interviewees mentioned that the height that was allowed for the fence was not enough to keep the animals away. Additionally, some participants felt bothered by the necessity of fencing their plots, also viewing the cost of construction as a burden. One interviewee specifically noted that the high price of fencing materials had prevented him from building one thus far.

The regulations and guidelines governing allotment areas prohibit the construction of permanent structures, such as greenhouses, on the plots. However, the use of plastic tunnels and transferable greenhouses is permitted, if they comply with specified size restrictions. These were used by some of the interviewees. Especially, gardeners who were interested in growing tomatoes or some exotic plants that require more warmth and longer growing periods were utilizing these structures.

5.2 Competences in allotment gardening

In this subchapter the most central skills, knowledge and understandings related to allotment gardening will be presented. First, the key competence related to nourishing the soil will be covered. As an integral part of the well-being of the soil, the skills and knowledge related to composting will be presented. Second, the know-how linked to the seasonality and climate will be outlined. Third, the crop rotation and positioning of plants is explored. Lastly, I will discuss the most important pathways of gaining these competences.

5.2.1 Nourishment of the soil and composting

A frequently mentioned, central competence related to allotment gardening based on the interviews was the understanding of the soil and the ways to nourish it. One interviewee described the importance of the tending of the soil as follows.

> "If you don't take care of the soil, there is no point in imagining that you get to take care of the plants." (R1)

This is a competence that is related to allotment gardening especially. One participant who had practiced gardening on her balcony prior to allotment gardening described how in that form of gardening it was possible to discard the old soil and replace it with fresh soil each spring. However, she noted that now, with a 100-square-meter plot, the situation was different. Starting allotment gardening in the beginning of 2024 had required her to learn new skills related to upkeeping of the soil but also liming and fertilizing. Additionally, it was pointed out that there were a lot of contradictory instructions related to the maintenance of the soil, whether to turn the soil around regularly or to use "no-dig" method in which the idea is to interfere with the soil as little as possible. The no-dig technique was mentioned in several interviews. Despite frequent conversations related to this method, it did not seem to be a mainstream approach. There were many interviewees who talked about the turning of the soil as something that is done every spring.

Composting is an integral part of the practice of allotment gardening and relates to the well-being of the soil as the compost is used to improve the soil structure. In the rules of allotment areas, it is typically stated that organic waste must be composted on each individual plot, unless a shared composting system is available. Composting organic material is beneficial both overall and for the individual gardener, as it reduces the need to purchase commercial soil for the improvement of the soil. When composting is done effectively, gardeners can move toward a more self-sufficient system by producing their own soil. Still, composting seemed to be a skill that many allotment gardeners struggled with, especially in the beginning. This was mentioned by some participants themselves, and some participants had observed this in their allotment area. One interviewee described that some people in the allotment area seemed to be overwhelmed when it comes to composting. This was seen as a problem because the organic waste contributes to the quicker filling up of the mixed waste bins, which is one of the challenges in

Leppäsilta allotment area, according to the interviewees. Some participants admitted that they aren't completely sure what to do with composting and that they are still learning.

> "At the moment I don't know what to do with the composting thing. There is an old composting frame, which is quite oversized for my own use. During the summer, I got maybe 15 cm on the bottom so it would never even fill up. Then I just wondered if I could just stop composting altogether and put the organic material on top of the plot. I don't know." (R3)

One interviewee shared that she had to learn composting through trial and error. She admitted that it was something she could have used help with at the start but also recognized that, in allotment gardening overall, much of the learning tends to happen independently.

5.2.2 Understanding of the seasonality and climate

Finnish climate is characterized by strong seasonality. The growing season is limited and there are usually some colder periods at the beginning and at the end of the growing season which might influence the crops. A competence that was related to the understanding of the seasonality of allotment gardening in Finnish climate was the pre-cultivation of plants. One interviewee elaborated on the different aspects related to pre-cultivation. She mentioned that it is important to have the knowledge of whether a plant needs to be pre-cultivated, when to start this pre-cultivation and how long the germination period is. Several interviewees mentioned that tomatoes are important to be pre-cultivated to lengthen the growing season or otherwise, they don't succeed. On the other hand, it is important not to start the pre-cultivation too early. One interviewee mentioned that the previous year she started the pre-cultivation of tomatoes too soon, at the end of January, and the seedlings grew too much. If they are inside too long, they might not adapt to the weather outside.

> "The growing season in Finland is so short that you need to have a pretty clear idea already in March, preferably what you are going to pre-cultivate, because March, April and May are the months for pre-cultivation and mid-June is the last chance of night frosts and that's when you have to plant if you want to get a crop before the cool autumn weather." (R11)

The sudden cold weathers and night frosts are something that are typical for Finnish climate. The competence that was tightly connected to this was to know when to protect the plants from the cold weather by using frost cloth, for example. This is something that some of the participants had to learn the hard way. Especially, people who were originally outside of Finland mentioned that this is something they have struggled with, because the climate in Finland is so different compared to the one in their home country.

> "The Finnish climate makes it a bit challenging. I can't judge exactly when it is necessary to cover the plants. -- Last autumn, sudden cold and frost damaged the plants." (R16)

5.2.3 Crop rotation and positioning of plants

Crop rotation was a skill frequently mentioned in the interviews. Participants emphasized its importance, noting that without it, the soil could become depleted or impoverished. Crop rotation was particularly emphasized in the context of growing potatoes. Participants noted that planting potatoes in the same soil year after year increases the risk of plant diseases, such as potato blight, which could become a significant problem in an allotment setting due to its potential to spread easily. Thus, crop rotation and the positioning of the plants need to be planned for the next growing season. One interviewee mentioned that she has used a website to make these plans and to track the crop rotation.

> "I found a website called GrowVeg, a British website that has a grid where you can click plants into -- It is really useful, because I can see the plant rotation there." (R11)

A competence closely tied to plant placement is the understanding of which species need to be restricted due to their tendency to spread easily. Mint was a commonly cited example, mentioned in several interviews. It is known for its rapid root growth and tendency to take over a plot shortly after planting. Some participants shared that they learned this the hard way and later had to manage or remove it entirely. One interviewee described that even though some species that require special attention are warned about, it is still hard to grasp the volume at which they start to grow.

5.2.4 Origins of competences

Many of the interviewees had some previous experience of gardening prior to allotment gardening, from where some of the knowledge and skills originated. With many of the interviewees their gardening experiences had already begun in their childhood or youth. Several interviewees mentioned that their family members or relatives had practiced gardening. Through this they had either observed what the gardening entailed, or they had taken part in gardening by at least helping with weeding and watering the plants. In this context a few of the interviewees mentioned that they weren't interested in gardening at that time, but they discovered it later themselves. One important way of learning or gaining competence according to the interviewees was by learning through trial and error. That is why one interviewee mentioned that allotment gardening is worthwhile to do for a longer period of time. The interviewees described that through time one gains understanding of what plants flourish on one's plot and what don't. Still, even after many years of gardening, the learning seems to be continuous, and this was emphasized by many of the interviewees. One central theme related to gaining competence was to ask questions and listen to the advice that more experienced plot neighbors are giving. Another central way to learn from the neighbors was to look at the neighbors' plots and to follow their example. This way practitioners gained knowledge of what plants are thriving in that specific soil. Other ways of gaining knowledge were various. These varied from books and magazines to Internet and Facebook groups and other social media channels.

