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A comparative study of two community urban farms in Vienna and Singapore

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A comparative study of two community urban farms in Vienna and Singapore



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Abstract

There is a growing academic, state and popular discourse problematicising the contemporary global food system as one is changing from 'food from somewhere' to 'food from nowhere' (Campbell, 2009). These discourses critique the ever-increasing complexity of supply chains, which geographically, cognitively and emotionally distances producers/consumers and humans/non-humans entangled in food systems. Since cities are conventionally seen as spaces of food consumption rather than production, such distanciation is particularly prominent in urban areas. Community urban farms (CFs) have developed in many cities as interventions in urban food relations. Though wide-ranging in their scope, ambitions and dynamics, CFs have long been researched largely in terms of their abilities to achieve urban transformations. However, this paradigm assumes a problematic teleology in which specific urban (food) futures are assumed to be universally desirable. There thus remains insufficient knowledge on the multiple trajectories that CF participants' aspirational and lived food relations might take, or the extent to which CF shapes these relations. Combining actor-network theory and affordance theory, this study analyses discursive and lived food relations by comparing the experiences of regular participants in two CFs, WeltTellerFeld in Vienna and Ground-Up Initiative in Singapore. As the ways in which participants conceptualise and live out 'better' food relations are uncovered as trajectories shaped just as much by societal context as CF, a broader and more nuanced understanding of how CF and food relations can interact emerges. The diversity of food relations these cases embody thus demonstrates how teleological approaches to theorising urban food relations are inadequate, instead making a strong case for the theoretical and practical potentialities of thinking about food relations along multiple, non-linear trajectories.

Keywords: actor-network theory, affordance theory, community urban farming, comparative urbanisms, discourse analysis, sensory ethnography, urban food relations

Abstrakt

Es gibt einen wachsenden akademischen, staatlichen und populären Diskurs, der das gegenwärtige globale Nahrungsmittelsystem kritisiert: als "Lebensmittel von irgendwoher" zu "Lebensmitteln von nirgendwoher" transportiert (Campbell, 2009). Diese Diskurse kritisieren die zunehmende Komplexität der Lieferketten, die Produzenten/Konsumenten Menschen/Nicht-Menschen, die in Nahrungsmittelsysteme geografisch, kognitiv und emotional voneinander distanziert sind. Da Städte üblicherweise als Orte des Lebensmittelkonsums und nicht der Lebensmittelproduktion betrachtet werden, ist diese Distanzierung in städtischen Gebieten besonders ausgeprägt. In vielen Städten haben "Community Urban Farms" (CFs) als Interventionen in die städtischen Lebensmittelbeziehungen entwickelt. Obwohl ihr Umfang, ihre Ambitionen und ihre Dynamik weitreichend sind, werden CFs seit langem hauptsächlich im Hinblick auf ihr Potenzial zur Erzielung urbaner Transformationen erforscht. Dieses Paradigma geht jedoch von einer problematischen Teleologie aus, in der bestimmte städtische (Lebensmittel-) Zukünfte als allgemein wünschenswert angesehen werden. Es besteht daher nach wie vor unzureichendes Wissen über die vielfältigen Entwicklungslinien, die die angestrebten und gelebten Ernährungsbeziehungen von CF-Teilnehmern nehmen können, und darüber, inwieweit CF diese Beziehungen prägt. Diese Studie kombiniert Akteur-Netzwerk-Theorie und Affordanztheorie und analysiert diskursive und gelebte Ernährungsbeziehungen, indem sie die Erfahrungen regelmäßiger Teilnehmer zweier CFs, des WeltTellerFelds in Wien und der Ground-Up Initiative in Singapur, vergleicht. Da sich die Art und Weise, wie Teilnehmer "bessere" Ernährungsbeziehungen konzipieren und leben, als ebenso stark vom gesellschaftlichen Kontext geprägte Entwicklungslinien wie CF herausstellt, entsteht ein breiteres und differenzierteres Verständnis der Wechselwirkungen zwischen CF Ernährungsbeziehungen. Die Vielfalt der Ernährungsbeziehungen, die diese Fälle verkörpern, zeigt, wie unzureichend teleologische Ansätze zur Theoriebildung urbaner Ernährungsbeziehungen sind. Sie liefert vielmehr überzeugende Argumente für die theoretischen und praktischen Möglichkeiten, Ernährungsbeziehungen entlang vielfältiger, nichtlinearer Entwicklungslinien zu betrachten.

Schlüsselwörter: Akteur-Netzwerk-Theorie, Affordanztheorie, gemeinschaftliche urbane Landwirtschaft, vergleichende Urbanistik, Diskursanalyse, sensorische Ethnographie, urbane Ernährungsbeziehungen

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Table of Contents

Abstract	2
Abstrakt	3
Acknowledgements	4
Table of Contents.	5
List of Figures.	7
Glossary of Terms	8
1. Introduction	9
2. Literature Review	11
2.1 A genealogy of global food relations	11
2.1.1 Global food systems as food regimes	11
2.1.2 Food and the urban	13
2.1.3 'Food from somewhere' to 'food from nowhere'	14
2.2 CFs as food movements	15
2.2.1 Contemporary food movements	15
2.2.2 CFs as sites of alternative food relations?	17
2.2.3 CFs as sites of socioecological urban transformation?	19
2.3 Thinking through food relations	20
2.3.1 Lines of becoming: affordances as emergent food relations	20
2.3.2 Visceral and vital food relations.	21
2.3.3 Pragmatic utopianism in CFs	22
2.4 The urban in community farming	23
2.4.1 Understanding community urban farming	
2.4.2 Urban farming typologies	25
2.5 Identifying a research gap	
3. Research design	28
3.1 Overview	28
3.2 Theoretical framework	30
3.2.1 Comparative urbanisms as a theoretical teleology of study application	30
3.2.2 Visceral and vital food relations as a theoretical ontology of food	30
3.2.3 Latourian Actor-network theory (ANT) as theoretical epistemology for analysis	31
3.3 Methodology	31
3.3.1 Data collection methods	33
3.3.2 Data analysis methods	35
3.4 Positionality	38
3.5 Study limitations and further research	
4. Case background	41
4.1 Community urban farming landscapes	
4.1.1 in Vienna	
4.1.2 in Singapore	
4.2 Case studies	
4.2.1 WeltTellerFeld, Vienna	
4.2.2 Ground-Up Initiative, Singapore	

