

Doctoral Thesis in Planning and Decision Analysis

# More than flowers!

On the transformative practice of  
commoning urban gardens

NATHALIE BERGAME



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Academic Dissertation which, with due permission of the KTH Royal Institute of Technology, is submitted for public defence for the Degree of Doctor of Philosophy on Monday November the 13th, 2023, 10 am, at Kollegiesalen, Brinellvägen 6, KTH, Stockholm.

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## Interlude

(a typical situation in my life as a PhD student studying urban gardening)

*Why are you focusing on community gardens, Nathalie?*

N: [laughs]...I have received this question many times, so I am by now used to the question and the underlying assumption about it. Isn't it that you think 'Soo what is there to study with urban gardening', right?

*[nods, feeling a little bit uncomfortable but curious]*

N: Right? Like, people think I might be studying the plants and how to build a garden...

*[nods] Yes, that's what I assume you are doing.*

N: Yes, and it is a relevant assumption of course. What interests me more is though that no one seems to wonder about the fact that urban gardens are popping up everywhere in the city in public spaces. Are they, I don't know, too mundane to be taken seriously and evaluated critically?

*Mhh, I see. What exactly do you mean? I have seen one of them but as you said I am not really paying attention to them. Not like, with those electric city rollers, for example, I mean they are just littered everywhere. [starts to feel even more uncomfortable because of the indirect insinuation that urban gardens do not warrant any further notice]*

N: And still, the taxpayer's money is used to finance studies on urban gardens, even though, I know that colleagues of mine who are studying urban gardens do actually have issues getting money for their projects, as if saying, well urban gardens, what could possibly be the issue with them, what is there to be studied.

*Yeah, I see. That's sad. Sad for you.*

N: [laughs] Thank you. But no for real, urban gardens are actually quite interesting to study! I can see for example that gardens transform public spaces and change the social relations and structures of these spaces. And then, naturally, the question comes, okay but who has the agency to claim spaces for gardening, who has the right to the city, and who is shaping the city?

*I guess the public. I guess everyone.*

N: That's where the problem starts to unfold, as it turns out, it is not everyone who is part of this transformation and the gardens are definitely not used by everyone.

*Yeah okay, but still, I mean I am not using the playground or the frisbee park either.*

N: No, of course, that's right. But have you thought about who is not using public green spaces at all? Or feel they lack the agency to take over space because of their lack of agency on the societal level? I could see that people of colour or people who do not have Sweden as their country of origin are not well represented there. And what about the amounts of food produced in the gardens? I can tell you it is marginal. And this begs the question of who actually would want to engage because there is no remuneration for it. No large amounts of food, doing all the work just for free.

*Mhh. That doesn't make a lot of sense.*

N: Exactly, but for those that do it it makes a lot of sense. They really enjoy it, it brings them joy to work with the soil in the vicinity of their home. Some of them even cross the city to work on their garden initiative.

*That's nice.*

N: Yeah and it seems as if gardening is not only a practice of self-care but it is also care for others, for nature for example, for biodiversity. It transforms neighbourhoods into communities! And if you put urban gardening into context it becomes even more interesting. Let me just read you something: Haskaj (2021:1061) writes that "*Gardening's leisurely activity embodies simultaneously the hard labour of the agrarian peasant and the self-sufficient anarchist squatter, the landed aristocrat and the even the suburban lawn tender. This dialectical relation of work and leisure, production and consumption, low class and high, economy and culture, fixes the garden squarely in the centre of questions surrounding work, class and the city.*" So, you see, gardening is closely intertwined with its socio-cultural context, the political economy of our time.

*Mhh. I see that's interesting.*

N: But that's not the whole story. There is another side to it as well. Urban gardening in the City of Stockholm is mostly done by women. But even elsewhere I found. And so I started wondering why this practice is so gendered. What are the underlying structural relations that seem to produce this tendency for urban gardening to be carried out by women? Well, now you have to read my fourth paper to learn more!



## Abstract

Urban gardening is a burgeoning practice that increasingly takes place in urban centres of the world. In this thesis, I define urban gardens as socially mediated yet materially rooted phenomenon through which social and material relations are elaborated in common through time and space. And, I understand the garden not as an object, but as an entity that emerges out of the relationships between gardeners and non-human nature. I draw on the recent turn in commons' theory shifting the focus on commoning, and not, as in earlier commons research, on the commons as structure. Grounded in the case of a new wave of urban gardening initiatives in the City of Stockholm, Sweden, I examine how commoning urban gardens transforms the people doing the gardening, the commoners, including their agency, subjectivity, and identity. But also how the commoners shape their structural environment.

Ontologically, I deploy a critical realist social theory perspective which means that I acknowledge the *a priori* existence of structures and agency *and* their conditioning by each other relationally. This means that I (i) look at how spatial, societal and temporal structures affect the agency of gardeners (ii) how those gardeners are affecting their structural environment through the practice of urban gardening, as (iii) well as how their agency is conditioned by the practice.

I deploy a qualitative mixed methods approach, comprising of interviews, a questionnaire, observations, participatory dissemination and poetic inquiry and find that high green public space availability in the City of Stockholm, municipal policies in favour of urban gardening, and a rich historic culture of associational life in Sweden provide a supportive context for urban gardening. I find that commoning gardens in public spaces bring together people and build collective relations despite a context of neoliberal individualisation. It emancipates individuals by reorganising the management of urban space, and changes how the City of Stockholm is urbanising towards more collective organising. Among those that partake in urban gardening, some remain grounded in a need-fulfilment ("I want to garden to be more in nature"), whereas others change through the commitment of being part of an urban garden, become political and collective subjectivities with a social identity that overlaps with their personal identity. This shows that structures condition people differently, and do not deterministically affect agency in the same way for everyone. Yet many remain entirely excluded from the new urban garden commons, such as people of colour, indicating that urban gardening, while it can be transformative for those that partake, is reproductive of structures of whiteness in urban public space. At the same time, historical structures of patriarchy in public spaces are being transformed. At the expense of the unpaid social reproductive labour of female gardeners, who make out the majority of urban gardeners, public green space is being transformed into spaces of care and community.

I conclude that urban gardening deserves a critical analysis of its immanent contradictions to safeguard against unwanted and unintentional reproduction of injustices and for the promotion of practices that emancipate and empower people.

### Keywords

City of Stockholm; transformative practices; emancipatory mechanisms; commoning; structure-agency dialectic; urban gardening.

## Sammanfattning

Urban stadsodling är en spirande praxis som i allt större utsträckning äger rum i stadskärnor i världen. I denna avhandling definierar jag urbana trädgårdar som allmänningar som uppstår genom kollektiva sociala praktiker som manifesterar sig rumsligt. Jag bygger på den senaste tidens vändning i commons-teori som flyttar fokus på commons, och inte, som i tidigare commons-forskning, på commons som struktur. Med utgångspunkt i fallet med stadsträdgårdsinitiativ i Stockholms stad, Sverige, undersöker jag hur gemensamma stadsträdgårdar förvandlar commoners (deras handlingskraft, subjektivitet, identitet) och vice versa, deras strukturella miljö.

Ontologiskt använder jag ett kritiskt-realistiskt och socialteoretiskt perspektiv som innebär att jag erkänner a priori existensen av strukturer och agency och deras relationella betingning av varandra relationellt. Detta innebär att jag (i) tittar på hur rumsliga, samhälleliga och tidsmässiga strukturer påverkar agenter, såsom invånare som vill ägna sig åt urban trädgård, (ii) hur dessa stadsodlare påverkar sin strukturella miljö genom utövandet av urban stadsodling, (iii) samt hur deras agens är betingad av praktiken.

Jag använder mig av en kvalitativ metod med blandade metoder, bestående av intervjuer, enkät, observationer, deltagande spridning och poetisk undersökning och upptäcker att en hög tillgänglighet till gröna offentliga utrymmen i Stockholms stad, kommunal politik till förmån för urban trädgårdsskötsel och en rik historisk kultur av föreningslivet i Sverige ger ett stödjande sammanhang för urban trädgårdsskötsel. Jag finner att gemensamma trädgårdar i offentliga utrymmen för samman människor och bygger kollektiva relationer trots ett sammanhang av nyliberal individualisering. Den frigör individer genom att omorganisera förvaltningen av stadsrum, och förändrar hur Stockholm city urbaniserar – det vill säga på ett kollektivt och bruksvärdebaserat sätt. Bland dem som deltar i stadsträdgårdsskötsel förblir vissa grundade i ett behovsuppfyllelse ("Jag vill odla för att vara mer i naturen"), medan andra förändras genom engagemanget att vara en del av en stadsträdgård, blir politiska och kollektiva subjektiviteter med en social identitet som överlappar med deras personliga identitet. Detta visar att strukturer betingar människor på olika sätt och inte deterministiskt påverkar agency på samma sätt för alla. Ändå förblir många helt utestängda från urban stadsodling, såsom people of colour, vilket indikerar att urban stadsodling, även om det kan vara transformerande för dem som deltar, är reproduktivt av strukturer av vithet i urbana offentliga rum. Samtidigt förvandlas historiska strukturer för rationell maskulinitet i offentliga rum. På bekostnad av kvinnliga stadsodlares obetalda sociala reproduktiva arbete, som utgör majoriteten av stadsodlarna, förvandlas offentliga grönområden till utrymmen för omsorg och gemenskap.

Jag drar slutsatsen att urban stadsodling förtjänar en kritisk analys av dess immanenta motsägelser för att skydda mot oönskad och oavsiktlig reproduktion av orättvisor och för att främja praktiker som frigör och stärker människor.

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After a failed first start in my life as a PhD student in Lund and an academic reorientation towards subjects that concern emancipation, justice, philosophy, nature-society relations and feminism, I found myself being drawn to studying new ways of organising society and the city more in particular. Thanks to the posting of my later-to-become supervisors Sara Borgström and Rebecka Milestad, my eyes were opened to the field of research on the *common*, a reciprocal form of living that had thus far eluded me. What seemed exciting from the beginning has during the research process revealed itself as an incredibly rich field to dive into.

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Stockholm, October, 2023

*Nathalie Bergame*

# List of appended papers

## Paper I

Bergame N. (2022) “Acknowledging Contradictions – Endorsing Change. Transforming the Urban through Gardening” in *Capitalism, Nature, Socialism* (Routledge)

Paper I argues that contradictions when used as an analytical lens, can give valuable insights into the dialectical relations that are reproduced or transformed through the practice of gardening. Commoned urban gardens can thereby exist side by side with neoliberal capitalist social relations of production, but can at the same time be exploited by them. The increasing pressure on urban space for the realisation of capital value is an undermining relationship to the practice of commoning gardens. On the other hand, the materiality of the gardens transforms individualised exchange-value and property-based practices in the urban and instead reproduces collective, use-value based and reciprocal relations.

## Paper II

Bergame N., Borgström S., Milestad R., (2022) “Preparing the grounds for emancipation. Explaining commoning as an emancipatory mechanism through dialectical social theory” in *Environment and Planning E: Nature and Space* (Sage)

In Paper II, the overarching aim is to determine and explain how collective practices of gardening that result in commoned gardens transform socio-spatial structures. By using the morphogenetic approach (Archer, 1995), a social theory that suggests social change arises through the mutual conditioning of agency and structure, we find that gardening in common reproduces structural whiteness and middle-class agency in public spaces. At the same time, the practice transforms social relations in public spaces from a passive to an active producer of public space as well as transforms public space in itself. The paper concludes that a dialectical perspective on urban commons helps examine the conditioning of the agency of those who are engaged in gardening and their capacity to bring about structural change.

## Paper III

Bergame N. (2023) “Cultivating commoner subjectivities and transforming agency in commoned urban gardens” in *Geoforum* (Elsevier)

Paper III focuses on the other side of the structure-agency dialectic by determining the changes that arise through collective practices of gardening. Drawing on Archer (2000), I show how a gardener's subjectivity is changed in the process of becoming a gardener in the public realm, how gardeners achieve access to corporate agency and how the urban gardens can function as a platform through which a position of power can be achieved.

## Paper IV

Bergame N. (under review) preliminary title “The reproductive fix: Gendered relations of social reproduction under capitalist urbanisation; the case of urban gardening” in *Gender, Place, Culture* (Taylor & Francis)

In Paper IV, the overarching aim is to think of processes of urbanisation such as urban gardening as reproductive labour that is gendered and marginalised. I show how transferring the management of public spaces to women-led garden collectives works as a “fix” for capitalist urbanisation to reproduce a dependence on global agri-food businesses, green branding, and the exploitation of structurally oppressed (female) bodies.