5.3 Meanings in allotment gardening

This subchapter aims to provide an overview of the symbolic meanings, motivations, emotions and aspirations of allotment gardeners in the scope of this research. In other words, the objective is to present the reasons why people practice allotment gardening and the joy and benefits the practice provides for them. This subchapter is divided into four parts, each focusing on a different set of meanings. These are harvest and produce, health and well-being, social aspect and self-expression.

5.3.1 Harvest and produce

The harvest seemed to be one of the main reasons for many interviewees to practice allotment gardening. Growing one's own food was something that brought joy and meaning to the large majority of the interviewees. The interviewees appreciated the good quality of their produce,

and aspects such as freshness and better taste compared to the counterparts bought from the store were raised. In addition, the produce being organic and free of chemicals was seen as an important aspect.

> "Even if seed potatoes cost as much as store-bought potatoes, I think I get some kind of taste benefit from it. That they're not as watery as the ones you buy in the store." (R17)

Some interviewees found meaning in the fact that they were able to grow and thus eat vegetables that could not be found in stores. Some interviewees who were originally outside of Finland mentioned that through allotment gardening they could grow and eat the foods that are essential part of their culture, which would otherwise not be possible. For one interviewee allotment gardening seemed like the only option to gain access to specific vegetables that are from his home country. Another source of meaning related to the harvest was the large crops that were shared with family and friends. Several interviewees mentioned that sometimes the harvest is so abundant that it is too much to eat themselves. As participants appreciated the grown produce greatly and wanted to avoid throwing it away, the interviewees said that they tend to give some of the harvest away. For one interviewee the sharing of the harvest symbolized sharing joy with others.

> "It's nice to share the joy with others. We give quite a lot of the produce that's left over and not used to some of our colleagues or in-laws or whoever really." (R23)

In the interviews the themes of food self-sufficiency and security of supply were raised on a few occasions. For some, the initial idea wasn't to be self-sufficient, but due to the large harvests, it had happened by accident. Many interviewees described how some of the harvest lasts till the end of the year. Some even felt like they were contributing to the security of supply, and they found meaning in it. Participants viewed getting vegetables from the garden as one important reason to practice gardening. Still, some interviewees mentioned that it is nice to know that their livelihood or survival is not dependent on getting the harvest, but they have the local store from which they can buy their vegetables if the crops somehow fail.

A few of the participants additionally viewed the produce as a way to save money and to benefit economically. Especially for one interviewee the possibility to save on the family budget was

the primary reason for practicing allotment gardening. She mentioned that she didn't find it worthwhile growing potatoes due to their cheap price in stores as well. She saw it more beneficial for her to put effort into other vegetables and plants.

> "I see many of my neighbors growing potatoes, but I don't see any benefit in it for myself. -- Potatoes are not that expensive, and their yield is not high. I try to grow more expensive and productive vegetables, berries and herbs." (R24)

Still, a somewhat more common way to approach the financial side was that allotment gardening is not financially beneficial or reasonable from that perspective, but it is fun and worth the "investing". A few participants mentioned that if they calculated the price for their produce, it would be quite expensive and that they might get organic products from the store at a cheaper price. Some mentioned that they see allotment gardening more as a hobby than food production and added that "what hobby wouldn't cost you something?".

5.3.2 Health and well-being

The research participants recognized the benefits that allotment gardening is providing to them in terms of their health, both physical and mental. The physical health benefits gained from allotment gardening were raised a bit more often by the people who had already retired or were a bit older than the average.

> "The older you get the more important physical exercise becomes. Gardening helps you keep fit. In the winter, when you are not doing it, you notice that your weight goes up and, in the summer, it goes down. The amount of beneficial exercise [in gardening] is huge. When you don't use a lot of machines. The lawn trimmer is the only one I use." (R15)

There were also other interviewees who acknowledged that there are only a few, or no automatized tools in use, which makes gardening physical work. Especially the digging and turning of the soil was seen as an aspect of gardening that requires more effort physically and that maintains physical condition. Allotment gardening was also seen as a good way to balance the sedentary nature of the work that some people are doing professionally. Additionally, to the benefits that allotment gardening provides to physical health, there were many benefits linked to mental health according to the interviewees. Some mentioned that being in the garden and

doing physical work can be a good way to defuse pressures and aggression. The bad mood can be harnessed in a useful way. One interviewee described that she might utilize her frustration to make a whole flower bed. In some interviews it also came up that when gardening, worries and troubles are forgotten.

> “The fact that you're there working with the land and growing something, it's relaxing and you're a completely different person when you're there and you leave. All your worries and sorrows are forgotten.” (R18)

Allotment gardening is experienced as a stress relieving, relaxing and therapeutic practice by the participants. Allotment gardening also provides positive emotions such as joy and happiness to the participants. Especially, the feeling of reward is something that the allotment gardeners experience as a part of the practice. Some interviewees linked these feelings to chores from which one can instantly see the results, such as pulling weeds. These emotions were also connected to watching the vegetables grow and to the harvesting. Additionally, being outdoors and in nature was an aspect that was often mentioned in the interviews, and it was seen as something that contributes to the well-being of allotment gardeners. Allotment gardens were referred to as oasis in the city, especially benefiting people who live in apartment buildings and don’t have access to their own yard.

> “It's the fact that you are outdoors. It's really great. I don't get the same feeling when I'm out there on the balcony, planting and gardening in flowerpots. It's a completely different thing when I'm outside doing physical stuff.” (R4)

5.3.3 Social aspect

When asked about the joy and benefits of allotment gardening the social aspect was raised several times. Sociality in various forms and degrees is seen as somewhat an integral part of the practice of allotment gardening. This is not the case with all the other forms of urban gardening. A participant who had previously cultivated the yard of a detached house she used to live in described that allotment gardening is considerably more sociable compared to it. The interviews revealed a strong culture of greeting others within the allotment areas. Some interviewees mentioned that this might extend to outside the allotment area as well. In the interviews, it was also mentioned that the participants enjoy having conversations with their plot neighbors and these discussions are common in allotment gardens.

> “I think it's wonderful to talk to people and often it can end up with you standing there for four hours with that pumpkin seedling in your hand and you haven't got any work done while you're talking to other people.” (R5)

As there were discussions regarding the plot neighbors and the social aspect, it came up that there are also neighbors who might not share the same language but there is still frequent interaction despite these language barriers. This was closely related to the notion of having allotment gardening as a shared interest. Allotment gardens are places that bring together from multiple different backgrounds. Despite these differences in gardeners’ backgrounds, the enjoyment of practicing allotment gardening is something that is a unifying factor to everyone. In many interviews the participants referred to meeting like-minded people as a source of joy for them.