	4.2.3 Justification of cases chosen	46
5. .	Discussion	49
5.1	Discursive food relations.	49
	5.1.1 A bodily relationship with food	50
	5.1.2 A spatial relationship with food	52
	5.1.3 A social relationship with food.	54
	5.1.4 Chapter summary	56
5.2	Lived food relations in the community urban farms.	57
	5.2.1 "养泥土来养菜, 养菜来养人": food-self relations	57
	Reinforcement of existing food values (WeltTellerFeld)	57
	Exploration of new food values (GUI)	59
	5.2.2 "Farming is a kind of social change": food-society relations	62
	Individualistic food advocacy (WeltTellerFeld)	62
	Collectivistic citizenship subjectivities (GUI)	66
	5.2.3 "Like a whole different world": food-space/time relations	68
	Space/time of the countryside (WeltTellerFeld)	68
	Space/time of the kampung (GUI)	70
	5.2.4 Chapter summary	71
5.3	Lived food relations in everyday life	72
	5.3.1 Metabolic flows foster	72
	dietary dependability (WeltTellerFeld)	72
	dietary diversity (GUI)	74
	5.3.2 Experiential knowledges foster	77
	urban place-making (WeltTellerFeld)	78
	personal moral development (GUI)	79
	5.3.3 Chapter summary	80
6.	Conclusions	81
7.	Bibliography	83
7.1	Text sources	83
7.2	Digital sources.	104
8.	Appendices	108
8.1	Table of community urban farming typologies	108
8.2	Relevant field diary excerpts.	111
	8.2.1 Examples of species counts conducted during field visits	111
	8.2.2 List of routine practices at GUI volunteering sessions	111
8.3	Table of interview respondents	113
8.4	Samples of participant food logs	114
	8.4.1 WeltTellerFeld	114
	8.4.2 GUI	117
8.5	Interview guide	121

List of Figures

Figure 1: Table providing an overview of this study's research design (Author's own)	29
Figure 2: Schematic diagram demonstrating how the three theoretical frames used in this study are brought together (Author's own)	. 30
Figure 3a: Flow chart showing how data sources are incorporated into the study to answer research questions (Author's own)	32
Figure 3b: Venn diagram showing how data is collected from data sources and used in analysis (Author's own)	33
Figure 4: Table showing the researcher's involvement in CF as part of ethnographic fieldwork. More details on the respective CFs can be found in Chapter 4 (Author's own)	
Figure 5: Table outlining the discourse analysis framework used in this study (Author's own)	37
Figure 6: Table outlining the sensory ethnography framework used in this study (Author's own)	37
Figure 7: Table listing the qualitative codes used in this study (Author's own)	38
Figure 8: Comparison table outlining the similarities and differences between the two cases, WeltTellerFeld and GUI (Author's own)	47
Figure 9: Annotated photographs of the WeltTellerFeld signboards demonstrating their educational strategies (Author's own)	63

Glossary of Terms

Term	Explanation	
ANT	Abbreviation referring to actor-network theory. Further elaboration in Chapter 3.2.3.	
CDA	Abbreviation referring to critical discourse analysis. Further elaboration in Chapter 3.3.2.	
CF	Abbreviation referring to community urban farms/farming.	
GUI	Abbreviation referring to Ground-Up Initiative, one of the two community urban farms studied in this paper.	
HDB	Abbreviation referring to high-rise public housing developed by the Singapore Housing & Development Board, a government agency. HDB housing accounts for more than 80% of Singaporeans' homes, with the majority owning these homes (Phang and Helble, 2025; Housing Development Board, 2025).	
Hofladen German word for farm shops, where agricultural goods produced by a farm directly in a shop on the site of farms in the German-speaking and broader world (Leal Londoño, 2011).		
Kampung	Malay word traditionally describing a typology of villages found in the Malay-speaking world. Used contemporarily in Singapore to loosely describe a (past) rural way of life characterised by community, solidarity and simplicity. In Singapore, these kampungs were gradually removed from the 1960s onwards (National Archives Singapore, n.d.; Sage Reference, n.d.).	
Kleine Stadt Farm	The largest urban farming collective in Austria, where the association is jointly managed by 20 organisations who share the farmland (Kleine Stadt Farm, 2025).	
RQ	Abbreviation referring to research question.	
Sedikit sedikit lama lama, jadi bukit	Malay proverb that emphasises the ability of small, incremental efforts to create success; literally: "bit by bit, slowly, it becomes a hill".	
冬粉 dōng fěn	A type of glass noodles eaten in Polynesia, East Asia, South Asia and Southeast Asia	
好公民 hǎo gōng mín	Name of the Mandarin-medium civics and moral education curricula used in Singapore's local schools; literally: <i>good citizen</i> .	
养泥土来养菜, 养菜 来养人 yǎng ní tǔ lái yǎng cài, yǎng cài lái yǎng rén	於人 yǎng ní tǔ lái one grows vegetables to cultivate the self. g cài, yǎng cài lái	

1. Introduction

My first encounter with community urban farms/farming (CF) was in Spring 2024, when I first moved to Vienna. During my first volunteering session, I offered to help prepare lunch, and was told to cut up the ingredients. Examining the tofu, bell peppers and chillies before me, my instinctive response was to wash and dice them for a stir-fry — I could not conceive of any other hygienic and tasty way to prepare the food. However, when the other volunteers returned from their tasks to eat, I could not tell who was more flabbergasted — the volunteers, who had assumed I would slice the ingredients dry as sandwich fillings, or I, who was horrified to see them uncomfortably sprinkle tiny cubes of (damp) tofu and vegetables on bread with mustard and eat them raw!