## **Author's contribution to papers**

- I. I am the author of this paper.
- II. I co-authored this paper with Sara Borgström and Rebecka Milestad. I was the lead author responsible for research design, literature review, data and field collection and analysis of the paper, while Sara Borgström and Rebecka Milestad contributed to the literature review, the background and context of urban agriculture in Sweden and the City of Stockholm in particular.
- III. I am the author of this paper.
- IV. I am the author of this paper.

# List of abbreviations

CDA	City District Administration
CR	Critical Realism

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## Introduction

The new urban garden commons (see Picture 1), which take centre stage in this thesis, saw a great rise in numbers in this time of omnipresent crises. When the 2008 financial crisis had just begun to fade from people's consciousness, residents of Stockholm started using public green spaces for the cultivation of vegetables, legumes, fruits, berries, flowers, and herbs (Bonow and Normark 2017). Agricultural cultivation in public spaces, known and studied as allotment gardens with longer-term leasing agreements, have co-existed in the City of Stockholm for at least a hundred years, and in the process conditioned urbanisation, densification and other urban developmental trends (Barthel, Folke, and Colding 2010; Nolin 2003).

In this thesis, I argue that urban gardening in its current new form, based rather on short-term tenure agreements and collective organising should be seen as “actually existing” practices of commoning (cf. Eizenberg 2012). I will show, not only, that this form of commoning can transform the agency of urban residents and, vice versa, urban social structures of neoliberal individualism and capitalist urbanisation, but also how this can be explained, using dialectical social theory as an analytical framework.

By the time the COVID-19 pandemic hit Sweden in March 2020, there existed already 140 urban gardening initiatives that made use of urban public land through short-term tenure agreements.<sup>1</sup> In this thesis, I examine eight of these initiatives in-depth.

By drawing on critical realist sociologist Archer's (1995, 2000) 'morphogenetic approach' and Marxist theorist Ollman's (2003) work, I describe in this thesis what happens with public spaces when residents transform them into collectively organised gardens (see paper II). I also inquire about the gardeners themselves, and how their subjectivity changes in the structural environment of a commoned urban garden (see paper III). I describe what it means to do urban gardening in common in a Swedish society in which Western societal structures of individualism, consumption and neoliberal capitalism are increasingly prevailing (see Background on the City of Stockholm as a case). Are people empowered and can they transform structures of the current political economy? Or is urban gardening just another crisis response - a 'reproductive fix' as it were, as a result of a neoliberal rollback of welfare services (see paper IV)? Paper I discusses the many contradictions that are part and parcel of urban gardening in its 'commoning form' in different geographical contexts.

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<sup>1</sup> Personal communication with an officer from the Traffic Administration Office (“Trafikkontoret”), 02.07.2020



**Picture 1 – Urban garden based on raised beds in wooden boxes (summer 2020). Photograph by author.**

## Aim of thesis

“[A]ll science would be superfluous if the outward appearance and the essence of things directly coincided.” (Marx 1981, 592)

For the first months of my thesis, I wandered parks, passed by urban gardens, and observed patiently. I did not have any interesting insight beyond what I could see happening. This amounted to such frustration that I felt I had nothing to do here, nothing to say about urban gardens. This feeling reached its peak when a senior colleague of mine asked curiously in one of my first research seminars “Why urban gardening, why would you study it?” I had no answer then. What could I say more about urban gardens than what was readily observable?

Only when I began grounding in philosophy of science and theory, did I realise that there is more to say about urban gardens than their appearance. I saw that, if there were not more to urban gardens than their appearance, then a positivist philosophy of science would suffice, holding that that which is true needs to be observable or empirically real. I turned to a critical realist philosophy of science, in order to go behind appearance and beyond directly observables. In this thesis, I ask in a critical realist fashion, ‘what must be true’ for changes both in agency of those gardening and social and material structures, to be able to exist. I also draw on feminist theory, holding that I as a researcher play a role in the type of knowledge I am creating.

In this thesis, I aim to shed light on the complexities of urban gardens by providing analytical tools that support the ‘seeing’, or as I will later call it in this cover essay, the ‘apparatus’ for research. I aim to contribute with a thesis that links geographical thought with sociology, urban studies with commons theory, and philosophy of science with the empirical realities of something so mundane as urban gardening.

## Scope

In this thesis, the focus is on the study of **urban gardens** that are primarily located within **the City of Stockholm**, Sweden. Paper I studies urban gardening in European cities based on empirical evidence from other scholars, whereas Papers II-IV are based on my empirical studies on urban gardens in the City of Stockholm. Paper III covers even the study of urban gardens from other geographical locations in Sweden. For the selection criteria of the urban gardens, see chapter ‘Case study using mixed methods (RQ 2,3,4)’.

Out of six key areas (Kwartnik-Pruc and Droj 2023) which scholarly studies on urban gardening predominantly focus on, my thesis relates to three: **knowledge of community participation and cohesion, urban planning and development, as well as sustainable development**<sup>2</sup>. Typically, methods and theoretical frameworks for data generation and the analysis of urban gardening range from purely qualitative and

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<sup>2</sup> A recent systematic literature review by Kwartnik-Pruc and Droj (2023) describes six key areas of research on urban gardening: “(1) community participation and cohesion, (2) health and well-being, (3) economic opportunities, (4) pollution, (5) urban planning and development, and (6) sustainable development” (ibid, 1).

social science-based to quantitative and natural science-based. This thesis draws on exclusively **qualitative methods**, aiming to explain how urban gardening leads to social and material transformation and reproduction. Theoretically, my thesis draws on **critical theory**, in order to abstract forms of oppression and emancipation that are reproduced or transformed through the practice of urban gardening. Instead of offering advice on how to organise collective urban gardening in a best-practice sort of way, I rather provide grounded insights into the contradicting relations of the practice, hoping to allow for a more nuanced and less romanticised view of urban gardening.

Temporarily, I studied the gardens between **2020-2023**, even though I asked participants questions about changes that took place before my field studies began.





**Picture 2 - Urban garden with both in-soil cultivation and raised beds in wooden boxes (summer 2023). Photograph by author.**

## Research questions

To respond to the aim of the thesis, which is explaining the transformative capacity of commoning urban gardens, four research questions (RQ) are guiding the thesis (see Table 1). Where the first RQ serves as a more general inquiry on the contradictions of urban gardening practices, the second and third RQ relate more to the structural and agential changes that can come about as a result of gardening in common. The fourth RQ engages with how urban gardening in common relates to patriarchal forms of oppression and social reproduction.

**Table 1 – Research questions of this thesis and the resources used to answer them.**

Research question (RQ)	Required information	Theoretical resources	Empirical resources
1. How can the contradictions of commons that are based on practices of urban commoning be understood?	How can contradictions be understood? How do contradictions relate to social change?	Dialectical Marxist theory (Ollman 2003)	Literature review on empirical examples of urban gardening commons in secondary literature
2. How does urban gardening as commoning practice condition structural change?	How can a structure be conceptualised? How can structural change be explained?	Dialectical social theory (Archer, 1995, 2000)	Literature review; In-depth interview study with urban gardeners in the City of Stockholm and city officials
3. How does urban gardening as commoning practice condition agential change and how is agency conditioned by structure?	How can agency be conceptualised? How can agential change be explained? How can social change be understood?	Dialectical social theory (Archer, 1995, 2000)	Literature review; In-depth interview study with urban gardeners in the City of Stockholm; Online Questionnaire; Participatory dissemination
4. How does urban gardening relate to gender structures, and social reproduction and care?	What resources are exploring the common in relation to gender, oppression and care?	Feminist theory	Literature review; Data from the field studies conducted in this research

## Background on the City of Stockholm as a case

In studies within the field of urban planning and sustainability studies, the City of Stockholm is heralded as having *“pioneered some of the most advanced projects to improve sustainability at the local level”* (Ruiz-Campillo 2022, 970). Within the area of urban development, specifically the *“Hammarby model”* receives attention, a part of the city built since the late 1990s. It is for instance claimed to how to successfully transform industrial land into a sustainable and economically vibrant district (ibid, 973). The Hammarby model has led to international recognition and awards, including the European Sustainable Cities Award in 1997, and the Green Capital Award in 2010 (ibid, 977). The City of Stockholm is also lauded for its *“remarkable strengths associated with moving towards new solutions, in terms of receptive contexts, human agency, space for experimentation, and a collaborative planning culture”* (Suleiman 2021, 1).

Despite the apparent strengths that urban planning models characterising the City of Stockholm seem to present, Metzger and Olsson (2013) are more critical in their assessment, demonstrating that so called sustainable development in Stockholm *“has generally been market led, or at least market oriented”* based on individual efforts on the *“enlightened consumer”* (ibid, 210). Zakhour and Metzger (2018) continue to argue that urbanisation in the City of Stockholm no longer is a result of politically-driven urban planning efforts, but of market-led development that views *“public land as a financial asset to be realised”* (ibid, 52). Despite popular belief, particularly from foreigners, Allelin and colleagues (2021) are clear in their judgement that Sweden is one of the countries that has implemented and continues to implement neoliberal capitalism in its most dogmatic and extreme form (see also Cervenka 2022).<sup>3</sup>

It is in this social context that my thesis, and other researchers studying urban gardening in the City of Stockholm, is placed. While the study of the *“transformation of agricultural land to built-up areas”* is commonplace, less focus has been put on studying *“agricultural transformation and use of unbuilt-up land in metropolitan regions”* Westlund and Nilsson (2022, 345–46) claim. For the greater geographical context of Stockholm, researchers study local initiatives and their role in providing resilient food systems (Sellberg et al. 2020) and point to the conflicts with *“environmental goals of resource efficiency and decrease carbon emissions”* that *“locally diverse and reconnected food systems with high self-sufficiency”* present (ibid, 8). Others study the drivers for urban community gardening and the role of the municipality in it (Bonow, Normark, and Lossien 2020) as well as urban gardening as nature-based solutions (Frantzeskaki et al. 2017).

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<sup>3</sup> Based on Allelin et al. (2021): Tax money does increasingly finance private welfare services, provided by stock companies; and the major privatisation of publicly owned goods.



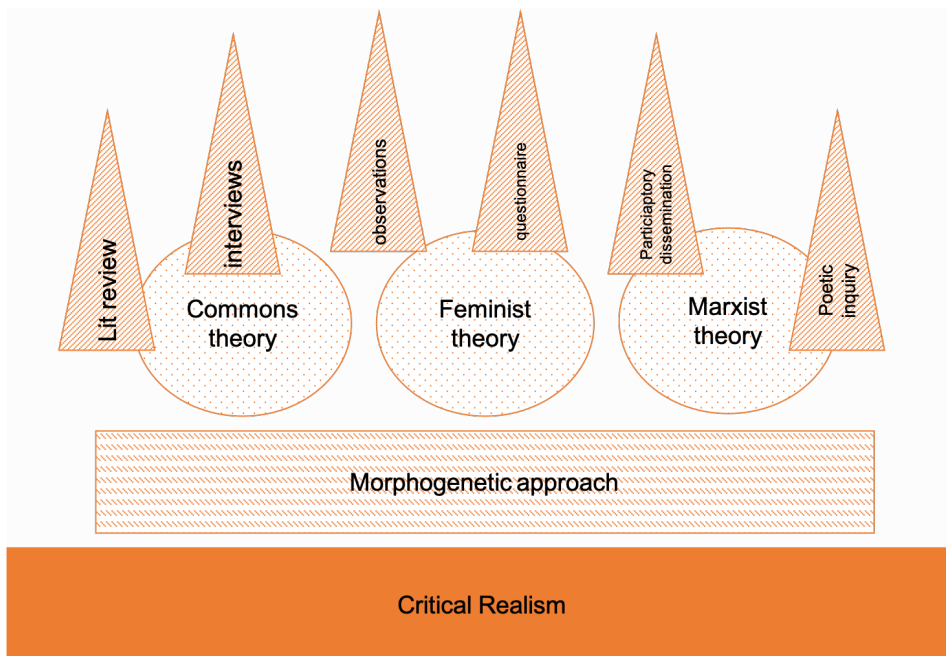
## Theory & Methods

In this chapter, I lay out the foundation of my research. I describe the philosophy of science deployed and the theories and methods that I draw upon. For an overview, see Figure 1 below.