> “It's nice to meet other people. I moved here knowing only a couple of people, and I still haven't really made that many friends here, because I hang out here at home quite a lot. But there are really nice like-minded people on the allotment, so it's never as if my life is now lonely, because when you go there, people start chatting just like that, because everyone's doing the same thing.” (R4)

In the interviews the participants frequently used the term community and referred to the atmosphere in the allotment as community spirit. Some elaborated that the plot neighbors have become a new community for them. The sense of community spirit was also supported by events taking place in some allotment areas. For example, in the case of Leppäsilta allotment area, there are events organized by the allotment contacts. The interviewees seemed to really appreciate this effort and everything the allotment contacts do for the community. Additionally, allotment gardening seemed to be a practice which was for some participants a shared hobby with a companion, family members or friends. Most often it seemed to be a shared hobby with a companion. Thus, the allotment gardening was a way to spend quality time with their spouse. On the other hand, interviewees who had children saw value in bringing them along to the allotment to learn and gain skills and the educational benefits were acknowledged. Lastly, it is important to note that even though the social aspect of allotment gardening was appreciated by many, it was also acknowledged that as the allotments are rented individually, it is possible to practice gardening in peace and solitude as well if one prefers it.

5.3.4 Self-expression

An important theme that emerged from the data was self-expression through allotment gardening. Participants appeared to value the freedom to choose which vegetables to grow and to design their allotments according to their personal preferences. One interviewee, for example, expressed a sense of autonomy by stating that she feels free to do whatever she wants on her plot. This sense of freedom was closely linked to experimentation with different plant species. It was common for participants to start with easier crops and gradually expand their gardening repertoire over time. For many, this process of experimentation added meaning and enjoyment to their gardening experience.

> "It is a bit like exploration, kind of fun and experimental. It brings a good feeling when you get to try something new and see and follow with interest how they grow." (R3)

One interviewee described growing plants as a personal challenge that allowed her to test her strengths and abilities. Several participants also expressed having specific goals related to their gardening experimentation. They had particular plant species in mind that they hoped to cultivate in the future, varieties they had not yet tried, demonstrating a desire to expand the range of species they grow.

Cooking with the produce harvested from the allotment emerged as a closely related practice to allotment gardening. Several participants spoke enthusiastically about the joy of cooking, particularly using ingredients they had grown themselves. This connection was especially prominent in interviews with participants from different cultural backgrounds, where culturally significant vegetables and traditional dishes were highlighted as central aspects of their gardening experience. For instance, zucchinis and eggplants were used to prepare mezes, while okra was featured in a traditional soup. One interviewee highlighted the importance of having a grill at the allotment and thus being able to cook traditional food directly on site for friends and family.

For many participants, the visual aspect of gardening held significant meaning. Aesthetic considerations were present in how the allotment was planned, for example in terms of the choice of plants and how those are positioned. Creating a visually pleasing environment seemed to be a clear goal for some. One interviewee, for instance, shared that her enjoyment of the visual

side of gardening led her to plant many flowers. She mentioned that it had long been a dream of hers to one day paint the flowers in her garden, although she had not yet found the time to pursue it. Some of these participants who especially enjoyed and desired a beautiful and well-kept allotment described themselves as creative and visual individuals, which they felt naturally drew them to the aesthetic dimension of gardening.

> "The goal is that the plot is also visually pleasing -- that it is nice looking, that it is nice to go there. Sometimes I feel like I'm stepping into my living room when I go there in the summer." (R1)

5.4 Spatial and temporal elements

In this subchapter, I will examine the spatial and temporal dimensions of allotment gardening as distinct elements. Although these aspects are closely interconnected in practice, analyzing them separately seemed to be the clearest approach for the purposes of this study.

5.4.1 Spatial element

Based on the research findings, the majority of participants had less than 3 and a half kilometers to their allotments, and for some, the allotment was just a few hundred meters away from their home. It was common for participants to describe their allotments as being within a short walking or biking distance. For many it was typical to commute to the allotment on foot or by bicycle, but some mentioned that they are also occasionally transporting by bus or by car, especially when they need to transport tools or other materials to the allotment. For many of the interviewees it was important that the allotment garden and plot is close to their home and not too far away. The conception of what would be too long of a distance from their home to the plot did differ. One interviewee mentioned that 5 kilometers would be too long, and another said 20 kilometers as an example. Easy access to the plot was something that the interviewees appreciated.

> "Fortunately, you don't have to go far. It would be quite different if you were farming in Tapiola or had to travel further away, then you couldn't carry any tools on your shoulder or carry a bag of soil, or you would need to clean yourself up when you leave. Now when you walk there through the forest patch it doesn't matter." (R8)

The interviewees had also considered the location of their home in relation to the allotment garden. Two females whose children had moved away mentioned that they had moved into houses or apartments from which they had a short distance to the plot. One of them mentioned that it was one of her criteria for the apartment that it would be close to the already existing plot and just a short bike ride away. There were also interviewees who were considering moving sometime in the future. One interviewee mentioned that if they were to move, it would be important to get a house with a yard to cultivate, or they would need to move so that it would still be possible to access the allotment. This emphasized how important gardening as a hobby had become to her. Another interviewee described her thoughts related to moving in the near future and how that would affect her gardening practice.

> "It is... I wouldn't say that it is a big part in determining our future living area... it's not the first priority to stay close to that allotment, but yes, when there has been an apartment that has interested us in Matinkylä, then I have thought that I would be getting to the allotment even less often. Then it would be a car or long bus ride away." (R11)

In some interviews it came up that the allotment is in the same direction as the workplace or some other place the interviewees go to frequently. This way it is convenient to go and stop at the allotment on the same trip as one is engaging in some other practice. One interviewee mentioned that sometimes she goes to the allotment after work just for fun, even if there isn't anything that needs to be done. She might just go there and admire the plants. Another female mentioned this as well. She is now retired but previously her workplace was in the same direction as her allotment.

> "When I used to go to work by bike, the allotment was almost along my commute, so I often stopped there on the way home from work and watered the plants and took some lettuce from there and then drove home." (R12)

One of the longest distances to the allotment amongst the interviewees was 8,6 kilometers. In this case it didn't seem to be a problem for the interviewee. The interviewee mentioned that they usually commute to the plot by car. She and her companion are working in the same workplace, and the plot is in the same direction as their commute which makes it easier.

5.4.2 Temporal element

The practice of allotment gardening began with many of the interviewees after a life change or through getting more time due to different reasons. One interviewee described the reasons that had freed up time in her life and the reasons which were leading her to start allotment gardening as follows.