This was more than just a momentary instance of cultural disjuncture. After months of volunteering at several CFs, I found that the ways in which CF interacted with participants' food practices varied in many ways, shaped not just by sociocultural norms but also the vast personal networks of human and non-human actants, past and present, that each participant was entangled in. Although food was valued in similar ways — as opportunities for sensory enjoyment, health improvement, environmentally sustainable choices, human connection, etc. — the food relations that each individual could conceive of, much less aspire to or realise, might not even be within the other's imaginations, sometimes even between participants within the same CF. This diversity contradicted the abundance of Urban Studies literature evaluating CF's capacities for urban transformation in terms of materialising a checklist of fairly similar outcomes like urban food security, socioenvironmental sustainability and urban greening (e.g. Enthoven & Van den Broeck, 2021; Traill, 2023). Participants' contextualisation of their food values within unique personal circumstances, while interested in such outcomes, reflected more desultory influence of CF on food relations. Processes of exploration, negotiation and becoming with ever-shifting trajectories seemed to dominate their food relations, rather than a teleological movement towards fixed, universally desired food future(s).

Such utopic academic discourse thus fails to recognise that CF participants' food relations are negotiated not just through CF, but through ongoing relations with food, nature and society from which vastly different urban food futures might emerge. Without contextualising CF within the cities they are embedded in, it is difficult to understand what food future(s) participants aspire to create, much less how these food relations are made possible. There is thus a need to broaden our understandings of CF beyond teleologies of urban transformation — an endeavor that expands both theoretical concepts on how CF interacts with urban food relations, and increases the feasibility of knowledge exchange across the field of practice.

The dearth of Urban Studies literature on the spectrum of food futures CF participants desire served as the catalyst of this study. How might we better analyse the full extent of food futures believed to be practically possible and/or aspirationally beneficial in different urban contexts? To what extent is this range of possibilities expanded or constrained through and/or in spite of CF? To answer these questions, this study adopts a comparative approach contrasting the food relations of CF participants across two cases. Such comparison led me to my research question, which strives to analyse the multiplicity of role(s) that CF plays in shaping participant lifeworlds:

To what extent do community urban farms shape their participants' food relations?

Comparing the experiences of regular participants in two CFs, WeltTellerFeld in Vienna and Ground-Up Initiative (GUI) in Singapore, this study is centred around key concerns in urban studies, including social movements, urban food relations and community networks. The direction of this study is further refined through the following sub-questions, which correspond to the discussion chapters of this paper:

Sub-RQ 1 (Chapter 5.1): How do participants narrate the relationship(s) between food and the respective CFs?

Sub-RQ 2 (Chapter 5.2): How do CF practices shape participants' food relations?

Sub-RQ 3 (Chapter 5.3): How do participants' everyday practices shape their food relations?

2. Literature Review

2.1 A genealogy of global food relations

2.1.1 Global food systems as food regimes

Community urban farming (CF) must first be understood in the context of the historical evolution of food systems, which have shaped food relations today. Food regimes research provides a salient theoretical frame for charting these histories. While mainstream understandings of 'food' predominantly center around food as an inert, material substance; an ontological 'thing' with a self-evident existence as sustenance and economic commodity (Goodman, 2017), food regimes research highlights how such an assumption is illusory. Applying a Marxist-historicist approach to global food systems, as introduced in Friedmann's (1987)'s 'food regimes' thesis, food regimes research studies how stable periods of capital accumulation are associated with specific political economies of agricultural production and consumption. These agriculture-capital complexes have been explored from several vantage points, from national development (Friedmann & McMichael, 1989), corporatisation of food systems (McMichael, 2009), digitalisation (Prause et al., 2021) to international geostrategy (McMichael, 2020). Moreover, while agricultural scholars have challenged the original 'food regimes' concept (e.g. Tilzey, 2019 critiquing underlying definitions of capitalism) or expanded it (e.g. Béné, 2021 on the shifting role of multinational corporations; Lohnes & Pine, 2023 accounting for growing charitable regimes), the underlying 'food regimes' concept continues to be seen as a productive framework for tracing contemporary food relations. The pervasiveness of the concept in agricultural studies thus highlights how knowledge of historical milieus of capitalist commodification and agro-industrialisation is able to illuminate the rich material, emotional and symbolic lives of food (Bernstein, 2016).