For data generation, I used the methods of ‘interviews’, ‘observations’, and ‘participatory dissemination’ (see Valli 2021), guided by questions developed by myself from the social theory of the ‘morphogenetic approach’ (Archer 1995).

For the analysis of the data generated, I deploy the social theory of the ‘morphogenetic approach’ (Archer 1995), the method of ‘participatory dissemination’ (Valli 2021) and ‘poetic inquiry’ (see van Amsterdam and van Eck 2019).

In order to present my data and findings, I predominantly use an academic writing style common to the discipline of human geography. In papers III and IV, I engage more with creative writing methods, integrating my and others' feelings, and by being careful not to write as if my view on the subject is the only and rational one (cf. ‘god-trick’ research as stressed by Haraway (1988)). For the representation of the voices and opinions of participants, I either rephrase what interviewees said, in the form of poems of standard text or quote their words as statements directly.



**Figure 1 – Methodology deployed in this thesis. From below upwards: Philosophy of science grounding in Critical Realism, analytical and ontological grounding in the ‘morphogenetic approach’, additional theories (commons, feminist, and Marxist) used to frame and explain the findings, and methods used to generate, analyse and represent the empirical data. Own figure.**

## Timeline of the study

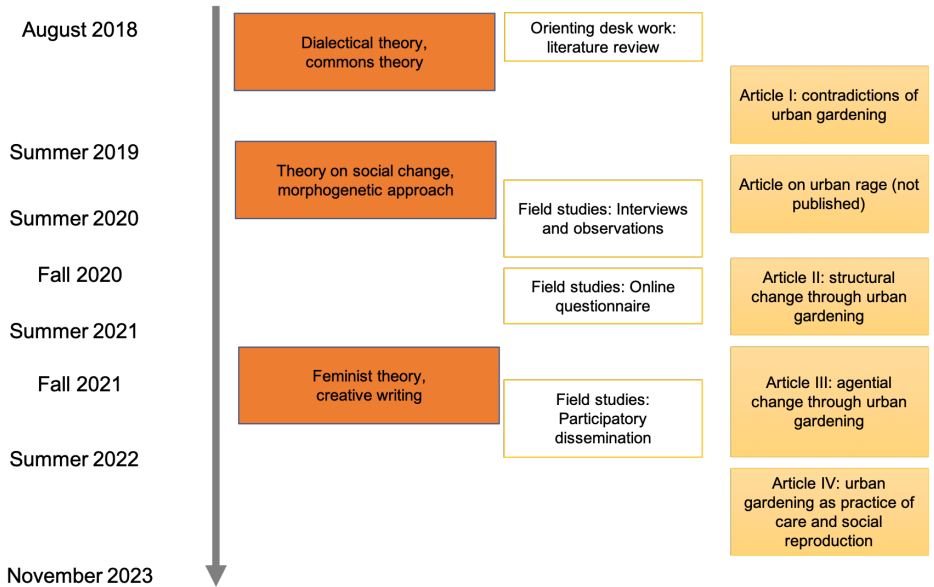


Figure 2 – Timeline of the thesis, with theories and perspectives to the left, empirical studies grounded in those perspectives in the middle, and the outcomes and presentations of those studies to the right.

## Philosophy of Science

My research activity was guided by qualitative methods which resonated with my research questions. In this section, I lay out the most important propositions that formed my ‘research apparatus’<sup>4</sup>: the ontological foundation in critical realism and the theoretical grounding in the morphogenetic approach. While the foundation in these theories has not shaped my preferences for one method over the other (as different methods help explore different mechanisms), my research questions were best responded to through qualitative methods on a foundation of a critical realist ontology which I will lay out in the next section.

### Critical Realist Ontology

The philosophy of science that I have been drawing on in my work is the philosophy of science of Critical Realism. One of its main aims is to revindicate ontology and accept a **stratified ontology**, that is, a view of reality as comprised of three realms of reality: ‘the real’, ‘the actual’ and ‘the empirical’. ‘The real’ denotes here the realm of underlying mechanisms, “*structures and powers of objects*” (Sayer 2000, 12), all of which can remain unactualised and not observable, despite their presence. The realm of ‘the actual’ pertains to the effects of those mechanisms and powers, whereas all that which is observable and can be experienced belongs to ‘the empirical’ realm.

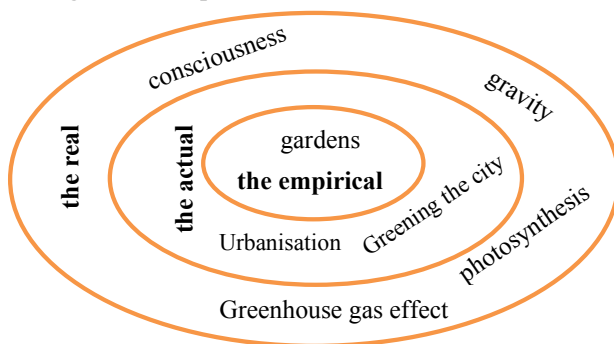


Figure 3 – Three domains of reality according to the philosophy of science of critical realism. (own figure, based on Bhaskar (1998))

One could ask why making the effort to stratify reality in that way, and one answer is that appearances do not necessarily reflect the mechanisms and relations that cause the appearances. An example used by critical realists is for example that the appearance of stasis can be brought about through the exact directional opposition of underlying forces that are holding each other in a state of stasis. Merely observing the phenomenon in question and not asking about what causes the phenomenon to behave in that way would render the false impression of the phenomenon being static, ignoring how this stasis comes

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<sup>4</sup> See more on how I use apparatus in chapter “Some thoughts about doing research and ontology”.

about. Furthermore, critical realism argues that reducing “*the question of what is to the question of what we can know*” (Archer et al. 1998, xii) is a fallacy, as it would mean that the nature of reality depends upon our intellectual grasping of it. Meaning, that if reality were dependent upon our understanding of it, reality would have to change accordingly every time paradigm shifts occur in science. Rather, critical realism aims to make room for the possibility that reality exists independently of our knowledge of it and that we only ever can approach an understanding of the world by being critical and allowing for the fallibility of our knowledge. With that, critical realism aims to counteract reductionist projects such as subjectivism which reduces “*reality [...] to our ideas of it*.” (Archer and Outhwaite 2004, 130). As our ideas and understandings of the world can change, making our knowledge of it *transitive*, critical realism claims that we need an ontology that accounts for the *intransitivity* of reality, the real conditions that make our world what it is. Those are complex and might be difficult to obtain but negating their existence would confuse further advancement of our understanding of the world. This is why, what in critical realism is called ‘the real’, is needed in addition to ‘the empirical’, that which we can observe, and ‘the actual’, that which takes place as events in the world even if we never get to see it <sup>5</sup>. Given this, the method used to arrive at knowledge about ‘the real’ is the method of retrodution.

“[Retrodution] seeks to clarify the basic prerequisites or conditions for social relationships, people’s actions, reasoning and knowledge. The term ‘conditions’ here means the circumstances without which something can’t exist. In such argumentation we try at the same time to separate the necessary conditions from contingent circumstances.” (Danermark 2002, 96).

Applying critical realist thought in my thesis work meant that I inquired about the conditions that make it possible to practice urban gardening. Among them are the most essential conditions, including i) a bio-physical climate that allows for outdoor urban gardening (as opposed to gardening in the Arctic for example where most plants that we eat cannot be cultivated), and ii) the existence of physical space on which raised beds in heightened wooden boxes can be placed. But also the existence of iii) people who have free time at hand, who have the knowledge to garden or are willing to learn, and are conditioned in such way that they have the affordance to do urban gardening, iv) the political will from the side of the City of Stockholm to allow for urban gardening. Structures of oppression such as racism, patriarchy and inequality are not necessary for urban gardening to exist. However, they condition urban gardening and are causally efficacious for urban gardening being primarily a middle-class, gendered and white phenomenon.

The second pillow of critical realism, besides the stratified ontology, is **epistemological relativism** which holds that the means to create knowledge are manifold but that one

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<sup>5</sup> An example would be that regularly, the animal swan is white, an empirical reality easily obtained (‘the empirical’). Acknowledging ‘the real’ would be to understand that genetically the existence of a black swan is possible, but during the time of study, we might never be able to see a black swan, even though there might be one black swan living on this earth right now (‘the actual’).

knowledge can be better at describing reality than another – also described as judgemental rationality (Danermark 2002). Epistemological relativism also embraces different knowledges from different disciplines on the subject in question: for example, urban gardening can be studied from a variety of different perspectives and disciplines, with the disciplines of biology, agricultural sciences and toxicology contributing with insights on soil quality and pollution in urban spaces, and political science contributing with knowledge on how societies and institutions such as commoned gardens are governed. All disciplines enrich the understanding of the phenomenon by providing with understanding of different mechanisms that are all part of the same phenomenon.

Generally, the project of critical realism as a philosophy of science aims for social science research that is explanatory and looks for causal mechanisms, not correlations. Critical realism aims also for emancipatory research that helps achieve the flourishing of all living beings (Schudel 2022). It is also therefore I deem critical realism relevant for this thesis project as it aids the analysis and understanding of emancipatory social change.

### **Morphogenetic approach as ontology, analytical and explanatory theory**

“Staden som somnar på kvällen är en annan än den som vi vaknade på morgonen. Något har byggts och något har rivits. Någon har fötts och någon har dött. Förändringen pågår oavbrutet och det som en gång fanns ska aldrig komma tillbaka” (Fogelström, 1968, 7)<sup>6</sup>

The ‘morphogenetic approach’ is a social theory related to critical realism that explains and helps analyse **social change (and stasis)**. It is based on **analytical duality**, a pillar of critical realism, which looks at the social world through the framework of an agency-structure structure dialectic. Praxis is thereby the mediating mechanism which conditions both agential and structural change and stasis. This is different from other philosophies which give primacy to either structure or agency over the other (cf. Giddens (1987) structuration theory or Berger and Luckmann’s (1966) social constructionism). A critical realist conception on the other hand is based on a conception of agency and structure as irreducible (Hartwig 2007).

Archer’s morphogenetic approach which is based on analytical dualism, and that separates agency from structure temporarily, allows for *“the examination of their interplay, of the effects of one upon the other and of any statement about their relative contribution to stability and change at any given time”* (Archer 1995, 14). The framework proposes that society is always *“pre-structured”* (Bhaskar 2016, 55), comprised of structures that *“necessarily [pre-date] the action(s) leading to its reproduction or transformation”* (Archer 1995, 15) while structures are the elaborated outcome of post-date action (ibid).

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<sup>6</sup> “The city that falls asleep at night is different from the one we wake up in in the morning. Something has been built and something has been demolished. Someone has been borne and someone has died. Change is ongoing and what once was, will never return.” English translation by Henrik Ernstson.

Here, Archer introduces the factor of time and the temporality of the structure-agency dialectic. Change as such is taking place over time (from  $T^1$  to  $T^4$ ), as reflected in Figure 4 below. And, she claims that analytical dualism is needed for the recognition of the different “time frames, for example, that of unfolding situated activity and the overarching durations of social and economic systems” (Simmonds, Gazley, and Daellenbach 2018, 255), which may have different temporalities.

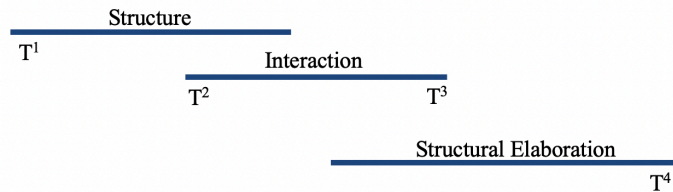


Figure 4 – The elaboration of structure, figure based on Archer (1995)

Importantly hereby is that structures, such as how urban public land is designated and used, cannot be voluntarily transformed through interaction/elaboration, “*even given a collective determination to transform it*” (Archer 1995, 79). This is because action is conditioned by structural forces, made up of for example social structures of social groups that are benefitting from stasis, or material structures such as the way society is organised infrastructurally. Successful transformation of structures can according to Archer be achieved through the formation of a corporate agency, a collective social structure, able to transform social structures. If successful, the very same structures that impeded and conditioned action at  $T^1$  are transformed at  $T^4$  and those will now be the new context in which action can take place. Despite the assumption that action is always conditioned, Archer’s theory opposes a view that understands action as *determined*. Instead, her theory proposes an analysis of the agential power that lies in people’s capacity to act collectively, and possibly change the structural environment they are otherwise conditioned by. In Table 2, on the next page, I outline examples of the structures that condition the agency of gardeners and their practice of gardening in common. All of which are subject to transformation or reproduction through urban gardening practices.