> "My working life also changed -- around 5–6 years ago, and indeed the fact that the children had moved out. So that freed up time. And then I know that it requires commitment and as I think I've travelled enough already, in the context of work and free time. I don't need such long trips abroad. And then we had a cottage, too -- then my spouse and I were no longer interested in it so then that freed up time as well." (R1)

In other interviews as well, it came up that when the children had grown up and they became more independent, it gave the participants more time and it was the time to start developing their own hobbies such as allotment gardening. Retirement was also one reason for beginning the allotment gardening and which contributed to having more time to dedicate to allotment gardening. A couple who has practiced allotment gardening for a while described that as they retired a few years ago, it gave them more time to dedicate to cultivation. There were also participants who were currently on maternity leave or had been some years ago. One of them described the connection between her maternity leave and the time to contribute to allotment gardening as follows:

> "I was on maternity leave with our baby and at that time I spent a lot of time on the plot as I could be there during the day, and the baby slept in the stroller. -- This year has been spent working, 2 kids, it has been a lot. So, not as much time has been available for gardening as when I was on maternity leave." (R11)

Allotment gardening is mentioned to be a laborious and time-consuming practice, especially in the summer when the days are hot, and the plants should be watered almost daily. Some interviewees experienced this as a challenge from time to time. Especially during the summer holidays, some interviewees implied that it would be nice to do something else, as well, other than being on the plot. As a solution to this, interviewees were asking for help from other people, which usually meant family members. Interestingly many had found help with the watering

from people in their family, not as much from the neighbors who would be going to the allotment anyway. This was elaborated by some of the interviewees, and they mentioned that there is a threshold to ask for help from the neighbors.

> "Sometimes it's been difficult to find someone to water if you're on holiday somewhere. Or maybe it's just the threshold that you don't dare to ask, even though many of the neighbors would probably water... if it's dry and you have to water every day, it has sometimes been challenging to find the time." (R13)

5.5 Wishes of the allotment gardeners

In this subchapter I will explore the needs and wishes of allotment gardeners regarding the future of allotment gardening and food self-provisioning in Finland. This subchapter will be divided into four sections which elaborate on these desires that the participants expressed.

5.5.1 More opportunities

An often-mentioned topic related to the discussions around the future of allotment gardening and food self-provisioning was that more opportunities should be offered.

> "I just wish that as many people as possible could have access to this gardening practice, and I wish that there were more of these areas in Helsinki too." (R5)

Various approaches were suggested to aid in creating more opportunities for people to engage in allotment gardening. In addition to creating new allotments areas, the creation of more opportunities could happen through the creation of new plots in existing allotment areas. According to one interviewee, there is uncultivated land on the edges of the allotment area she is cultivating. She mentioned that the allotment area could be expanded, and new plots could be created in this land area. According to interviewees, one way to give land to people eager to cultivate would be by quicker circulation of the plots in the allotment areas. What this means in practice is that as there are some plots in the allotment areas that are not being cultivated or managed properly, those should be transferred to new gardeners faster. As was presented previously, some of the allotment areas have rules regarding the date until which the cultivation

should begin and if the cultivation is not started, the plot will be reallocated by the administrators. Despite this system, according to the interviewees there are some plots that seem to not be managed. The idea of quicker circulation of plots is supported by some interviewees referring to the long queues and mentioning that they also had to wait in line to get their plot. Thus, especially due to the increased demand, it is seen appropriate to circulate the plots faster. The faster circulation was also supported by the notion that according to the interviewees, the plots get into poor condition quickly if those are not tended. Thus, for the person who gets the plot next, the starting of cultivation will be more difficult, which can affect motivation. Additionally, if weeds such as dandelions and couch grass take over the unmanaged plot, those will quickly spread from there to neighboring plots as well, which is not optimal. One interviewee also speculated that if plots are not becoming free even when some remain unmanaged, it might discourage the people who are enthusiastic about allotment gardening. In addition to creating more opportunities for allotment gardening, the interviewees highlighted opportunities for food self-provisioning beyond allotment gardening. Several interviewees mentioned the opportunity to have cultivation boxes as a low threshold option.

> "I think it would be wonderful if there were more opportunities for urban gardening, even on smaller scale, for example, cultivation boxes. Those would not need to be huge, but there could be more of them, even in the yards of housing companies or in parks, such as in Tokoinranta. I think there could be a demand for them." (R3)

5.5.2 Changes in rules and codes of conduct

In the interviews the prominent role of the allotment administrators, either city or association, was brought up. As the administrators establish and communicate the rules and regulations for the allotment areas, it becomes evident that these guidelines influence how allotment gardening is practiced, both locally and within the broader Finnish context. In the interviews, participants expressed a mixture of satisfaction and frustration with the regulations, as well as with the overall effectiveness of the work carried out by the cities and associations. For instance, some participants expressed dissatisfaction with specific and strict rules set by the administrators and wished for greater flexibility in how these regulations are applied. These were mostly regarding the structures on the plot and the size requirements of, for example, the transferable greenhouses, terraces and fences. Especially people who were growing plants that are more sensitive to cold weather and that require a longer period to grow, were wishing for better opportunities to cover these plants.

> “There are a lot of prohibitions and restrictions. Only gauze can be used for protection, this is not enough for the Finnish climate in May. You can only cover about 2,5 square meters with a membrane, that is about 15 bushes of tomatoes or cucumbers or whatever, this is catastrophically not enough.” (R24)

On the other hand, some participants found the strict regulations to be a positive thing, guiding the practices in the area and keeping the area cleaner and neater. However, it was mentioned in some interviews that despite the strict rules, some rules seem to be not complied with. Occasionally, the administrators give notes to gardeners if they come across rule violations. In some cases, for instance with waste management, it is not so easy to locate who has been the one violating these rules. Thus, some interviewees called for more compliance from fellow gardeners regarding the regulations in the allotment.

The other wishes for the administrators included things such as opening the water supply earlier in the spring, emptying the mixed waste bins in the area more often, maintenance of the common areas in the allotment and the opportunity for individuals to rent more than one plot simultaneously, thus getting an opportunity to cultivate a larger land area. This wish for more land to cultivate and garden on was expressed especially by a few participants who were originally from outside of Finland. This had to do with the wish to cultivate more crops and a wider variety of species, but it was also connected to a desire to have a leisure place.

> “We would have so many ideas and plants, but there's no place for it so it's a bit more difficult. -- If you want to barbecue or sit it's difficult because there's so little space. -- It would be better if it was also a leisure place and not that you just have to go there and do everything.” (R6)

Finally, as the demand for plots is currently high and the queues are long, more information and transparency related to the waiting lists was called for. Having some kind of knowledge of how long it might take to get an allotment or how many people are lining up for one was seen important.