Food regimes research thus uncovers a genealogy of the lives of food over various regimes of capital accumulation. This context is a crucial background for understanding contemporary food relations, positioning food systems as a paradoxical tension between historical continuity and rupture. Following McMichael (2009), who traced food regimes across three periods of stable capital accumulation, we can understand contemporary food regimes as having been shaped by historical trends that emerged from three successive food regimes. In McMichael's thesis, the first food regime (1870s-1914) established a core-periphery relationship between colonising and colonised nations through agricultural extraction. Centred around the demands of Western imperial ambitions, food production in colonies not only supported dietary consumption needed to develop European industrial workforces, but also became a lucrative area of trade where food was viewed increasingly for its exchange value over its use value (Araghi, 2003). Monocultural agriculture produced primarily to

reap profit from far-off markets, rather than for meeting basic sustenance needs, became a norm in many agricultural colonies — a core-periphery relationship that prevails today, albeit between sovereign states rather than colonies and colonists. The second food regime (1945-1973), in turn, built the foundations of the global agro-industrial complex by normalising mechanisation and Taylorist production. Taking place during the post-World War II push for modernisation, heavy emphasis was placed on agricultural intensification through industrialisation (Weis, 2007). Driven by a Rostowian (1960) belief in 'Stages of Growth', the development of primary industries like agriculture was believed to be a necessary stepping stone to improving living standards and building capacity for more capital-intensive secondary industries (McMichael, 1984), and thus a governance imperative. Hence, state policies often prioritised rapid increases in agricultural output, focusing on developing the economies of scale through farmland consolidation, via co-optation by multinational corporations (MNCs) and/or nationalisation through state collectives (Ntihinyurwa & de Vries, 2021). This agricultural consolidation, which was often enacted through smallholder dispossession and/or consolidation, laid the foundations of food systems today, where smallholders struggle to remain economically competitive relative to larger MNCs. The third food regime (1980s-) built on the agricultural consolidation of the preceding regime, creating what McMichael (2005) calls a 'corporate food regime' dominated by MNCs that increasingly control agricultural systems through vertical and horizontal expansion (Burch & Lawrence, 2009). Attributing this shift to the collapse of the Soviet Union, which gave capitalist economic models immense political weight, nations turned increasingly to free markets as sources of growth. Economic liberalisation policies implemented by many nations thus slowly fostered what Reardon et al. (2003) calls a 'supermarket revolution': producers and consumers alike becoming more dependent on price-setting by large supermarket corporations, further edging out smallholders and streamlining many channels through which food is provisioned today.

While primarily a Marxist theoretical framework focused on historical-materialism, food regimes research also traces the erosion of Bourdieusian cultural capital in food relations. While there was certainly some degree of food-related cultural and dietary change through imperialism, Friedmann (2005) argues that drastic homogenisation of food sources only took place from the second food regime of agricultural modernisation. Fierce geopolitical competition between capitalist and communist powers during the Cold War meant that modernisation was seen not just as evidence of socioeconomic development, but as proof that entire ideological systems dictating specific approaches to governance were superior. Food provisioning, which supported human sustenance and economic (re)construction in war-torn nations and newly independent Third World countries, was thus instrumental to modernisation (Harriss & Stewart, 2015; Settle & da Silva, 2024). Built on narrow ideas of 'best practices' of crop production practices, agricultural economics, nutrition and 'healthy' consumption, modernisation under the second food regime led to significant homogenisation of agricultural methods and diets (Evans & Lawson, 2020). In Third World countries, often subjected to

the conditionalities of loans from more powerful nations with their own geopolitical and ideological motives, this homogenisation was particularly severe — drastically transforming food provisioning paradigms. Such cultural homogenisation was further intensified through the practices promoted by the Green Revolution (as opposed to a communist Red Revolution), where capitalistic Western nations used geopolitical pressure and the rationalities of agricultural 'science' to transform Third World nations into ideological battlegrounds and experimental laboratories (Bruckmeier, 2024). Often serving to further state and/or private (philanthrocapitalist) agendas, as in the case of the Rockefeller International Rice Research Foundation work, these projects severely homogenised cultural practices, dictating all aspects of food provisioning from seed diversity to growing practices, as well as preparation methods and dietary habits (Smith, 2009). Under the present food regime, new trends like the 'Gene Revolution' (which employs biotechnology to achieve desired food relations), and the growing internationalisation of food provisioning (which is often accompanied by superficial cultural exchange or even cultural appropriation) deepen such homogenisation (Clapp & Ruder, 2020; Mueller & Flachs, 2022; Farrer & Wang, 2020). As local cultural knowledge and resources are lost to time under globalisation and agricultural market consolidation under corporations, the very foundations of global food relations were homogenised — from the genetic to epistemological. Tracing cause to effect, food regime research highlights the vast and historically-entrenched transformations of food systems which CFs are responding to.

2.1.2 Food and the urban

A genealogy of past food regimes helps us understand that CFs are entangled in long histories of transformation, where food has taken on different meanings and values as it becomes (dis)embedded in different sociopolitical and economic structures. Urban food systems, in particular, are key to appreciating multiscalar influences on food system transformations. It is widely accepted that urban areas have been historically dependent on resource imports from geographic spaces far beyond city boundaries, including food (Reisman & Fairbairn, 2021). Since agriculture is land-intensive and generates minimal profits per land unit, cities rarely favour food production, instead prioritising more economically efficient land uses (ibid.). Moreover, in the contemporary transnational global food regime, the extensive operations of supermarket corporations allow urbanites to be provisioned with affordable food from distant places, such that localised urban food production is generally less economically efficient than reliance on more global or regional food sources (Tornaghi & Dehaene, 2020). Hence, urban food relations are predominantly characterised by consumption, where urban dwellers purchase and eat food provisioned by others elsewhere.