**Table 2 – Structure and agency in the case of urban gardening (based on own analysis).**

Agency		Structure		
Agent  <i>(collectivities that share the same life chances)</i>	Actor  <i>(individuals whose identities and values are forged from agential collectivities)</i>	material		ideational
		Natural <i>(biophysical)</i>	Social /Cultural	
Neighbours	Gardeners whose social identity expresses their personal identity	Plants	Garden community/association	Laws
Gardeners partaking in the association		Soil	Socio-spatial relations	Tenure agreement
		Humans	Gender structures	
Passersby	City District Administration Officials	Animals (birds, bees, deer, dogs, horses)	Urban gardening culture	Urban gardening culture
		Public space or park boundaries	Racism	
		Buildings	Public space or park boundaries	

*Practice as the mediating mechanism for the structure-agency dialectic*

Grounded in both critical realism ontology and the morphogenetic approach, the focus in an analysis of social change is on the practices of people that mediate their agency and their agential capacity to elaborate their structural context. While Archer's morphogenetic approach and analytical dualism forms the base of my thesis, I will briefly discuss another theory which has social practices at their center of inquiry, namely, social practice theory below. While I have not used social practice theory, I have made use Hannah Arendt's three types of practices that human beings carry out: **labour, work, and action** (Arendt 1958, 7). Whereas our bodies and communities are reproduced through *reproductive labour* such as food cultivation and preparation, childcare, and exercise, *productive work* on the other hand, relates to "progress (see Marx, 1976), transcendence (De Beauvoir, 2011 [1949]; Massey, 1994, p. 260), and the going beyond of the daily and everyday struggle of surviving and flourishing" (paper IV, 4). Action however, from Arendt's perspective, is the political praxis of debating with others in society about how our world should be organised and how we want to live together. For paper IV, I have made use of Arendt's distinction between work and labour, to discuss gardening as labour that is socially reproductive and gendered.

**Social practice theory** is another body of theory with a focus on social practices as the unit of analysis when seeking to understand how societies change (Shove, Pantzar, and Watsson 2012). Hereby, the focus is put on understanding how those "*practices change and stay the same*" (ibid, 11), based on the structuration theory of Giddens (1987) that conceptualises the structure-agency dialectic differently to Archer's (1995) realist ontology. Archer however critiques Giddens's ontology for defining structures as forces conditioning

agency in the moments of practice, but otherwise, giving structures no *real* existence, that is independent from their effects upon agency. Social practice theory (see Shove, Pantzar, and Watsson 2012) is also critiqued for alienating the subject from its practices leading to the “*death of the subject*” (Sovacool and Hess 2017, 713). In contrast, the **morphogenetic approach** by Archer is not only interested in structural transformation and how it comes about through practices; it also seeks to analyse the transformation in the subject or person that is taking part in structural change, what could be called agential transformation. Archer describes this as “double morphogenesis” (1995), a morphogenesis not only of structure but of agency in the same process. In my research, it has been important for me to not only focus on practices and structural change – but also how personal changes come about, and ultimately, how emancipation comes about.

In Figure 5 below, the analytical schema of analysing the relation between practice, structure, and agency is summarised. This builds on Archers explanation of the stratification of people and the agential changes that people follow through when elaborating their structural environment.

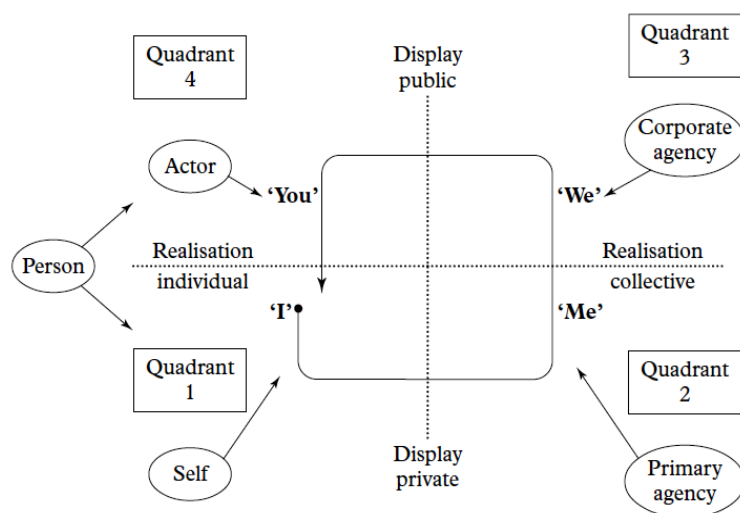


Figure 5 –The stratification of agency (Archer, 2000, 295).

In paper III of this thesis, “Cultivating commoner subjectivities” I go into depth about the different changes that arise through the collective practices of urban gardening in the City of Stockholm. More generally, Archer suggests that the ‘I’ (lower left quadrant) has desires and needs and has a structural position in society, but, that the ‘Me’ (lower right quadrant), does not *per se* have the agential power to make any changes to that positioning. Thanks to the reflexivity of human beings and their ability to reflect upon their positioning in society,

<sup>7</sup> Meaning that focus is withdrawn from the subject, or “the author” of the social structure.



people can engage in collective action that acts on their needs and expresses their desires for change. In the example of this thesis, this means that urban residents might feel the desire to be more connected to nature and cultivate their own produce but due to their structural positioning and the structures of property and class (at T<sup>1</sup>) they do not have access to their own garden. And so, as reflexive beings, they begin the process of acquiring land for gardening through engaging in a collective gardening project. Through joining a garden community, gardeners realise access to collective or what Archer refers to as “corporate agency” – an agency which emerges through collective relations. Corporate agency possibly but not necessarily allows them different privileges of power than compared to being a single individual (compare with union membership) claiming public land for individual cultivation of agricultural produce. Following that, Archer suggests that when a person’s desires are fulfilled by the new position they take on in the collective, they become a social actor, a person whose social identity through their positioning is congruent with their personal identity. This means that some people can come to express their “whole selves” and who they want to be through their life in the gardens. For example, they become fulfilled in being part of a garden community, cultivating their own food, and sharing knowledge. Others however are members of a garden because it provides them with something they need in their life, but their life does not centre around or is fulfilled by their social identity as a gardener.

Archer’s account which views agency as realised through collectives, reflected in her view of corporate agency, has been fruitful for my research related to the commons as a social form of organisation of production and reproduction. It has helped me to see the collective social relations that emerge from commoning practices, and understand them as an emergent agency different to the agency of individuals. Archer’s stratification of agency has also aided my understanding that urban gardens are structural contexts themselves, in which people can assume a social identity different from individualised social relations of consumption.

## **On commons as theory**

Being the main conceptualisation through which I have viewed the urban gardens and their practice of urban gardening in this thesis, this section provides some more detail on how commons theory has shaped this research.

Beginning with its etymological origin, the word ‘common’ derives from the Latin *munus* which signifies a “*type of performance and counter-performance*”, a reciprocal and importantly communal performance of duty with a “*collective and often political character*” (Dardot & Laval, 2019, 50). Concerning the commons’ ontological genealogy, it is claimed “*that the commons are best understood not as a resource but as a social process of organisation and production*” (Fournier, 2013, 433). Similarly, Foster & Iaione (2016) argue that commons are socially produced, and that “*there is no common without commoning*” (Bollier & Helfrich, 2012, 56). This is different from the historical conceptualisation of the common as a resource, strongly forged by Hardin’s (1968)

theoretical argument notoriously known as ‘the tragedy of the commons’. Even though Nobel laureate Elinor Ostrom (1990) refuted this proclaimed tragedy in her meticulous empirical research on commons, only recently there can be observed a turn away from the commons (with plural s) to the common (singular form) - denoting a shift from a focus on resources towards the commoning process (Linebaugh 2008; Varvarousis and Kallis 2017). As such, the common is created *actively*, and thereby offers “*essential spaces outside our increasingly failing markets and states, in which to reconstruct social relations*” (Fournier, 2013, 435). This meant for my research that I understand urban gardens as a common, whose structural existence is reproduced through the commoning practice of urban gardening collectively.

More generally, research shows that commoning practices can fend off new waves of urban enclosures in the form of dispossession, privatisation, and enclosures of public urban space (Hodkinson, 2012). These enclosures are driven by processes originating from a global scale of capitalist commodification, which interact with “*the city as space of mediation, mitigating between the everyday and the logic of commodification*” (Kip, 2015, 47). This insight fed into understanding the urban garden as being intricately linked with structures on other levels than the immediate level of the garden, something theorisations within political ecology have been stressing for a long time (Angelo and Wachsmuth 2015). As such, commoning urban space can become a practice of urbanisation aimed at counteracting related processes on different scales (such as global capitalism) and at the same time work as a means to bring together people and account for their differences (De Angelis 2017).

### **Marxist dialectics and feminism as theory**

According to Marx, the “*capitalist process of production is a historically specific form of the social production process*” (Marx 1981, 957) - a form that is not given, or natural for that matter. As an antidote to the different forms of alienation created through reproducing capitalist structures, Marxist scholars engage in the study of the commons, inquiring about the potential that commoning has as a transformative and emancipatory practice (Caffentzis and Federici 2014; Engel-Di Mauro 2020; De Angelis 2013) antithetical to capitalist social relations. Marxist theory holds, for example, that

“the capitalist production process proceeds under specific material conditions, which are however also the bearers of specific social relations which the individuals enter into in the process of reproducing their life” (Marx 1981, 957).

This understanding is based on a dialectical perspective which acknowledges that social relations *qua* structures are reproduced by people while conditioning their lives and agency to break free from it.

Further, Marxist theory is also based on the inquiry of contradictions, such as the contradictions between use value<sup>8</sup> and exchange value, private accumulation and commonwealth, and production and social reproduction (Harvey 2014). From a Marxist perspective, contradictions are rarely resolved entirely (Harvey, 2014) and, due to the opposing forces inherent in those contradictory relations, can “*erupt into crises*” leading to capital morphing into something else (ibid, 4). This is also the assumption of the social theory I am using in my research, the ‘morphogenetic approach’ by Archer (1995) – with the assumption that society is morphing into a new form through the dialectical movement between structure and agency. Marxist-informed research uses contradictions for revealing “*underlying causes*” of phenomena as a tool to “*unmask what is truly happening underneath a welter of often mystifying surface appearances*” (ibid, 5) – a method or lens, that has informed my thesis strongly.

In this context, my work has also heavily drawn on the work on commons, patriarchy and capitalism, by feminist scholar Federici (2004). In her book “Caliban and the Witch” she describes the essential role that patriarchal oppression and colonisation as power systems play for capitalism (see also Peake et al. 2021). Federici claims that the roll-out of a capitalist society would have not been possible without the submission of collectively organised commons that provided subsistence in favour of a system based on an exchange-value-based relation between wage-labourer and colonial agri-food labourer/slave and the oppression of both of them. This system is, despite its changes over time, still present today and conditions the lives of people living in cities. The urban is thereby “*the primary mode through which capitalism endeavours to organize the social, political, and economic realms, [...]*” (Peake et al. 2021, 19). Urban gardening necessarily relates to these systems of oppression in that it is placed in a spatial structure that favours exchange-value over use-value, civil volunteering, food production elsewhere, and wage labour over subsistence through commoning. This thesis builds here also on the claim that “*capitalism cannot reproduce itself capitalistically; rather, it downloads the burden of its own reproduction onto women [and other subalterns] in the form of unwaged work*” (Peake et al. 2021, 6) a claim that meant for me to be critical about the fact that, also in Stockholm, the majority of the commoners are women, who provide their labour for free in their “*free time*” from waged-work, studies or retirement.<sup>9</sup>

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<sup>8</sup> There are different schools of thought on the definition of use-value and exchange value. I have used the terms in the way in which Hornborg (2018, 80) describes “use-values”, namely, as “a broader category of biophysical resources including embodied energy, labor, land, and materials”. I used exchange value as the abstraction of use-value for example in the form of money or as a commodity. In that sense, I agree with the way how Harvey (2009, 138) describes their relation to each other: that “use value is embodied in exchange value”.

<sup>9</sup> As much as the oppression of women for capitalist reproduction, my work has also been informed by the work of eco-feminist scholars who call for the recognition of the fact that also nature is subordinated for the purpose of reproducing modern societies (Mies and Shiva 1993; Merchant 1996).

## Qualitative methods

All the methods that I have been using have been deployed to understand the **dialectic between the gardener's agency and their structural environment** (the urban gardens, structures of capitalism, class, race, patriarchy).