> "Perhaps I would have wished for some information in the early stages about the queue situation -- if you really want a plot and as quickly as possible, that would outline where there is a chance to get one." (R5)

5.5.3 Enhanced communality and cooperation

Despite the participants appreciating the already existing communities in the allotment areas and the overall community spirit, some interviewees felt like this could be enhanced even further. According to the interviewees, some allotment areas already have Facebook groups as communication channels, but not all. Some participants whose allotment areas lacked a communication channel expressed that having a group for the gardeners could be beneficial. This could ensure that no one would be left alone with their questions or problems. Additionally, to increase the communality in allotment areas, some participants were wishing for more events to be hosted, so that gardeners would get to know each other better. Some participants expressed their desire to especially interact with and learn from gardeners who are from other cultures. Thus, they could gain knowledge of new plant species and expand the range of plants that are cultivated. Additionally, one interviewee called for more open-mindedness of different ways of functioning in the allotments. Closely related to this was also the notion of helping one another and especially people who are new to the allotment areas or don't yet have as much knowledge of the practicalities.

Although allotments are primarily intended for food production and gardening, their use as public recreational spaces could be taken even further. According to one interviewee, the allotment area he is cultivating is utilized by people engaged in other activities as well such as birdwatching and beekeeping. He would like to see more cooperation beyond just allotment gardening.

> "There are birdwatchers there every now and then. Then there are the small mammals, for example, weasels -- There are people observing them. There could perhaps be more of this kind of collaboration with these different organizations in the city." (R15)

He sees that there could be opportunities to develop this further and for more collaboration, making allotment gardens even more multifunctional spaces as they are already. With wider collaboration and increased community spirit the attitudes towards nature and towards other

farmers could be changed in positive ways. The participants also raised the possibility of kindergartens, schools and nursing homes integrating practices related to allotment gardening or food self-provisioning into their activities and thus increasing the nature-connectedness, understanding of origins of food and cross-generational cooperation.

> "There is children's kindergarten next door. Integrating these children into this [allotment gardening] could be some kind of idea for this kind of cross-generational cooperation." (R22)

5.5.4 Recognition and appreciation of allotment gardening

A recurring theme in the interviews and especially regarding the Espoo area was that the allotment gardening and its continuity in Espoo has not always been secure. The participants explained that some years ago, in 2018, the allotment gardening practice was either supposed to be taken over by local associations, them renting, managing and controlling the plots, or end altogether. With local gardeners' "activism" this was stopped and the allotment gardening continued as it had before that.

> "The City of Espoo tried to give up these allotments so we wrote to them -- I would emphasize that this is a good hobby that brings peace of mind. It should be appreciated. -- This is perhaps a bit of an underrated hobby." (R9)

Thus, some participants called for more appreciation towards allotment gardening in society, but especially from the people managing the allotments and making the decisions at city level. It was experienced that allotment gardening is not prioritized in decision making in some of these cities as much as some other hobbies or leisure activities despite these cities promoting themselves as green, sustainable or environmentally friendly. Additionally, some participants referred to the planning and zoning processes that are taking place in these cities.

> "In fact, the city of Espoo is the biggest threat. It is constantly thinking about where it could build more houses. -- Now what can affect this is the new master plan 2060, which is in Espoo, and allotments in Rastaala partly seems to remain under construction." (R22)

The participants expressed in many ways their fondness for allotment gardening and the wish for continuity. Before one of the interviews took place, a participant's husband had expressed that "the allotment is the best thing that the City of Espoo can offer us".

6 Discussion

I now move on to discuss the results in relation to the theoretical framework, consisting of previous literature and social practice theoretical perspectives. In this chapter I will summarize the key research findings. I will also address the potential limitations related to this research. Finally, I will provide suggestions for further research.

6.1 Overview and discussion of the main findings

Based on the previous literature and the findings of this research, allotment gardening as an entity is formed by a variety of materials, competences and meanings. Moreover, spatial and temporal factors play a central role in either enabling or constraining the performance of the practice. There are both similarities and differences in how these elements appear in each practitioner's performance of the practice. Firstly, allotment gardening demands that all practitioners have some fundamental knowledge of how to grow plants and how to care for the soil. They also need to be familiar with the rules set by the administrators, as non-compliance could prevent them from continuing to garden in the area. In terms of material aspect, some tools, such as shovels, are used by all the participants despite the total amount of tools varying between them. Additionally, all participants have some meanings that they attach to the gardening, despite those differing between the participants. As the allotment gardeners might not share the same meanings or motivations regarding the allotment gardening, they also exhibit different gardening methods and grow differing plant species on their allotments. Additionally, the time committed to gardening differs between the participants based on their engagement with other practices. Despite these differences in the ways the allotment gardening is performed, they are forming and sustaining the practice of allotment gardening as a recognizable entity.

This research suggests that distinctive to the material sphere is the active use of body, hands and especially manual tools to cultivate the soil which is an essential foundation to allotment gardening. Additionally, seeds, plants and varying amounts of physical structures are needed

depending on the aims and goals of allotment gardeners. These findings are similar to those of Dobernig et al. (2016) according to whom human bodies, soil, manual tools and crops form the material aspect of urban gardening and thus allotment gardening. As was discussed by Jensen and Sørensen (2020), some manual tools used by allotment gardeners are often inherited either from family members or previous tenants on the plot. This element of circularity was also present in this research. Some of these material aspects might be shared with some other forms of gardening as well. Something that seemed distinctive to allotment gardening and which simultaneously represented a change in the material sphere of allotment gardening was the fences. The building of fences was a relatively new phenomenon, but it had become almost the rule rather than an exception in some allotment areas. This illustrates how the elements of practice can change through time.

Dobernig et al. (2016) discovered that individuals engaging in allotment gardening or other forms of urban gardening are not necessarily skilled gardeners at the outset, even though the practice demands certain competences. This was also the case in the context of my research as some people began allotment gardening without any previous experience regarding gardening practices. However, there was a significant group of participants who had prior experience with other forms of gardening, such as growing plants in a cultivation box, on a balcony, or in their own yard, before engaging in allotment gardening. Nonetheless, the skills required for allotment gardening may differ significantly from those needed for other forms of gardening. The most frequently mentioned and central competence related to allotment gardening identified in this research was the knowledge and skills required for the upkeep of the soil. Other key competences involved understanding of the seasons and climate, as well as knowledge of crop rotation and composting.

According to Dobernig et al. (2016) some initial gaps in competence are individually solved by trial and error. Similarly, Ponizy et al. (2021) concluded that one of the most important ways of acquiring knowledge about plants and cultivation is through “learning by doing”. This research also emphasized the importance of trial and error and learning by doing. Participants noted, for instance, that through experience, they have learned which plants thrive on their plot and which do not. Additionally, Dobernig et al. (2016) highlight that experimenting is something that enhances and develops gardeners' skills over time. In the context of this research, several participants mentioned experimenting as a part of their allotment gardening practice and it also brought them joy and added meaning. Since trial and error and experimentation are

viewed as key learning pathways, Dobernig et al. (2016) suggest that individuals develop proficiency and expertise in gardening by practicing it over an extended period. Another key way of gaining competence identified in this research was through conversations with plot neighbors, as well as observing other people's plots. These ways of learning through shared experiences and advice and also by observation are also recognized by Dobernig et al. (2016).