Following Brenner and Schmid's (2011) seminal planetary urbanisation thesis, the urban can thus be interpreted as "a complex interplay of related but contradictory processes marked by the uneven development of capitalism [beyond city boundaries]" (p. 591), where distant people, spaces

and resources are entangled with urban life. Drawing from Marxist theories of urban metabolism, planetary urbanisation scholars highlight how urbanites not only consume material resources produced elsewhere, as mentioned in the previous paragraph, but also displace undesirable outputs such as waste and pollution to spaces beyond the city (Angelo & Goh, 2021). Applying such a metabolic lens to urban food relations highlights how cities are not just consumers, but also simultaneously producers of waste and pollution derived from food provisioning — from cultivation, to refining processes, transport and disposal (Bhadouria et al., 2023) — which must be disposed off somewhere. The urban is thus not just a space for the localised outworkings of global food regimes, but also shapes global food regimes in turn through the impact of urban food relations on economic, environmental and sociocultural issues elsewhere.

2.1.3 'Food from somewhere' to 'food from nowhere'

With economic globalisation and transnational production spreading the process of food provisioning across multiple geographic fronts to maximise profit, Campbell (2009) has criticised food relations as having moved from 'food from somewhere' to 'food from nowhere', particularly in predominantly non-food-producing spaces like cities. This idea of 'food from nowhere' can be understood from several angles. Practically, the growing complexity of supply chains renders them ever-more untraceable, as even agricultural products are disembodied into separate parts and transported to distant locations for further refining into diverse goods (Conti et al., 2024). For example, Blanchette (2020), studying the pork industrial complex in a small Midwestern town, highlights how the perfectly uniform, standardised pig-turned-pork of food corporations is, in actuality, a multitude of human-hog relationships. Modern hog meat is thus not just 'pork', but an industrial resource used to make leather, lubricants, adhesives and many other non-food products. It is thus often unclear what agricultural products foods were made from, much less where they came from or who/what was involved in their production (Chatterjee & Subramaniam, 2021). Cognitively, such ambiguity limits one's knowledge of food relations beyond the immediately visible — which, for the urban dweller, is often only sparse packaging information on food sources and general knowledge about food systems, rather than knowledge of specific supply chains or actants (Schermer, 2015). Over time, this cognitive and practical information scarcity can create an emotional detachment from wider food relations that one is neither aware of nor tangibly impacted by (Levkoe et al., 2020). Consequently, 'food from somewhere', traceable to simpler, more localised supply chains in earlier food regimes, has slowly become 'food from nowhere' as apathy towards broader food relations beyond the immediately-evident increases with knowledge paucity (ibid.). As supply chains grow more elaborate, actants become increasingly alienated from each other in space and time, unable to perceive or even conceive the far-reaching consequences that ripple out of actions across food systems. Hence, at least as experienced on human timescales, urban food becomes not just 'from nowhere' but 'goes nowhere' as well in food imaginaries.

To re-situate and re-orient our food relations, critical food studies have called for a reanimation of food in theory and practice. Scholars argue that foods can no longer be treated as ontological, static entities, but should be recognised as lively, vibrant actants that actively participate in and shape other entities and relations, both human and non-human (Goodman, 2017). Applying the work of anthropologists (e.g. Tsing, 2015), geographers (e.g. Haraway, 2016) and philosophers (Bennett, 2010) who refuse to see 'things' as pre-existing objects, critical food scholars push for an understanding of food as always-in-the-making, constituted through an ongoing series of transformations that occur through interactions with other actants. Such a 'vibrant' perspective on food allows one to trace its evolution from 'nature' to 'agriculture' before becoming 'ingredients' prepared as 'food', as well as the diverse iterations of such transformation that emerge under situated assemblages. For instance, Nally and Kearns (2020) trace the history of the potato, identifying its many lives: from an instrument of South American state taxation of peasants, to its repurposing by Spanish colonisers as the calorific basis sustaining forced labour, and its material strengths and limitations as a tool of Irish resistance against English rule. In such a study, a potato is never an inanimate 'thing', but is instead an active agent in the making and un-making of power. Thinking through food relations in terms of the 'lively' thus provides a conceptual pathway for reanimating 'food from nowhere', revealing previously unrecognised connections so we may find ways to reimagine and rebuild our food relations for the better.

2.2 CFs as food movements

2.2.1 Contemporary food movements

Community urban farming (CF) is one such avenue to reimagining food relations. CF has been recognised as a phenomenon since the late 1970s, when accelerating urbanisation and resultant increases in population density and living costs popularised urban food production initiatives as a way to tackle food insecurity (Bailkey & Greenstein, 2024; Marzuki & Kais, 2020). CFs can thus be positioned as part of a longer heritage of food movements (Blättel-Mink et al., 2017). These movements tie geographically distant urban and non-urban places together to enact change — a context that is critical to understanding the discourses, practices and language that often populates CFs. Hence, before exploring food relations in CFs, it is essential to situate them in a broader history of contemporary food movements.

Food-related movements have long existed, from uprisings during famines (Davis, 2002) to farmers' protests (Simonow, 2020). However, the holistic focus of contemporary food movements on

changing food systems only coalesced in the 1970s, in the context of environmental debates regarding pollution, environmental degradation and resource insecurity (Vermeulen et al., 2020). These early food movements were generally divided into two areas of concern: food consumption and production. Early food consumption movements were more environmentally oriented, focusing on consumer welfare. Texts such as Carson (1962)'s Silent Spring, which exposed humans and biodiversity alike as victims of chemical pollution, challenged human/nature separation and tied humans and nature together as a single ecosystem. Such emphasis on human/nature interconnectedness added impetus to food movements resisting intense chemical usage in commercial agriculture through a clear connection to personal health, as well as a sense of environmental solidarity (Heinze, 2023). Similarly, early production-centred movements were driven by discourses of social solidarity and human rights. Drawing on ideas of social justice and postcolonial discrimination to assert the rights of subaltern groups, these movements were grounded in ethics of universal equality and care. For instance, La Via Campesina, a collective of neo-peasant and indigenous food producers and those who stand in solidarity with them, assert a right to food production grounded in the local knowledges and the needs of producers, rather than the needs of capital (Borras Jr, 2023). These food movements, which sought systemic change to transform food relations, represented a distinct shift from previous movements which had less emphasis on building solidarity with those not directly affected and focused more on immediate solutions to localised problems.