Sherman (1976) as well as Ollman (2003) provide a set of aspects that one should ask oneself when inquiring about dialectical relationships: First, **interconnections (i)**. For example, which interconnections and relations do exist between the phenomenon and its environment, or within the phenomenon? Second, the question of **change (ii)**. How has the situation arrived at this point and what are the processes that led up to it? Third, **opposites and conflicts (iii)** within the phenomenon but also in relation to its environment. Fourth, the dialectic of **quantity and quality (iv)**: what quantitative changes led up to qualitative changes? When did qualities change? And lastly, the **negation of the negation (v)**, or absencing the absence in critical realism. What is negated or eliminated in processes of change? Why and what is absent or can not come to the fore?

In my research, these aspects of a dialectical inquiry have translated into me beginning my studies by focusing on the contradictions of urban gardening (iii), and directing my focus towards understanding how the practices change relations (i) and lead to qualitative transformation (ii). The dialectical perspective has also helped me to see and search for what is not present in the gardens, physically and socially: for example, the communities that are excluded from the practice (v). The aspect of quantity and quality of a dialectical inquiry (iv) has directed me towards thinking about the scale of the phenomenon, how many people are engaged and in which ways urban gardening in common can bring about a qualitative shift in the way urban societies are organised.

Together with the research questions repeated below, the research practice has revolved around understanding the case of the City of Stockholm (**case study**), by making use of semi-structured interviews (**interviews**) with gardeners, civil servants from the City District Administrations as well as experts in the field of urban gardening, engaging with other scholar's cases from other cities (**literature analysis**), inquiring about more details about the gardening from a larger amount of gardeners (**questionnaire**) than was possible through the interviews, by interpreting together with gardeners my results (**participatory dissemination**), and by rewriting and densifying statements through poetry (**poetic inquiry**). My research questions were:

1. How can the contradictions of commons that are based on practices of urban commoning be understood?
2. How does urban gardening as commoning practice condition structural change?
3. How does urban gardening as commoning practice condition agential change and how is agency conditioned by structure?
4. How does urban gardening relate to gender structures and care?

In the remainder of the chapter on methods, I will describe more in detail how I used the qualitative methods in my thesis work. For an overview, below Table 3 outlines the methods used for each paper.

**Table 3 – Methods deployed in this thesis.**

Papers	Literature review	Semi-structured interviews	Online questionnaire	Participatory dissemination	Field observations	Poetic inquiry
I	X					
II	X	X			X	
III	X	X	X	X	X	
IV	X	X	X			X

### Literature analysis (RQ1)

Before entering into the empirical fieldwork, I began my research by conducting a literature review on academic research that covered the relationship between urban commons and urban gardening more generally. I used a variety of relevant search strings<sup>10</sup> that were entered into different databases such as Google Scholar, KTH libro and Scopus. I reviewed the literature published within the disciplines of human and cultural geography and sociology. This choice to exclude other disciplines was guided by my scholarly background and the type of research that I want to produce, namely research that is interested in the relation between urban space, nature and the organisation of society.

The literature analysis resulted in an understanding that much of the work on urban gardens is linked to commons theory, which understands urban gardening as a transformative practice for emancipation. Much of the literature describes also how urban commons are subversive forms of organising society-nature relations. I also found that many critical scholars were describing the challenges and issues, as well as the contradictions, of food-producing urban commons. This finding led up to the first research question that guided my inquiry: *“How can the contradictions of commons be understood that are based on practices of urban commoning?”* (RQ1).

Results from the literature review showed that the concept of contradictions was used differently by scholars. Many times, contradictions were not defined as such or it was not clear what was in contradiction with what. Another challenge was to generate a valuable conclusion from the review of contradictions. I chose to categorise the contradictions reported in the literature in themes. While many of them related to the contradictions

<sup>10</sup> (“food commons” OR “urban garden\*” OR “community farm\*” OR “spatial practice”) AND (transformation\* OR chang\* OR “change in agency” OR transform\*) AND (agency OR “agential capacity” OR “personal capacity” OR agent\* OR “right to the city”) AND (dialect\* OR “structure-agency” OR relation\*)

(“food commons” OR “urban garden\*” OR “community farm\*”) AND (transformation\* OR chang\* OR “change in agency” OR transform\*) AND (agency OR agent\* OR “right to the city”) AND (dialect\* OR “structure-agency” OR “relation” (“commons” OR “urban garden\*” OR “community farm\*”) AND (chang\* OR emancipat\* OR transform\*) AND (agency OR agent\* OR “right to the city”) AND (dialect\*)

between the collectivity of the common as opposed to individualised social relations in a contemporary system of neoliberal capitalism, others related to how commoning as practice contradicts capitalist exchange-value-based relations of production. While those centered more around the social relations of commons, other reported contradictions had more to do with the materiality of the commons: its spatiality that interfered with contemporary spatial relations of private or public ownership, or the seasonality and temporality of growing plants in the city that contradicts the short-term temporality of market-led capitalist urbanisation. The grouping of the reported contradictions was not always possible, but this study aimed to provide an overview of possible contradictions that had been reported by scholars. Another purpose was to foreshadow and lay the ground for my study – to be attentive to the elements of urban gardening in common that could be in contradiction with the current political economy and its urban conditions.

### Case study using mixed methods (RQ 2,3,4)

Motivated by the fact that (a) I have been based in the City of Stockholm and had access to empirical knowledge on this context through my supervisors Sara Borgström and Rebecka Milestad, but also other colleagues both from KTH and other universities in Stockholm County; and (b) the existence of the practice and the flourishing and even growth of urban gardening practices, I chose the City of Stockholm as case study for my field studies.

To study the phenomenon of urban gardening in the City of Stockholm, I used the ‘case study’ method, where a phenomenon is studied in its contemporary reality, common to the social sciences. As such, the case study method is based on the study of a case or a phenomenon that is studied in its contemporary reality. A case study is typically characterised by a geographical and temporal boundary (Flowerdew and Martin 2005, 95), and the yielding of empirical data through a variety of methods. In my case, those methods included interviews, observations, an online-questionnaire, participatory dissemination and poetic inquiry.

To select relevant urban gardening associations for my study, I used the following criteria:

- Located within the administrative boundaries of the City of Stockholm (within the thirteen city districts);
- Based on public (green) space administered by either the Traffic Office or the City District Administrations;
- Gardens that primarily produce food (but also flowers and other plants);
- Based on the new tenure agreements of urban public space (in Swedish “brukaravtal”) that can be cancelled within one month’s notice. This excludes those associations that have long-term leases such as allotment gardens, which have historically been part of the landscape of the City of Stockholm;
- Organised and managed by non-profit civil associations and not managed by the City District Administrations;
- With as wide geographical spread as possible, selecting some gardens lying centrally and others more peripherally.

Gardens that engage less than three members are excluded from the selection. This criteria risks excluding smaller initiatives such as small guerilla gardening initiatives, but the focus of this study is to analyse more stable gardens in the urban environment that have a potential to function as case studies of transformative or even subversive practices, contradicting dominant spatial, material and socio-cultural structural relations.

#### *Interviews (RQ 2,3,4)*

To study how urban gardening as commoning practice conditions “*structural change*” (RQ2), “*agential change*” (RQ3) as well as “*how agency is conditioned by structure*” (RQ3), I engaged in **semi-structured interviews with gardeners** of the new urban gardening initiatives subject of my PhD research. The choice of method is motivated by the assumption that interviewees can reflect upon and report back to me about the ways in which their doings in the world, and their gardening in common, change their structural environment and themselves.

The questions that I asked in the interviews were guided by Archer's theory on the morphogenetic approach (1995, 2000). Initially, I used her writings on the nature of social change (“Realist Social Theory: the Morphogenetic Approach” and “Being Human. The Problem of Agency”) to formulate questions for the interview guide. Therefore, I developed two sets of questions: one related to the **agency (a)** of gardeners (26 questions), and the other related to the **structural context (b)** (18 questions).

Examples of questions on agency **(a)** are: “What kind of positions are discernable and what is the network of social relations? How have these positions been created?”, “What collective activities are there?”, “How have different people's relations to each other changed?”, “How can the agents in Stockholm be characterised? What are the socio-demographics?”, “What are the resources which different groups hold and use?”. The question that related to structure **(b)** were, amongst others: “What relations (e.g. property relations) pre-exist which individuals enter into and whose activities (gardening under tenure agreement) reproduces or transforms them?”, “Which are the structures (e.g. climate, soil quality, racism, park landscape) that cannot be changed in one generation because of historical effects and are therefore not subject to social constructionist thought? Which are the properties not of their own making which constrain their activities?”, “How are structural influences transmitted to particular agents in determinate positions and situations and how are these strategic combinations resulting in morphogenesis or morphostasis?”. For the interviews, these questions were reformulated to be understood independently of having an understanding of the theory that they are based on.

This meant that I asked questions about how long the initiative had existed (aiming to find out about the pre-existing structural context that conditioned their doings), how the initiative received access to urban public land, what type of infrastructures gardeners use to cultivate plants (aiming to understand if the current modes of urbanisation affect what garden infrastructure), how they are organised into a collective (aiming to understand how social relations are transformed and spatially placed), who is represented among the

members of gardens (aiming to understand how the urban gardens, the public space and other social structures condition urban gardening), what the gardeners perceive as changes. I also asked about the process of becoming a member (understanding how agents gain access to 'corporate agency' (see Archer, 1995) and transform power relations), and if the gardening in common has led to changes in their understanding of self (aiming to understand if gardeners feel part of a community, or change their identity). I also asked about conflicts with other members or people who are not part of the initiative.

In total, I interviewed eight gardeners from different gardens, all of whom were board members or had been at an earlier point in time. The choice was guided by the fact that I perceived that their position as board members must have impacted their agency. See paper II for more details.

In addition, **I also interviewed key informants:** three City District Administration officials out of 14 city districts in the City of Stockholm, five researchers whose research is concerned with urban gardening in Sweden, Germany, and Spain, and one professional gardener employed by a public garden in the City of Stockholm. Here, the purpose was to gain more insights into the questions that I asked the gardeners from the urban gardening initiatives, from another perspective. I wanted to know from the key informants if I missed anything that was not communicated by the gardeners, but I also wanted to know from the City District Administration officials how they perceived urban gardening and what their agendas were.

In general, I perceived that the City District Administration officials were very positive towards the gardening initiatives, whereas the researchers described issues with urban gardening in the form in which it takes place currently. The gardeners both confirmed those issues but also highlighted the great benefits received from gardening.

The structure of the interviews according to questions on agency and structure informed the analysis. While paper II focused on the answers received to questions on the structural changes and conditions of urban gardening, paper III analysed the answers received on agency. Grounded in the morphogenetic approach and with the thesis focusing on practices of urban commoning, I deemed the structure of collectivity that emerges from urban gardening in common an important structural outcome to focus on. Another analytical focal point was to understand to which degree the urban commoning practices led to structures that were autonomous from state-based management of public spaces. How commoning conditioned the structural (re)distribution of spatial resources such as public land was another aspect I analysed in paper II.

For paper III, the focal point of the analysis was on agency and how agency had changed through the urban commoning practices. Therefore, I analysed the answers from the interviews according to the stratified understanding of agency by Archer (2000) (see Figure 5). The analysis centred on understanding how residents had received access to positions as gardeners, power related to this emergent position as members of an initiative, and how gardening in common had changed their subjectivity and identity.



### *Observations (RQ 2,3,4)*

In addition to interviewing gardeners, and inquiring about their experiences, my field studies also included on-site visits to eight different gardens. With the method of observation, I aimed to “feel into the field”, for example, to try to feel what it means to be located in public spaces that are transformed into gardens, and how passersby engage with the gardens – experiencing the gardens from my body. Although I was not a participant or member of the urban gardens where I did observations, visiting the gardens can arguably also be defined as participating in the field, even though to a lesser extent. With that I mean that my observations from the field are not coming from a neutral space, I chose the day and time of the observations, and the type of situations that I noted down.

I visited the gardens on single occasions, at the beginning of the season in March and May and by the end of the season in September. In some instances, I sat down on a bench close to the garden and observed how passersby interacted with the gardens, in other instances, I sat in one of the garden’s on furniture built by the gardeners for everyone to use and observed a homeless person using some of the other seating areas for sunbathing. This other person felt intruded by my presence and I felt uneasy by my effect and retracted from the scene. At other times, I spent time in the garden with one of the members who I interviewed and felt a more comfortable feeling of belonging, that I had a reason to be here, not being an intruder. In those instances, other passersby greeted us and asked questions or said how nice their gardens were.