Based on the data, the category of meanings had the highest number of codes and subcodes among all aspects of allotment gardening. This highlights the wide range of meanings, motivations, emotions, and aspirations that individuals associate with the practice of allotment gardening. These findings align with the research results by Pourias and colleagues (2015) related to the multifunctionality of urban collective gardens. Pourias et al. (2015) discovered that gardeners have several motivations for participating in urban collective gardening. Although producing food may be the primary motive for gardening, there are several other functions to gardening as well, which likely play a key role in encouraging participation. In the context of this research, food production seemed to be a central motivator for the participants. Nonetheless, a wide variety of other meanings were also attributed to allotment gardening, and it was common during the interviews for participants to provide a listing of the meanings that held the most significance for them. These meanings associated with allotment gardening were presented frequently throughout the interviews—not only in response to direct questions about meaning, but also when participants were asked about their reasons for taking up the practice.

In this study, four overarching categories were developed to represent the diverse range of meanings attributed to allotment gardening: harvest and produce, health and well-being, social aspect, and self-expression. These broader codes were created to help synthesize and organize the wide array of individual meanings expressed by participants. Pourias and colleagues (2015) highlighted eight main functions to urban collective gardens in their research. These were food production, social place, health, emancipation from urban life, contact with nature, leisure, learn and teach, and impact on city and landscape. There are a lot of similarities in these functions that Pourias and colleagues (2015) discovered compared to this research. Although the subcodes “spending time outdoors and in nature” and “recreation and leisure” were not assigned their own top-level category, they were central and meaningful aspects for the research participants contributing to their health and well-being. Some of the meanings associated with allotment gardening were emphasized more strongly by specific groups of participants. For instance, the physical health benefits of gardening were more commonly mentioned by retired

individuals who were slightly older than the average participant. In contrast, the themes of leisure and spending time on the plot with family and friends were especially prominent among participants originally from outside Finland.

According to Smith and Jehlička (2013) and Jensen and Sørensen (2020), it is common for people to describe allotment gardening and food production primarily as a hobby. In this sense, gardening is pursued not out of necessity to secure one's livelihood, but as a voluntary and enjoyable activity. This perspective was confirmed in this research, where interviewees consistently characterized allotment gardening as a meaningful and important hobby. While growing their own food was a key motivation for most participants, several also emphasized that if they happened to lose a crop, they could simply purchase replacements from a nearby store. This reflects a generally relaxed attitude toward the practice. According to Ponizy et al. (2021), motivations for growing vegetables and fruits often relate to the economic advantages of food self-provisioning. My research findings do not entirely align with this. The economic aspect was generally seen as less important. A common perspective was that, when calculated, the cost of allotment-grown produce might exceed that of store-bought alternatives. Several participants framed this by comparing allotment gardening to other hobbies, noting that hobbies naturally come with expenses.

Adding to aspects raised in previous research, the findings of the present study highlight the importance of proximity to the allotment garden and the ability to dedicate sufficient time to gardening, which is generally perceived as a relatively time-consuming and, to some extent, binding activity. Regarding the spatial aspect, proximity to the allotment area was considered important to ensure easy access to the plot. An interesting insight was that some participants had taken the location of their allotment into account when choosing their current apartment, while others were currently contemplating this issue due to the possibility of moving in the near future. This emphasized both the significance of allotment gardening in their lives and the value they placed on having the plot located nearby. In their study, Pourias et al. (2015) found that gardens often function as neighborhood spaces, as they are primarily used by individuals who live nearby and within a short distance of them. From a spatial perspective, it also became clear that allotment gardening is closely integrated into the daily routines of its practitioners, linking it to other activities and practices in their everyday lives. For example, some participants attached going to the allotment with their commute to work.

From a temporal perspective, life changes that created more free time often served as a starting point for taking up allotment gardening. These shifts often involved life events such as retirement or children becoming more independent. According to Ponizy et al. (2021), a significant proportion of allotment gardeners in several European countries and cities are pensioners or retirees. One key reason for this trend is that retired individuals often have more time available to devote to gardening. Similar observations were made in north England by Taylor (2018), who noted that retirees typically find it easier to manage their plots and integrate gardening into their routines, as their life circumstances involve fewer competing obligations. In contrast, for those engaged in paid employment, visiting the allotment can at times feel burdensome or demanding (Taylor, 2018). Participants in this study also noted that allotment gardening can occasionally be time-consuming and binding. The need to visit the plot almost daily, particularly for watering, was seen as a challenge by some of the participants. Some interviewees expressed a desire to engage in other activities as well, particularly during the summer holidays. This clearly illustrates how other activities can sometimes compete with allotment gardening for time and attention.

When it comes to the needs and wishes of allotment gardeners present in this research, aspects such as creating more opportunities, changing rules and codes of conduct, increasing communality and giving more appreciation and recognition to the practice were raised. As was previously mentioned, allotment gardening is already seen as a multifunctional practice (Pourias et al., 2015). Despite this, this research uncovered that some allotment gardeners view that this multifunctionality could be taken even further by collaborating between different organizations, kindergartens, schools or nursing homes. The good atmosphere and community spirit in allotments was highlighted by the participant of this research, but simultaneously some interviewees mentioned that there is a threshold to ask help from other gardeners on the allotment regarding watering of plants or other tasks. Thus, it can be speculated that there are some limitations to the communality and some room for improvement left.

Some participants called for more appreciation and recognition towards allotment gardening in general but also in the context of cities. Some participants raised their concerns regarding the continuity of allotment gardening as the cities are being densified, and more housing is being built. This is not at all an unfounded concern. Urbanization is estimated to continue in Finland in the coming decades. According to the current trends, Finland's urbanization rate will rise from 73 % in 2020 to 79 % in 2050 (Valtioneuvosto, 2022). This will result in a lot of new

construction, especially in the largest urban areas (Valtioneuvosto, 2022). As this study has been particularly focusing on the allotment gardening in the largest cities in Finland, these rising trends in urbanization and construction will likely be having some effect in the future of allotment gardening. These trends have been recorded globally as well. In their review, Kwartnik-Pruc and Droj (2023) emphasized that as urban land values rise due to urbanization, local authorities face increasing pressure to allocate available land for real estate development. This growing focus on profitable land use happens often at the expense of public green spaces (Kwartnik-Pruc and Droj, 2023). As the material and spatial existence of allotments is crucial for the survival and continuation of allotment gardening as a practice, the future of the practice is largely in the hands of urban planners and the people who are in decision-making positions. While other forms of urban gardening and food self-provisioning are important from the food production and sustainability perspectives as well, those practices can't be compared to allotment gardening and the elements constituting those are different to allotment gardening. For this reason, the recognition of the multitude of benefits allotment gardens provide for individual gardeners and the local communities would be imperative to make sure that allotment areas are preserved and the practice of allotment gardening continues to thrive in the future.