The United Nations Brundtland Report, published in 1987, further strengthened this holistic approach to food movements through its promotion of the 'sustainability' concept (Hajian and Kashani, 2021). The Report, which established a formal definition of sustainability and advocated it as the solution to tackling super-wicked problems like resource insecurity and climate change, provided a way for thinking about food systems that drew consumption- and production-oriented movements closer together through a focus on future-readiness. Nonetheless, while most agree on the Brundtland definition of sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report, 1987), it is important to note that there is disagreement regarding how such sustainability should look in practice (Kirkby et al., 2023). While some movements call for radical revolution to transform the global food system (Suarez & Ume, 2024), many others seek to exist alongside mainstream food systems, focusing instead on 'inside-out', 'bottom-up' transformation (Ergene & Calás, 2023) as a means of enacting lasting change. Furthermore, while some movements are more activism-oriented in the manner of 'new social movements' which build connective identity and advocacy through intersectional alliances (Alvarez et al., 1998), others are more focused on developing alternative sociomaterial systems, such as in the case of 'alternative (agro-)food networks' (Psarikidou, 2022).

More recently, as environmental and social justice have been increasingly recognised as two sides of the same coin, food movements have worked to intersectionally reconnect actants across

multiple scales and areas of concern (Scholsberg, 2020). These contemporary movements increasingly recognise that issues faced at one end of a food system are deeply intertwined with dynamics elsewhere in both food and non-food systems. This approach is not unique to food movements, but one that reflects a broadening solidarity across civil society movements in the face of ever-more complex and interconnected global problems, from inequality to climate change and violence (ibid.). Such 'scale-jumping' (Smith, 1996), moving between different scales in practice and discourse, has encouraged an outpouring of food movements: 'Slow Food' valuing local/traditional cooking and growing practices (Rosa et al., 2022); 'Organic Food' focused on minimising environmental degradation in agriculture (Fernandes & Saraiva, 2022); 'Fair Trade' to protect labour rights (Ribeiro-Duthie et al., 2021); 'Food Justice' to tackle food equity (Ben-Othmen et al., 2023); 'Short Food Supply Chains' (Marsden et al., 2000) to mitigate food related emissions — a diversity in terminologies, alliances and alignments (including with social movements not explicitly focused on food, like conservation, humanitarian aid or social justice) that highlights the variety of challenges that have arisen in response to site-specific food relations. Moreover, in the wake of the COVID-19 pandemic (Gandy, 2022), a confluence of wars, climate disasters, zoonotic disease, mobility restrictions and heightened trade protectionism resulted in unexpected food shortages and panic buying in cities worldwide (Loker & Francis, 2020). Thus, building more resilient urban food systems has increasingly been viewed as an imperative for cities, renewing academic interest in urban food relations with greater urgency.

Although such an explosion of ideas renders it analytically difficult to precisely identify what constitutes a food movement, the aforementioned movements all seek to forge "forms of food provisioning with characteristics deemed to be different from, perhaps counteractive to, mainstream modes" (Tregear, 2011: 419). Food movements can thus be defined by, firstly, their opposition to "more standardised industrial mode of food supply" (Renting et al., 2003, p. 394), and secondly, their commitment to building diverse, alternative food relations. Regardless of the movements' scale(s) of intervention, whether global systemic overhaul or individual changes in habit, food movements can be understood as the means by which we may collectively explore ways to reimagine our relationship with food and its ties to space, place and time.

2.2.2 CFs as sites of alternative food relations?

CF's specifically urban geography lends it certain clear commonalities. Firstly, as urban formations, CFs exist in a discursive context where mainstream food provisioning is reliant on food 'food from nowhere' (Campbell, 2009): produced in far-off, often little-known geographical locations. Hence, CFs becomes a means by which local communities can transform this 'nowhere' into 'somewhere' through engagement with places, people, processes and things involved in food provisioning (Enthoven & Van den Broeck, 2021). Secondly, 'localness' is a pervasive idea in these

CFs as a utopic metonym for 'community' and as an accessible space/scale for individual engagement. While the 'local' is a political term full of ambiguities and subtleties in situated contexts (Harvey, 1996), in CFs it remains an ideal that orients and grounds participants in urban spaces, places and scales tangible to individuals and communities. Whether as a social identity forging connections to people, or as a commitment to place and/or the natural environment, the idea of 'localness' grounds CFs as a sphere for action where food relations, values and beliefs can be enacted (Goodman et al., 2012). By supporting local production in various ways, from community-supported agriculture, where people can volunteer at local farms (e.g. Jonas, 2021 on US cities), to community-led farm collectives, where locals and/or local organisations jointly own and manage farmland (e.g. Barghusen et al., 2021 on Dutch agricultural collectives), possibilities for forging new material, cognitive and emotional food relations emerge. Thirdly, the very diversity of what CFs have become is testament to CFs' flexibility and openness to change. While creating definitional ambivalence as to what exactly characterises a CF, such diversity strongly reflects CFs' common adaptability as they confront complex, situated challenges (Leder et al., 2019). Some CFs may seek radical systemic changes that can replace mainstream capitalist food markets, while others provide alternatives that can exist alongside the capitalist status quo, working through and between the gaps of existing systems to enact cultural change (Vincent & Feola, 2020).