Picture 3 – In-soil cultivation of an urban garden in the City of Stockholm (summer 2020). Photograph by author.

Most of the time, I chose days that were sunny or at least warm enough to spend at least 10 minutes in the garden; most of the visits lasted at least half an hour. I often observed people passing by the gardens but not spending time in the gardens. I saw birds who used the gardens to find food, and leashed dogs passing by with their owners. I noticed that the gardens oftentimes are located close to other outdoor activities, like a football area, or a playground, which many times meant that you could hear children laughing and screaming when sitting in the gardens. All gardens have some kind of put-up signs describing who is responsible for the garden, how to become a member and how to contact the association that cultivates plants here. Some gardens display a plant map. Another garden has clear political messages attached to wooden signs (see Picture 4) to inform passersby about the purpose of the garden. Some gardens look wilder than others, with overgrown grass and weeds. Others are very well-trimmed with clear paths and boundaries.

The observations helped me to understand how it might feel as a non-member, how the garden spaces despite their openness feel to me as if I do not belong there, afraid to disturb. I often thought that I would like to take some of the herbs for tea but I was not sure about the policy of the garden.

#### *Questionnaire (RQ 3)*

In addition to the interviews in which I was able to spend a lot of time with gardeners and get to know gardeners personally, I also wanted to know more about a greater variety of people, people who do not hold a board member position and who have just become members for example. Based on what other scholars had reported, namely that many times, gardeners who are initially unpolitical, develop a political stance and realise the benefits of gardening in the urban (e.g. as a way of producing food locally, improving biodiversity etc.), I wanted to know whether gardening in common changed the agency or positioning of the gardeners, be it in their political attitude or if it would affect their identity in another way. Together with my PhD colleague Nikolina Oreskovic at Södertörns University in Stockholm, Sweden, we developed an online questionnaire to inquire about data on socio-demographics, reasons for gardening, issues with gardening together, how long they had been members, and how being part of the association had changed them.



Picture 4 – The sitting area of an urban garden in the City of Stockholm (summer 2020). Photograph by author.

According to Flowerdew & Martin (2005, 79), questionnaires allow for inquiry about respondent variables, behaviour and attitudes, opinions and beliefs. The method involves the design of a set of questionnaire questions that take into account the different axioms of the nature of the phenomenon in question, such as time, space, material and social aspects. In our case, the questionnaire asked about the following aspects (see box below):

respondent variables: gender, age, type of member of the community garden (board/regular), employment/retired/studying, who is the holder of the spatial property rights, type of land (private, public), does the person hold cultivating knowledge, how long has the person been a member, amount of harvest compared to consumption during one year, the gardening has changed my capacities (for organisation, for social competences, confidence, employable, received more power);

behaviour: what activities are done collectively, how often do gardeners come to the garden, how far do they travel, how many hours per week, what kind of food is cultivated, temporal length of engagement in gardening, personal change through the gardening (new friends, being part of a community, getting to know people from other social groups, networking with other gardens;

attitudes, opinions and beliefs: reason for gardening (to relax, for community ('social' gardening) or for cultivating food, to do something practical, to learn how to cultivate, do something for the environment, to make new friends, to find a political platform, to learn about associational life;

garden parameters: type of plants, type of infrastructure used for the garden, soil quality, longevity of the garden, air emissions, noise pollution, and safety.

Based on these aspects, we designed a questionnaire with twenty-three questions, aiming to take more than thirty minutes to answer. The questionnaire was created in the professional online survey tool by Södertörn University and was distributed in November 2020 via the gardens' Facebook groups and through the garden board members I had contacted. In total, we received thirty-three replies after the harvesting season in 2020. The answers were then analysed according to Figure 5 –The stratification of agency (Archer, 2000, 295).

#### *Participatory Dissemination (RQ3)*

After I had conducted the interviews and received the results from the questionnaire, I reiterated my findings through a participatory method, based on the method of 'participatory dissemination' developed among others by Valli (2021). As such, the method "*engages research participants in the interpretation of preliminary research findings*" (ibid; page 25). The main motif for using this method was to see whether my interpretations of the questionnaire responses and the interviews on the transformation of agency, subjectivity and identity made sense to those I wrote about.

I approached the method by preparing my results on the subject of the gardeners' agency and by inviting two gardeners (board members) from gardens that I so far had not yet had interacted with or interviewed. At the beginning of our meeting, I presented them first the aim of the meeting, which was, wanting to hear their opinion on my interpretations of the questionnaire and the interviews. Then I explained and described the stratification of agency by Archer (2000) (see Figure 5) that I previously had used for analysing the material from questionnaire and interviews. I presented the gardeners with the different preliminary results on the 'I' (concerns and desires), the 'Me' (subjectivity, social positioning), the 'We' (corporate agency through the garden association), as well as the 'You' (the agency one has access to through occupying a position that allows for the expression of personal identity in a society), and asked for their opinion. The meetings were held individually and in one case in a café close to their commoned garden and in another on a bench in their commoned garden. Both meetings lasted for 75 minutes and were recorded.

The feedback from the gardeners I met for conducting this method was positive in that they said that it was nice for them to see what others had responded, that they would identify with the majority of what others had said and that my results made sense to them. This was reassuring for my work as my results were confirmed by gardeners, but I also experienced those meetings as a meaningful way of disseminating this research.





Picture 5 – Urban garden with cultivation in raised beds in wooden boxes (summer 2020). Photograph by author.

#### *Poetic Inquiry (RQ 4)*

Towards the end of my thesis work, I realised that I wanted to give space to all those emotions and feelings captured in statements from gardeners, during interviews, and by reading the responses in the questionnaire. I decided to use the method of ‘poetic inquiry’ for the presentation of the material that I so far had collected. Despite not being used very often, the method as such is not unknown within the discipline of geography (Palmgren 2018). I used this method not for data collection but rather to **represent data**, similar to what other geographers have done to “(re)presenting research experiences, fieldwork observations or geographical imaginations” (Palmgren 2018, 373) (see also (de Leeuw and Hawkins 2017; Eshun and Madge 2012; van Amsterdam and van Eck 2019).

I approached the method by first sorting through my memories from encounters and sentiments shared with me. From that process, I noted down those sentiments that had a strong and pressing character to them, sentiments that evoked feelings in me as a listener. Then, I re-read the transcripts from the interviews and read through the responses from the questionnaire, searching for gardener’s voices expressing feelings such as distress, joy, wonder, and anxiety. In the next step, I sought out differences and similarities of the statements that had an affective nature. Then I extracted essential words from the affective statements and rewrote what had been said in a condensed form, as poems. At the same time, I drew on the method of ‘collective biographies’ (Gannon and Gonick 2019) which

aims to capture experiences that are shared by a social group with a similar positioning, for example, women in a patriarchal society. The guiding question for writing the poems here was *“What shared experiences can I present here, in a highly condensed form?”* The goal was to represent the different voices and not only the shared sentiments.

## Results

Based on the definition of the urban gardens that are the subject of this thesis as **commons**, the theoretical grounding in the **morphogenetic approach** as social theory (Archer, 1994), the meta-theoretical foundation in the philosophy of science of **critical realism** (Bhaskar 1998), and the **mixed qualitative methods** used (see the preceding chapter), I will provide and overview of my main results.

**Starting with research question (1)**, I show in this thesis, by using dialectical theory (Ollman 2003), that contradictions can be deployed as a lens through which to understand and analyse how change takes place. Based on the premise that change arises from a dialectical movement between necessarily related structures, I ask, “*What must be the case for urban gardens to flourish?*” (engaging the critical realist method of retrodiction, see chapter ‘Critical Realist Ontology’). Assuming that urban gardens require a cultivation medium such as soil, water, nutrients, pollinators, light and a climate that matches the requirements of the plants to be able to exist, I hold that those contradictions that are affecting those basic requirements are of diminishing nature for the urban gardens. In article I, I show that the structural environment of an urban garden with its socio-spatial, material, temporal, and political structures can contradict necessary aspects of a flourishing urban garden (such as the need for regenerative practices such as composting and soil cultivation typically not accepted in green urban spaces).

I find that contradicting relations between the gardens and their structural environment do not necessarily have to have a negative or diminishing effect on them. While the collective social relations, reproduced through for example gardening in common, are in contradiction to neoliberal individualised and capitalist social relations, whose spiritual cause is profit (Häggglund 2020, 385), gardening in common can currently exist side-by-side in the City of Stockholm, without challenging larger political economical structures. Short-term tenure agreements that can be cancelled on short notice as well as the foundation of the gardens on volunteer labour, however, contradict the long-term temporalities of plants as well as the needs of people, for waged labour – for the reproduction of human bodies in a political economy based on the selling of labour for survival. This necessary contradiction can be cause for transformation: either their destruction (of the gardens because people do not have time to work for free, or the plants, because the garden is eradicated in the process of transforming the green space into a space for buildings and houses) or their empowerment (realising the relevance of urban gardens and the labour of residents and providing them with conditions that allow them to flourish).

Another contradiction is the relation between the gardens as socio-spatial structures that are based on community and openness and the (private) property relations established through gardening as an association claiming public urban space for the function of urban gardening where other functions were possible prior. Where the normative idea for public

space is to provide spaces that are open to all, gardening in common can function to exclude some and override socio-spatial relations that are less permanent (for example for other outdoor activities). In these instances, gardens oppose existing structures and transform them to the benefit of the gardens and the middle class and to the detriment of other park space uses and users.

**The second research question (2)** is aimed at analysing how the practice of commoning changes social, material, and cultural structures, and asks how it does so. Based on the evidence of other scholars that commons work against socio-spatial injustices and for emancipatory change, this research inquiry explores commoning in its transformative and emancipatory capacity. It does so by inquiring about to which extent commoning contributes to three emancipatory goals: (1) collectivity, the claims of the *right to the city* perspective for (2) autonomy, and the changes in the (3) distribution of resources, as suggested by Archer's morphogenetic approach (1995).

Based on the morphogenetic approach by Archer (1994), the analysis of paper II is centred on describing the conditioning effects of structure on agency and vice versa. The results suggest that commoning gardens in public spaces brings together people and builds collective relations in a context of neoliberal individualisation. Commoning thereby emancipates individuals by reorganising the management of urban space, and changes how the City of Stockholm is urbanising – that is, in a collective and use-value-based fashion. The practice is thereby conditioned by a current culture of 'greening the city', the positive support from the City District Administrations and the fact that, in the City of Stockholm, there is plenty of green public space available.

**The third research question (3)** inquires about the ways in which the gardeners as subjects to structural relations in public space, the gardens, and the community they enter into through collective gardening, transform themselves in the process of engaging in gardening practices. Based on the assumption that when people transform their structural environment, their action not only changes structures but has an impact on their agency as well (what Archer calls the Double Morphogenesis), paper III seconds findings by Dombroski, Diprose, & Boles, (2019) who find that commoning allows commoners to 'step up' in their agency (see also Varvarousis 2018; Petrescu 2017) – suggesting that practices have 'inner' reverberations even when they are not carried out any longer (see also Varvarousis and Kallis 2017). This stresses the importance of an ontological foundation that is based on a conceptualisation of agency as something that exists by itself but is also shaped in relation to the world. Because, otherwise, if agency is only actualised in the moment in which it enters into a relation, changes in agency (for example, identity) would not last beyond the moment in which they were changed.

Where research on the commons often puts more emphasis on the practice of commoning and its structural effects, paper III lays out a framework for analysing how commoning instigates changes in the agency of the individual commoners. Results from this inquiry show that gardening in common does not at all have the same effect on everyone: while



some remain grounded in a need-fulfilment (“*I want to garden to be more in nature or other reasons*”), others change through the commitment and become collective subjectivities with a social identity that overlaps with their personal identity. This again shows that structures condition people differently and that it is not sufficient to inquire only either the effect of agency on structure (as if agency were not constrained or enabled by structure) or vice versa, the effect of structure on agency (as if structure would deterministically affect agency in the same way for everyone).