6.2 Limitations of the study

Despite the insights gained in this study, this research is also subject to several limitations that should be acknowledged when interpreting the findings. These limitations arise from the research design, methodological choices and analytical framework employed in the study. One of the central limitations of this research is the broad topic and scope. By attempting to examine allotment gardening as a general practice, the study was only able to provide a surface-level overview of the topic. This research might have benefitted from a narrower and more clear-cut approach on some specific aspect of allotment gardening enabling a deeper and more nuanced analysis. Applying this broad approach may have resulted in the omission of important details during the data collection, analysis, or writing phases. Accordingly, future research should consider adopting a narrower focus to explore specific dimensions of allotment gardening in greater depth.

As has been previously presented, the framework created by Shove et al. (2012) offers a good theoretical framework for empirical research which has been utilized in previous academic

work. Despite this, it is important to note that this categorization might simplify the nature of a complex and multifaceted practice such as allotment gardening. As Shove et al. (2012, p. 120) present this "the contention that practices are composed of just three generic elements" is a simplification that they have made. Acknowledging this, the decision to include the spatial and temporal elements of allotment gardening was made. Still, there is a possibility that there are simplifications regarding the complexity of the practice of allotment gardening which have been made.

Additionally, in this research the sole data collection method was interviews. As was discussed in the method section, some approaches to practice theoretical research encourage the use of ethnographic methods such as observation rather than relying solely on interviews or surveys (Hargreaves, 2011). Despite being aware of this, there were clear reasons for the decision to focus on interviews as the main data collection method. Nevertheless, it is important to acknowledge that this may have led to the omission of certain significant aspects or introduced a potential bias in the research findings. In addition, regarding the methods of this research, it needs to be acknowledged that the interviews were conducted both in Finnish and in English, but the results and participants' quotes are presented in English. Thus, based on these differences in languages, there is a possibility of interpretations that have been made in the process. Additionally, not all the participants had equal skills or abilities to express themselves in either Finnish or English, which meant that the questions needed to be adapted and modified based on each interview setting. This might have presented bias into the research. Lastly, it is important to acknowledge that as this research is utilizing qualitative methodology, the researcher plays a central role in the analysis of data (Willis, 2015). In this research, thematic analysis was utilized to examine the collected textual data and to identify patterns and recurring themes. The interpretive nature of this method of analysis leaves room for personal bias, as the researcher's background and perspective can shape the understanding and presentation of the results.

6.3 Suggestions for further research

This research focused interviewing solely allotment gardeners, 'the practitioners' themselves and their views on the current practice in the context of Finnish cities. As has been previously presented, the allotment gardening administrators, which are usually cities or associations, have

a central role in shaping the practice by renting land and setting the rules and regulations. It would be interesting to conduct a study that would focus on the views of the allotment gardening administrators related to the current practices and how they might develop in the future. Especially, perspectives related to urban planning and zoning and which kind of role allotment gardens will present in cities and urban areas in the future. One potential way would also be to compare the views of allotment gardeners and the views of administrators to consider both perspectives.

The research sample was relatively diverse in terms of participants' age, gender, profession, origin, and gardening experience. However, they shared a common characteristic: gardening as a hobby. Additionally, a large majority of participants were engaged in allotment gardening specifically in the Espoo area, leading to a stronger representation of gardeners from this region compared to those from other Finnish cities. Given this setup, it was not feasible to make meaningful comparisons between gardening practices across different cities in Finland. Nevertheless, it would be interesting to explore whether regional differences exist in the codes of conduct or approaches to allotment gardening.

In this research it was discovered that some of the allotment gardeners additionally owned a summer cottage and some elaborated that they either practice gardening there as well in differing forms or that they have decided not to grow anything on these due to having the allotment. It would be interesting to study further these differences in practices and what elements are linked to each practice. It would also be interesting to study how the practice of allotment gardening is situated with the other practices in people's lives, and what are the competing and complementary practices. As Hargreaves (2011) concluded in his study, analysis which focuses solely on one practice might neglect the complex connections and conflicts between practices which are essential in people's everyday lives.

As a part of this research, I had the privilege to also interview two people who participated in other forms of urban gardening, home gardening and community gardening. For reasons related to clarity and integrity of the dataset, these interviews were left out of the analysis. Despite having to leave these interviews out, those provided interesting insights. Thus, in the future it could be interesting to conduct research in which two or more forms of urban gardening are compared with each other. Similarly, an interesting approach could be to include people who have practiced allotment gardening and then decided to give it up. This viewpoint could give a

different perspective e.g. related to the meanings, motivations and emotions. In this research those were largely positive but in the case of people who have given up or abandoned the practice it could exhibit more variation.

7 Conclusions

As was previously presented, adapted from the model of Shove et al. (2012, p. 7), allotment gardening can be described as a complex combination of using tools and other material elements to cultivate a plot of land which require bodily competencies and mental capabilities; the rules and norms that define the practice of allotment gardening; its meanings to practitioners and more widely to the whole society. Thus, these aspects of gardening are shaping the practice. Additionally, this research has uncovered that the spatial and temporal elements have central role in shaping the practice and either making it more accessible or hindering the participation. Based on the findings of this research, I argue that participation in allotment gardening becomes feasible when the key elements of materials, competences, and meanings align with suitable spatial and temporal conditions. At the moment one of the central limiting factors to participation in allotment gardening in some Finnish cities seems to be the lack of adequate supply of allotments that would respond to the high demand. Thus, the spatial and material aspects raise to the centre stage acting as the key factors that either promote or obstruct the allotment gardening practice in the future. Thus, it can be said that the future of allotment gardening practice is highly dependent on the amount of land that is allocated to it by cities. To make sure that the practice continues to thrive in the future, it is imperative to acknowledge the various benefits the allotment gardening provides to its practitioners and to people living in urban areas in general. These benefits include, for example, a wide variety of ecosystems services and environmental benefits. Additionally, allotment gardens contribute to the health and well-being of urban residents, especially to the people who practice gardening but moreover to people who can use them for recreation. On the other hand, more attention should be given to other forms of food self-provisioning as well. Options such as cultivation boxes or other smaller scale options need to be promoted as low threshold options. But in order to achieve this and to move towards more self-sufficiency in Finnish urban areas, more support, appreciation and recognition needs to be given to food self-provisioning and sustainable practices in general.

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DECLARATION OF THE GENERATIVE AI USE

During the writing process, OpenAI's ChatGPT (version 4o) was used to enhance the language, clarity and grammar of the text. The translation of interview quotations from Finnish to English was partly aided by DeepL translation software. All content has been carefully reviewed and edited for accuracy and the author assumes full responsibility for the final text.

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Appendices

APPENDIX 1 – Research invitation in Finnish and English translation

In Finnish:

Oletko aloittanut kaupunkiviljelyn parin (n. 2 – 4) viime vuoden aikana? Haluaisitko kertoa harrastuksestasi?