Nonetheless, it is important to note that CF participation does not necessarily always represent a fundamental change in human-food relations, whether for better or worse. Consumers may simply be swapping one type of commodity for another (e.g. non-organic food for organic food) without rethinking underlying socio-environmental relationships of production and exchange (e.g. Jaffe & Gertler, 2006 on North American food systems). In such cases, the CF label may become more of a marketing tool than a form of urban transformation. Similarly, CFs may serve as spaces for uncritical reproduction of existing cultural values rather than platforms for exploring new values. For instance, Goodman et al. (2012) highlight how US CFs helped valorise 'community' and 'localness' as inherently good without interrogating what those concepts meant in the US context, often creating exclusionary spaces along lines of race and class. Unreflexive and uncritical lauding of CFs thus denies the existence of the ongoing macro- and micropolitics in every CF, and presents CFs as static, aspirational benchmarks of success (Diekmann et al., 2020). This is detrimental to academic, political and popular discourse, for in swapping out one ideal for another, there remains a single ideal-type to aspire towards, suggesting a linear trajectory of success. Rather than being focused on 'perfectionist' best-case scenarios and goals, more reflexive understandings of CFs are needed: where 'change' and 'improvement' comprise ever-contested ideas, processes and outcomes (Vincent & Feola, 2020). It is thus crucial that CF be established neither as utopian ideal or dystopian reproduction of the status quo, but as both and neither: assemblages that are always-in-the-making.

2.2.3 CFs as sites of socioecological urban transformation?

As emergent spaces, CFs' efforts to cultivate alternative food relations are commonly conceptualised as socioecological urban transformations in progress. The majority of Urban Studies literature reflects a sense that these transformations are conceptualised as teleological trajectories either in the replicability of practical strategies across scales, or in their aspirations towards fixed ends (Kreinin, 2020). Importantly, there is no complete consensus on the socioecological transformations necessary to enact positive change, or how these transformations might be practically achieved (Tornaghi and Dehaene, 2020), particularly in urban areas where intense, competing demands on land use further complicate priorities for socioecological transformation (Kingsley et al., 2021). These conceptualisations vary in their ambitions — from radical global change akin to a 'new' Polanyian 'Great Transformation' (Brand et al., 2020), to more gradual 'transitions' denoting interconnected shifts at a range of scales (Vermunt et al., 2020) — and in their tactics, which range from 'agroecology' applying ecological principles to farming (Andersen et al., 2021) to 'commoning' through creating shared interdependencies (Dombroski et al., 2023). However, work on socioecological transformation holds in common several characteristics: 1) a rejection of the status quo; 2) a conviction that a rewriting of existing social and ecological systems is needed to enact lasting, positive change; and 3) a belief in an ideal set of socioecological relations that are universally desirable in the *longue durée* (Braun, 2018; Ehrnström-Fuentes & Bieze, 2023; McPhearson et al., 2022).

This approach refuses to recognise the possibility of inherent tensions between socioecological relations across spaces, scales and domains of intervention, and instead views these tensions as evidence of incomplete socioecological transformation (Vermunt et al., 2020; Langemeyer et al., 2021; Ehrnström-Fuentes & Bieze, 2023). As Bouzarovski (2022) has noted by looking at Green Deals, the language of socioecological transformation is often rife with contradictions and is anything but egalitarian in its notions of justice. Socioecological transformations literature thus focuses on achieving the common 'good' assumed to benefit everyone in the long run, without questioning the epistemologies or trade-offs through which this 'good' has been formulated. Hence, CFs, often viewed through socioecological lenses like 'nature-based solutions' (Kingsley et al., 2021) 'degrowth' (Strenchok, 2020) or 'commons' (Ng. 2020; Dombroski et al., 2023), are generally interpreted as moving (successfully or unsuccessfully) towards static visions of more convivial worlds (Rutt, 2020) — lively and emergent in their strategies and realised outcomes, but unrelentingly fixed in their end goals. Studying CFs as socioecological transformations is thus a trajectory that only becomes teleologically apparent in retrospect, when precise transformations clearly tied to constructed milieus. The language of socioecological transformation, while effective in retroactively charting socioecological developments or identifying latent potentialities for transformation, provides a limited conceptual vocabulary for encapsulating the liveliness of CF food relations, which move in multiple trajectories as they are ever in-the-making.

2.3 Thinking through food relations

2.3.1 Lines of becoming: affordances as emergent food relations

Ingold (2021)'s 'lines of becoming' provide a salient conceptual frame for keeping us open to emergent food relations and ways of being in the world. Referencing Deleuze and Guattari (2004), who claim that "we are composed of lines ... bundles of lines" (p. 223), Ingold suggests that 'things' can only be understood through movement along multiple 'lines' of change — linear in the sense of there being a finite number of potentialities that can materialise, but non-linear in the possibility that 'things' might be moving in multiple trajectories. This metaphor employs a conception of 'things' that is emergent, evolving along pathways where what comes before and after are part of what we perceive in the present. Loosely comparing knowledge production to a bridge over a fast-flowing river, Ingold claims that transversal thinking, which moves from objects and images like moving from start to end of the 'bridge' is often favoured in academia. This point-to-point preference for transversal thinking comes at the expense of longitudinal thinking, which he compares to the fast-moving river flow of materials and atmospheres (ibid.). This transversal emphasis restricts our ability to generate knowledge that captures the emergent nature of 'things' in-the-making, leaving only artefacts in which the full nature of a 'thing' remains elusive.