**The fourth research question (4)** aims to understand what it means that urban gardening in the City of Stockholm is predominantly carried out by women. As subjects to patriarchal structures that are actualised in the form of subsumption under male subjects and the oppression of access to power (such as to property and political positions), paper IV argues that it is not by coincidence that it is women who take care of the public environment during their free time. It is, I argue, a reproduction of social relations of patriarchy, where women take over the role of labourers of social reproduction and production. At the same time, they do so in the public sphere, a sphere that historically, has been the realm of masculinity, production, and technology. In paper IV, I direct attention to urban gardening as a practice of a ‘reproductive fix’, a fix that is complicit in the dialectic of the reproduction of structures of capitalist patriarchy and the transformation of short-lived and consumption-based activities tradable on the market into structures of community and care. I also warn against the fact that urban gardening is complicit in ‘slow violence’, by increasingly demanding more of subjects of reproduction.

## A brief discussion of the emancipatory potential of urban gardening in common

Throughout working on my thesis and doing fieldwork, I have been trying to understand what emancipation is and then, later on, how emancipation takes place. Not all writings on emancipation have lend itself to remedy my ignorance. Just as an example, in the Dictionary of Critical Realism it says that “[e]mancipation is among other things liberation from the labyrinthine coils of the TINA SYNDROME<sup>11</sup> of anthropic irrationalism, which banishes thought of what we essentially are and could be” (Hartwig 2007, 41).

I remember organising a research seminar on emancipation early in my studies and asking colleagues what they thought emancipation was. The word emancipation did not resonate or was known to the majority. I also asked gardeners if they thought their gardening was empowering them. Some of them seemed to have a clearer understanding of what emancipation and empowerment are. One gardener said yes, absolutely, the garden and the land worked as a platform through which she could empower herself. Another said that many are “*waiting for an expert*” to make decisions for them and that the garden is a place in which one can develop confidence to act despite not being an expert. Karoline Pöggel, a PhD colleague of mine said that by organising collectively around a garden, one can make the experience of self-efficacy. Santiago Gorostiza, a friend and colleague of mine said that emancipation starts in your mind, and that emancipation is about being able to imagine what is possible.

From those engagements with colleagues, my own embodied experience and reflexivity, and by learning from the teachings of Archer (1995, 2000), from scholars of critical realism (Schudel 2022; Price 2020; Collier 2020), and from scholars of geography (Springer 2011; Harvey 2012; Lefebvre 2003) I conclude that: Emancipation is both, individual and collective – individual in the sense that someone can emancipate themselves from the structural positioning without affecting the wider structural environment, and then collective emancipation as emancipation that breaks with relations of oppression on a larger scale. Feminist scholar Coole (2015, 530) suggests, drawing on Foucault and Kant, that emancipation be “best understood in a threefold sense in which legal, subjective, and economic dimensions are combined” – meaning, “a release from legal bondage” (532), but also the development of “embodied subjectivities casting themselves loose from the weight of custom, norms, and routines” (533), and the liberation from the “particular oppressions that financial dependence, economic inequality, exploitation, workplace gendering and discipline, the sexual division of labor, and the market forces” (542).

Something that seems to exist consensus around is that emancipation starts within oneself, as an act of reflexivity, seconding what is argued in the ‘Dictionary of Critical Realism’

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<sup>11</sup> TINA being the acronym for There is no Alternative, describing formations that are “internally contradictory, more or less systemic, efficacious syntonic ... ensembles ... displaying duplicity, equivocation, extreme plasticity ... and rational indeterminacy” (Bhaskar 1998, 117)

(Hartwig 2007, 24), namely “that emancipatory praxis is *self-emancipation*” (italics in original). And, that emancipation and the precondition of reflexivity is linked to the question of agency. Here, the social theory of the morphogenetic approach by Archer and its focus on (i) structural conditioning, (ii) the reflexive elaboration of the structural environment, (iii) and the transformation of agency in the same process, together with the ontology of critical realism and the analytical dualism it suggests, has been fruitful for actually analysing how emancipation takes place and can be explained.

Critical scholars warn however against that form of emancipation which is aimed at “transcending natural limits”, referring to the “*Promethean aim*” (Hayward 1992, 3 italics in original) – a form of human emancipation that is based on the oppression of ecological emancipation. Thus, emancipation shall “challenge and absent harmful power relations” to nature (Bhaskar et al. 2010, 209). Together with others proposing the idea of ‘radical emancipation’ (see Marosan 2022), I would argue that ecological emancipation is not an act of moral benevolence, or something that is ‘nice to have’. Rather, emancipation of the human and non-human world are necessarily related – an insight rendered by radical self-reflexivity (that there is only nature because we are nature too) or by engaging with eco-feminist (Mies and Shiva 1993; Barca 2020) and eco-socialist (cf. Marosan 2022) thought.

Further, putting the process of emancipation in dialogue with dialectical theory helped me understand that emancipation is not a linear process but a highly contradictory one. Constraints and oppressive structural relations are not overthrown by merely acting or thinking differently. Emancipatory action has to work in opposition to those relations that are necessary for that relation to exist, and, have the capacity to transform them, at least partly. This transformation does not come without struggle. The insights of dialectical theory on contradictions (see Ollman 2003) helped me understand what I encountered in my research: the fact that, for example, transforming grass-based green spaces into urban gardens does not only help increase biodiversity but the sheer presence of urban gardens drives also processes of gentrification and raises housing prices. Urban gardens can be used by state institutions to push out unwanted social groups such as unhoused people, while at the same time offering residents more agency over their biophysical environment (see paper I).

But when does transformation occur? And when does stasis predominate? Archer (1995, 295) suggests that **stasis** dominates where there are high levels of social and systemic integration. Here, both social and systemic structures are (1) necessary complementary, that is, reinforcing a situation in which “*everyone has something to lose from disruption*” (Archer 1995, 220). Even though I have not used this theorisation in my thesis, I believe this situation is true for some aspects of the relationship between the gardeners and the City District Administration (CDA). Both would, for example, lose from making too harsh claims; the CDA from asking too much of gardeners, policing them, while wanting more participatory and democratic urban development, and the gardeners from demanding full rights to land by for example occupying land without tenure agreements (for example

when the CDA decides to build houses or transform the function of the space). Another situation in which stasis prevails is according to Archer the situation in which there is a (2) necessary contradiction or an incompatibility between the current systemic structures (social and cultural) and social structures. In the case of the City of Stockholm, the CDA remains at the centre of authoritative power over public space, embedded in a system that is built on the management of urban public space by a state institution within a representative democracy. Moreover, Sweden presents cultural structures of associational life, and a close connection to nature and the outdoors (von Essen, Jegermalm, and Svedberg 2015). At the same time, residents are increasingly encouraged to take over the management of urban public space claiming rights to land. Taking into account the extensive time and labour needed to establish a garden, gardeners improve the often polluted and nutrient-less soil and build a community around the garden. This contradiction between the rise of a new social structure (the gardens, the community around it, the gardening culture in the city) and the location of power placed at state institutions, not at the garden commoners' hands is a tension. What would be needed for this contradiction to be resolved would be among others, the reimbursement for the labour of taking care of the public realm (or a basic income of sorts), a permanent tenure agreement, and a systemic shift of power to the position of a commoner.

Those situations that Archer envisions as **transformative** are the ones in which there are contingent complementarities (3) and contingent contradictions (4), that is, situations in which the relations between social structures and systemic integration are contingently related. A contingent compatibility (3) is for example based on "*contingent relationships which prove highly compatible with the interest of particular groups*" (Archer, 1995 226). This could for example be the case when due to an external change, such as a war or a crop failure in one of the countries on which Sweden is food-wise dependent, there arises the need for more locally produced food. Here, the systemic need for the production of food integrates well with the existence of urban gardens and might promote the establishment of new gardens in the urban realm. Lastly, Archer describes the situation of a low system integration and low social integration as a situation of contingent contradictions able to lead to morphogenesis. Here, contradictions are not affecting those who are part of the relationship internally, or, in their essence, but rather, are external and contingent. In this situation, interests in remaining in the old structural system are low for the majority and contradictions that have emerged out of former structures can be resolved by changing social structures. This could be true for a situation in which people feel alienated in an everyday life structured by neoliberal individualised and fragmented social relations in which commoning, is taken up so as to create community. Here, neoliberalism as an ideological structure remains actualised materially intact (for example, the way contemporary housing fragments collective social relations into individualised) but socially, islands of community and commons can be established.

## Reflections

### Some thoughts about doing research and ontology

"In [Niels] Bohr's sense, a "phenomenon" is the description of that which is to be observed and of the apparatus used to obtain the observation" (Holton 1970, 1070)

"As soon as he sets up the observation tools on his workbench, the system he has chosen to put under observation and his measuring instruments for doing the job form one inseparable whole. Therefore the results depend heavily on the apparatus." (Holton 1970, 1018–19)

The quotes above originate from the realm of the quantum physics of the 1920s, making the argument that observer and observed are part of the same phenomenon. This is echoed by social scientists as well, in particular, feminist scholars (see Haraway 1988). At the same time, science, in general, claims its value for being relevant in the quest for truth *because* of its objective and non-subjective approach to truth-seeking - for being able to see the phenomenon as if, one, as a researcher, were not involved in generating the phenomenon through the apparatus (the body and mind) or the theoretical and ontological foundation. Thus, in order not to be reductive of reality, that is, reduce it to one's singular truth based on one's own subjective standpoint and apparatus, scholars hold on to and fiercely defend **objectivity**. But what is objectivity? Critical realism, the philosophy of science that informed this thesis, defines objectivity as that which "*is true independently of any subject judging it to be true*" (Collier 2003, 19). For physicist Niels Bohr, objectivity is connected to what the historian Holton (1970) refers to as **complementarity**. He suggests that truth, objectivity, or

"[...] clarity does not reside in simplification and reduction to a single, directly comprehensive model, but the exhaustive overlay of different descriptions that incorporate apparently contradictory notions." (Holton 1970, 1018)

To approach objectivity, I have used different methods that are traditional but embodied and reflexive (structured interviews with our bodies on-site; poetic inquiry to express feelings; observations with my body feeling into the field) or detached and grounded in positive science (online questionnaire; literature review). Through the different methods, I have tried to overlay descriptions of for example structural conditions that are present independent from any subject being aware of it (for instance, class contempt, patriarchy, or white supremacy), with embodied descriptions by gardeners that are individual and subjective, alongside my own descriptions and experiences from engaging in the field.

Another thinker who has influenced my work is ethnographer Michael Burawoy who holds that "[w]e cannot see social reality without theory, just as we cannot see the physical world without our eyes" (Burawoy 2009, xiii). Burawoy (2009, 71) proposes that "*it is not the problem that determines the method, but the method shapes the problem*". While he suggests that the theory used, combined with our eyes, is the actual apparatus, feminist theory (see Haraway's (1988) argument on situated knowledges) argues that there is more

to it. The apparatus is also conditioned by who I am, as a person, and the role and position I hold in society - my positionality. Although it remains unclear what the actual apparatus is and what exactly conditions what the apparatus can perceive, I believe being aware of all those parts of the apparatus is crucial for a reflexive science. I reflect on my apparatus in the following section.

## Positionality and Ethical Considerations

“To think of positionality and situated knowledges as ‘privileges’ rather than ‘deficits’ is to be aware of how one’s capacity for knowing is made possible by, and suffused with, one’s specific positioning” (Simandan 2019, 142)

Those advocating for transparency around one’s positionality assume that one’s position plays a role in the act of knowledge creation. However, there is no commonly agreed-upon method for describing one’s positionality. There is consensus that “*family history, ethnicity, geopolitical positioning, sexuality, dis/ability, religion*” (Thapar-Björkert and Koobak 2014, 51) are important parts of one’s positionality, affecting qualitative social science research. Others, such as feminist geographer Cindi Katz, demand what feminist geographer Gillian Rose describes as “*a full contextualization of fieldwork*” (Rose 1997, 310) taking into account and reflecting on power relations between researcher and researched.

At the same time, the report of positionality “*depends on certain notions of agency (as conscious) and power (as context), and assumes that both are knowable*” (Rose 1997, 311). Such a reflexive way of understanding oneself as part of the research process requires that one understands what effects one’s position has on the process of creating knowledge. It is herein, in the intimate sensitivity to how one’s own position affects the methods chosen, the research design, the conclusions drawn and the interpretations founded, that the feminist call for positionality is heard. But this requires the cultivation of reflexivity. As long as there is resistance against a science that acknowledges positionality, this capacity to be sensitive to one’s positioning will remain on the fringes. Currently, the responsibility remains with the individual and there is no systemic effort in developing that capacity in academic scholars.