Olen ympäristömuutoksen ja globaalin kestävyyden maisteriopiskelija Helsingin yliopistosta ja teen maisterintutkielmaa kaupunkiviljelyyn liittyen. Tutkielma toteutetaan osana Helsingin yliopiston Kestävyystieteen instituutin (HELSUS) järjestämää Co-Creation Lab-projektia, jossa mukana ovat Marttaliitto, HSY sekä Helsingin kaupunki.

Osana tutkielmaani pyrin tutkimaan muun muassa sitä, millaisia materiaaleja, tietoja ja taitoja kaupunkiviljelyyn vaaditaan ja millaisia merkityksiä siihen liittyy. Haluaisin myös selvittää erilaisia keinoja, joilla uusia ihmisiä voitaisiin saada kiinnostumaan kaupunkiviljelystä. Tätä varten etsin haastateltavia, jotka ovat aloittaneet kaupunkiviljelyn melko hiljattain. Toisaalta arvostan näkemyksiä kaupunkiviljelyyn liittyen riippumatta aloitusajankohdasta. Haastattelut olisi mahdollista toteuttaa tilanteesta ja toiveestanne riippuen joko kasvotusten tai etänä. Haastattelut toteutetaan tietosuojalainsäädäntöä noudattaen. Tutkimus raportoidaan niin, että ketään haastateltavaa ei pystytä tunnistamaan.

Jos kiinnostuit ja haluaisit jakaa omia kokemuksiasi ja näkemyksiäsi kaupunkiviljelyyn liittyen, olisin siitä hyvin kiitollinen!

Minuun voi olla yhteydessä joko sähköpostitse tai puhelimitse.

In English:

Have you started urban gardening in the past 2 – 4 years? Would you be open to discussing your views on the practice of urban gardening?

I am a master's student in Environmental Change and Global Sustainability at the University of Helsinki, and I am conducting my master's thesis on urban gardening. The thesis is part of the Co-Creation Lab project organized by the Helsinki Institute of Sustainability Science (HELSUS), with participants including the Martha Association, HSY (Helsinki Region Environmental Services Authority), and the City of Helsinki.

As part of my thesis, I aim to study what materials, knowledge, and skills are required for urban gardening, as well as the meanings associated with it. I would also like to explore potential ways to encourage more people to start urban gardening. For this reason, I am looking for interviewees who have started urban gardening relatively recently. At the same time, I appreciate perspectives on urban gardening regardless of when it was started. The interviews can be conducted either in person or remotely, depending on your preferences and the situation. The interviews will be carried out in accordance with data protection legislation, and the research will be reported in such a way that no interviewee can be identified.

If you are interested and would like to share your experiences and views on urban gardening, I would be very grateful!

You can contact me via email or by phone.

APPENDIX 2 – Interview guide in Finnish and English translation

In Finnish:

1) Tausta

- Kertoisitko hieman itsestäsi ja omasta taustastasi?

2) Palstaviljelyn aloitus & yleistä tietoa palstaviljelyharrastuksesta

- Miten päädyit aloittamaan palstaviljelyn? / Miten sinusta tuli palstaviljelijä?
- Kuinka pitkään olet harjoittanut palstaviljelyä?
- Pitikö palstaa jonottaa? Kuinka prosessi eteni?
- Missä viljelypalstasi sijaitsee? Kuinka pitkä matka palstalle on kotoasi?
- Minkä kokoinen viljelypalstasi on?
- Onko palsta-alueella joitakin sääntöjä?

3) Viljelyyn liittyvät materiaalit

- Minkälaisia materiaaleja, tarvikkeita tai työkaluja käytät osana viljelyä?
- Minkälaisia kasveja kasvat viljelypalstallasi?
    - (Millaisia kasveja kasvatit ensimmäisenä vuonna?)
    - (Ovatko nämä viljeltävät kasvit muuttuneet ensimmäisen vuoden jälkeen?)

4) Viljelyyn liittyvät tiedot ja taidot

- Minkälaisia tietoja palstaviljelyn aloittaminen on sinulta vaatinut?
    - Mistä lähteistä olet löytänyt tarvitsemaasi tietoa?
- Minkälaisten taitojen oppimista viljelyn aloittaminen on sinulta vaatinut?
    - Miten opit tarvitsemasi taidot?

5) Viljelyyn liittyvät merkitykset

- Mitä iloa ja hyötyä palstaviljely sinulle tarjoaa?
- Miksi palstaviljely on sinulle tärkeää?
- Minkälaisia tunteita palstaviljely sinussa herättää?
- Onko sinulla jotakin tavoitteita palstaviljelyn suhteen?

6) Palstaviljelyyn liittyvät haasteet

- Koitko jotkin palstaviljelyyn liittyvät asiat haasteellisina ennen viljelyn aloittamista?
    - Jos kyllä niin mikä/mitkä?
- Mitä siihen vaadittiin, että pääsit näistä haasteista yli?
- Minkälaista tukea olisit tarvinnut aloittamisvaiheessa?

7) Palstaviljelyn kehittäminen

- Onko sinulla ajatuksia siitä, miten palstaviljelyä voisi kehittää tai viedä eteenpäin tulevaisuudessa?
- Miten palstaviljelystä voisi tehdä entistä mukavampaa?
- Onko sinulla ajatuksia siitä, millä tavoin uusia ihmisiä voisi saada kiinnostumaan palstaviljelystä ja kuinka heitä voisi tukea viljelyn aloittamisessa?

In English:

1) Background

- Would you like to tell me a bit about yourself and your background?

2) The beginning of the practice & general information related to allotment gardening

- How did you decide to start allotment gardening? / How did you become an allotment gardener?
- How long have you practiced allotment gardening?
- Did you have to wait for the plot? How did the process proceed?
- Where is your plot located? How far is it from your home to the plot?
- What is the size of your plot?
- Are there any rules in the allotment area?

3) Materials related to allotment gardening

- What materials, supplies or tools do you use as part of your gardening?
- What kind of plants do you grow on your plot?
    - What kind of plants did you grow in your first year? Have these plants changed after the first year?

4) Competencies related to allotment gardening

- What kind of knowledge did the start of allotment gardening require
    - Where have you found the information?
- What kinds of skills did the start of allotment gardening require?
    - How did you gain the required skills?

5) Meanings related to allotment gardening

- What are the joys and benefits that allotment gardening provides for you?
- Why is allotment gardening important to you?
- What kinds of emotions does allotment gardening evoke in you?
- Do you have any goals related to allotment gardening?

6) Challenges related to allotment gardening

- Did you find any aspects of allotment gardening challenging before you started the cultivation?
    - If yes, which one(s)?
- What did it take to overcome these challenges?
- What kind of support would you have needed to get started?

7) The development of allotment gardening

- Do you have any ideas on how to develop or improve allotment gardening in the future?
- How could allotment gardening be more enjoyable?
- Do you have any ideas on how to get new people interested in allotment gardening and how to support them in getting started?