Sociologist Alice da Gobbo suggests that “the issue here is whether you think that by being reflexive you can “control” for your position and thus gain as much neutrality as possible, or instead you embrace your positionality also as a source of knowledge.”<sup>12</sup> This, I would argue, is an important point, namely that the act of reflecting upon one’s positionality is already helpful because it provides more information on how one came to certain conclusions or why one was able to see what one saw. With that, I believe one is better equipped to say something about one’s apparatus, and what type of phenomena one’s apparatus is sensitive to seeing, paying attention to or engaging with others.

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<sup>12</sup> seminar as part of the “Occupy Climate Change! Summer school” at KTH, 15.04.2022

It is therefore that I want to provide an account of how I as a researcher have been ‘affecting the field’ through my positionality. The most obvious aspects that come to my mind are those that are readily observed: my gender, my position in society, and my position at university. Being white and female allowed me to feel akin to the people I interviewed (as they too shared those at least superficially observable attributes) and that I encountered at the gardens, feeling that also I could be gardening there. I felt situated in a similar position, as only if I had applied to become a member, I would have been able to participate in the gardens too. With regard to the power relations between me as a PhD student and the gardeners, I often felt that those I interviewed, held positions of power and were not intrigued by my position as a PhD student coming from the university. Maybe it was my style of interviewing but I aimed actively to see my interviewees as people who hold a lot of knowledge and who I was privileged enough to receive some information from. In general, I had the feeling that those I interviewed took my requests for interviews very seriously, wanting to make an effort to give good answers and help me to produce ‘good science’.

As I have a strong interest in herbs and plants and am gardening myself in my spare time, I also shared with those I interviewed a love for cultivating and handling plants, improving soil, and wanting to work outdoors. Thanks to my own failures with harvest and being aware of the intricacies of cultivating a plant, I was not romanticising the gardening practices but knew how much work was behind it. It may also have sensitised me to the rather precarious conditions, concerning soil quality, lack of protection from animals and vandalism and lack of long-time tenure, under which the new urban gardening takes place. Further, my own experiences from formerly spending everyday life at a co-working space in Malmö had sensitised me to social contexts in which community and conviviality are practised. Being critical of the ways in which capitalist social relations affect the earth and its living beings made me look at the commons as a subversive project that I believe is worth engaging in. This surely made me look at those who do gardening in common as ambassadors for a better world. In that sense, my view and embodied experience on commoning practices made me believe that they are worth studying them as micro islands for transformation.

Some (see Simandan 2019; Kohl and McCutcheon 2015) discuss the shifting temporality of our positionality. When I began my studies, I was more focused on adhering to traditional research methods, methods such as ‘semi-structured interviews’ that felt safer than making use of creative and more messy methods. At the same time, my positioning was privileged, being fully funded by the Royal Institute of Technology, and not by an external project – a position that is rare at Swedish (technical) universities. I actualised the freedom that this kind of structural positioning brings from the beginning, and allowed myself to veer into unknown spaces and work on contradictions and theory. Then, the onset of Covid-19 restrictions and the slow development of a burnout that resulted in a long-term sick leave caused me to reconsider my methodological approach and the way how I conducted research. Not being able to interview people in person and social interactions in general

being too exhausting, opened me to engaging with gardeners and the material I so far had collected in different ways. I started working with the methods of ‘participatory dissemination’ and ‘poetic inquiry’.

### *Ethical Considerations*

In the leaflet on ‘Good research practice’ by the Swedish Research Council (Vetenskapsrådet) from 2017 it says that “Ethical considerations in research are largely a matter of finding a reasonable balance between various interests that are all legitimate.” (page 7). For this research, this means that I had to find a balance between my interests in conducting critical research, the interests of the gardeners that participated in my studies, and, the interests of the City District Administrations and the City of Stockholm at large. Fundamentally, this meant that my research was based on voluntary participation, informed consent, and anonymity. I respected that one person I had interviewed expressed that they did not want their words to be used, and omitted their statements from publication. Unfortunately, this one interview had been especially lively and informative and I made use of the information indirectly by using it in comparison with what others said.

My interest in research that is sensitive to injustices and critical of those structures that condition them, meant that I use theories that are sensitive to intersectional aspects of phenomena studied such as race, class and gender but are also shedding light how neoliberal capitalism is shaping the urban condition. From this perspective, I have generated results that might sit uneasily with those who are engaged in gardening, the gardeners, or those who promote gardening in the City of Stockholm, the City District Administrations. Despite my awareness of the risk that my research might raise questions about the legitimacy of promoting urban garden commons in the form in which they are existing today, based on associations and volunteer labour, I deem it of importance to shine a light on aspects that are not readily observable or palatable for that matter. I hope that this research can be used to increase a sensibility for the fact that even practices that seem benign and innocent (of being able to reproduce injustices), should be subjected to critical analysis in order to allow for the development of practices that are transcending injustices. I find this especially relevant for the study of urban public space, a realm that society has defined as accessible for all.

### **Limitations of methods and how I handled them**

#### **Focus on one geographical context in the empirical study**

This research focuses primarily on collective processes of reproducing and transforming urban structures within the Western globalised context, and more specifically the context of the City of Stockholm. I did not intend to use the case of the City of Stockholm for generalisations applicable to all other contexts, but rather, I aimed at suggesting ways of understanding how change comes about, and how commoning can be understood to be part of urban social change. By using a social theory that generally proposes the inquiry of



structure and agency and their dialectical conditioning of each other, I hope that my analysis can serve a wider audience.

### Response error

I acknowledge that during the participatory dissemination, respondents might have wanted to tendentially agree with my statements, as they assume that I have studied their case thoroughly, and as a researcher have a certain authority. In order to avoid a response error, I communicated in a way, open and inviting for discussion, so as to make space for disagreement. With regards to the questionnaire, respondents can in general be unreliable about the truth of their statements (e.g. not understanding the question and answering not according to their opinion), and thus untruthful statements can lead to a response error (Flowerdew & Martin, 2005, 85) rendering the results faulty and unusable. To handle this, in the questionnaire, me and my colleague with whom I designed the questionnaire, added text boxes for those who wanted to elaborate on their responses, which many respondents did.

### Confirmation biases

One way of handling confirmation biases from my side has been to reiterate my results and discuss them with colleagues within academia who are also studying urban gardens. Another strategy that was unintended but might have allowed for more objectivity is that I have not been a member of the garden associations I studied. I tried to remain very open during the research process, seeking those opinions by gardeners that were not reflective of the majority: for example, presenting my work at a mini-conference in an academic context in Stockholm, one gardener who was there in her role as an expert, suggested me to look more into class aspects of the practice, something I had not considered until then (me being middle class and experiencing the world from that privileged perspective). I also attended conferences and seminars with a focus on critical research, where postcolonial and feminist theory helped me to see beyond my positionality.

## Conclusions

Research-wise, I conclude that the study of the common and the study of urban gardening practices benefits from a thorough **ontological grounding**. I have done so by defining urban gardens as commons, that are socially mediated phenomena yet materially rooted. My analysis benefitted from this conceptualisation in the following way: it meant that I inquired about everything that contributes to the reproduction of the gardens - the gardeners, the plants, the soil, the insects, the physical space<sup>13</sup>. I see the urban garden thus not as an object, but as an entity that emerges out of the relationships between gardeners and between humans and non-human nature. I deployed **dialectical social theory** to analyse the parts - structure and agency – and their dialectical relation to each other as the generative force that allows for the emergence of the urban garden commons and its collective subjectivities. By following suggestions of more recent common's theorisations to focus on the practice of commoning instead of the common itself (see chapter “On commons as theory”), and by drawing on Archer's (1995) morphogenetic approach which holds that practice mediates change, I focus on urban gardening as the practice that both reproduces and transforms agency and structure.

Through this grounding, I find that **empirically**, commoning practices can work exclusionary (Lachmund 2019; Roy 2018), feed into neoliberal and capitalist urbanisation (Tornaghi 2014; McClintock 2014) and thus bring about spatial- and social-structural transformations and the reproduction of neoliberal and capitalist structures and subjectivities (see paper I). This focus on contradictions, understood as ‘opposing forces within the same relation’, helped the analysis of the complexities of the relations that are reproduced and transformed through urban gardening practices. In paper IV, I show that the commoning practice of urban gardening in the City of Stockholm reproduces particularly female middle-class subjectivities, which involves the strengthening of their agency to insert right claims on public space while cementing gendered social relations of reproduction and exploiting their labour for the common good. Based on the assumption that a common is reproduced through “reciprocity in perpetuity” (Pedersen 2010, 151; see also Dardot and Laval 2019), I argue that the urban gardeners are able to establish reciprocity (giving and taking) within the common, while the neighbouring environment and the city itself enjoys the, what in environmental economics is called, positive externalities (the beauty of the gardens, etc.), without taking part in reproducing the common. I, therefore, argue that urban gardening is one form of a ‘reproductive fix’ against urbanisation based on austerity (see paper IV).

Premised upon the morphogenetic approach, I analyse how the gardener's agency is conditioned by structures (of their own garden, the collective social relations, urban space) and to what extent their agency is transformed (see paper III). I find that in many cases,

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<sup>13</sup> Technically one could have added the climate too, employing a more holistic perspective.

individual subjectivities conditioned by structures of neoliberal individualism can transform into commoner subjectivities within the collective urban gardens. This is not the case for all gardens as some gardens are based on individually assigned soil beds as opposed to the majority of the urban gardens subject of this study, which are based on collectively used and tended-to soil beds. In paper II, I argue together with Sara Borgström and Rebecka Milestad that gardening in common reproduces existing structural whiteness and middle-class agency in public spaces. At the same time, we find that the practice transforms social relations in public spaces from a passive to an active producer of public space as well as transforms public space in itself.

Lastly, I conclude that the inquiry of agency and structure benefits from a **variety of methods** that are able to examine and represent the different parts of agency and structure and their dialectical relationship to each other. Where traditional methods such as interviews provided in-depth and extensive information on possible changes that gardeners perceived themselves, the online questionnaire allowed to go beyond the constraints of definite time and resources for interviewing gardeners. Where interviews were able to create relationships between me and gardeners, as well as be sensitive to emotions and details, the online questionnaire helped me see the bigger picture by creating more data on more gardens. Observations helped to understand the embodiment of the gardener, and the vulnerabilities of being a gardener in a public space. Without the interviews, I would have not been able to go into a poetic inquiry, exploring the emotional landscape and affect conditioned by the practice. The participatory dissemination was crucial to compare my findings with those I studied.

## Suggestions for avenues for further inquiry

One tension that I was not able to resolve is the one about **collectivity**. In this thesis, I worked with a social theory that albeit focusing on corporate agency, does not explicitly inquire into collectivity. My focus has been on individuals but less on that which emerges from the commoning, the common, the community. How should this emergent entity be understood? It certainly is not the sum of its parts, the structural environment and the gardeners. Could an engagement in social movement theory have brought more clarity, or would the focus have been too much on the “crowd”, as studied for example by Rudé (1964)? A further inquiry for me would have concerned this question, of how to understand social transformation not through ‘methodological individualism’ or ‘holism’ but through ‘collectivism’, if it were, a theorisation that is able to deal with groups, community and the collective as emergent strata.

One theorisation that I believe would have been helpful to further unpack forms of injustice, and analyse potentials for emancipation, is the grounding in **intersectionality**, the ontological program that holds that we cannot think of systems of oppression – for example, patriarchy and racism – separate from one another, but only together (Yuval-Davis 2006; bell hooks 1984; Crenshaw 1993). What would an engagement with such an intersectional ontology have yielded? A deeper understanding that urban gardening is white because it is female or female because it is middle class? Rather, it would have explained that urban gardening is white and female because of power systems of racism and patriarchy, systems that discriminate against and marginalise socially reproductive practices. It would have helped explain that global capitalism as a power system works in tandem with the patriarchy that oppresses female subjectivities, and racism that oppresses other-than-white subjectivities, leading to urban gardening being discounted as a “hobby” instead of being understood as a practice that subverts those systems by producing food for subsistence. Intersectionality would have helped in understanding that neoliberalism and capitalism, as neoliberal capitalism, work together: to not only produce individualised subjectivities that find it hard to commit to collective practices and place-bound activities such as urban gardens but to also deal with the conflicts that can arise in urban gardens (*“what should we plant?”*, *“my harvest got stolen!”*, *“this other member is never doing the weeding!”*, *“this person is taking up so much time and space!”*). I believe that by being more explicit about the structural conditions, made up of intersecting power systems that discriminate against similar subjects and practices, the dialectical claim of my thesis could have been strengthened.

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