To think more longitudinally in scholarly practice, many researchers, including Ingold, have employed Gibson's concept of 'affordances'. First coined in 1979, Gibson, an ecological psychologist, based the idea of 'affordances' on what an environment can offer an animal — the implication being that not just perception but also the range of actions possible are determined by an environment (Hincks & Powell, 2022). It has since been adopted as a term by scholars from fields across the social sciences and humanities to articulate how possible relations between actants unfold in multiple trajectories mediated and constituted by the intertwining of perception and action (Chong & Proctor, 2020). For example, Petersen (2018) relates how affordances of sensory-aesthetic pleasure and social contact emerge from front gardens in Copenhagen and their caretakers through the people and biodiversity they encounter. Nonetheless, scholars remained long divided on the precise nature of affordances. Some believed affordances were 'out there' as universally existing properties for actants to exploit, while others believe that affordances are properties that form as a result of engagement with actants (Hincks & Powell, 2022). More recent work has since reconciled these perspectives. Turning to a relational view of affordances, recent work has suggested that affordances do not arise directly through interactions between actants, but are continually constituted through the mosaic of

relations within a given assemblage (Wilkinson & Chemero, 2024). In this view, affordances can be used to study the relations that different subjects, objects and activities permit or support, as well as the relations constrained or prevented (Nally & Kearns, 2020). To Tsing (2015), for instance, in her seminal study on the 'world-making' (p. 121) capacities of matsutake mushrooms, these mushrooms simultaneously create and obstruct affordances of precarity and ecosystem transformation, imbuing them with a 'relational force' (p.103) that draws various human and non-human actants together in new configurations. Affordances are thus shaped by far-flung, multiscalar interactions across actants, both human and non-human, that give an assemblage its form (Wilkinson & Chemero, 2024). Hence, under a relational view, it is both impossible and irrelevant to debate whether or not affordances exist independent of interaction between actants: what is imperative is an understanding of the forces that shape these affordances, the 'bundles of [multiple] lines' (Ingold, 2021) from which affordances emerge as momentary instances of ever-shifting relations-in-the-making.

2.3.2 Visceral and vital food relations

Goodman's (2016) twofold categorisation of food relations as either 'visceral' or 'vital' is an approach that maps well onto the artificial differentiation between 'perception' (the state of the actant apprehending the affordance under study) and 'real elements' (the actants in a given assemblage) for greater analytical precision (Wilkinson & Chemero, 2024) often employed by scholars studying affordances. Human-centered 'visceral' studies, focused on personal, embodied encounters with food, highlight the role of perception in the emergence of affordances, while multicentric 'vital' studies, which see humans and food as lively, co-constitutive relational entities (ibid.), capture the broader dynamics of an assemblage, drawing attention to the contributions of other actants.

'Visceral' studies of food relations draw from multitudinous bodies of theory, from feminist theories of embodiment (Hayes-Conroy et al., 2020), to poststructural approaches like more-than-representational theory (Watson & Cooper, 2021) and phenomenology (Donato & Monsurrò, 2024). With conceptual vocabularies dealing with affective, emotional and sensory experience, a key body of work in 'visceral' food studies looks at how the boundaries of human bodies are blurred and unstable. Instead, 'visceral' studies follow more fluid, liminal conceptions of the self/other, subject/object, where these categories are not bounded entities but impressions that can merge in ways that defy clear diagnosis of where one ends. However, 'visceral' studies are not solely centered on the (human) body as a site for analysis: instead, the individual embodied experience is seen as a locus where broader atmospheres and structural forces become evident. For instance, Shee (2023) looks at how food consumption in Singapore can be seen not just in terms of economic access or government regulation, but also through how emotional and sensory relationships shape food procurement practices and politics.

Conversely, 'vital' studies of food are more interested in the impact more agential understandings of materiality can have on our conceptions of food relations. While 'visceral' studies focus on how being affected shapes our food relations, 'vital' studies look at recovering and repurposing the (socio)materialities of food, humans, and humans-food relations (Goodman, 2016). Grounded in Bennett (2010)'s seminal text, which rejected Hegelian subject/object dualisms in favour of 'vibrant matter', 'vital' studies encourage us to look at all entities' common 'liveliness' and dynamism, where the agency and form of various entities are constituted by the interplay of different interactions. Such agency is particularly evident in agricultural genetics, where work on how food (meat) is 'made to matter' figuratively and literally (Evans & Miele, 2012) highlights how non-humans actively shape our meat. Esturiao and Fischer (2022), for example, suggests that we view meat (see Gaard, 2017 for a related discussion on plant life) through the lens of Foucauldian biopolitics, which examine how living beings are governed not just through the exercise of power on individual bodies, but also through subjectification of populations to decide how beings are 'let [to] die' and 'made [to] live' (Emel & Neo, 2015), further influencing both the humans involved in these decisions and those impacted by agrarian decisions. Similarly, Blue and Rock (2011; 2020) how social, economic and industrial norms continually shape the physical and biological materials that constitute our food — a 'trans-biopolitics' that shapes us in turn, as seen in more recent zoonotic/epidemiological studies on human-plant-disease assemblages produced by ever-expanding urban resource frontiers and global markets (Hetherington, 2020), but also in studies of cultural values that foods may take on as a result of their production processes (e.g. Gotoh et al., 2018 on the Japanese beef industry). By thinking through human and non-human bodies, these studies lead us to other relations, reminding us that human-food-society-nature relations are not fixed. Not only do sociocultural norms shape the standards by which we evaluate 'food', the very makeup of these 'foods' is shaped by societal assemblages.

A twofold categorisation of food relations as 'visceral' or 'vital' thus not only allows us to identify and analyse specific perceptions and real elements that contribute to the making of an affordance, it also identifies different modalities of affordance pertaining more to sensory and cognitive input respectively. When researching specific community urban farms (CFs) as in this study, such analytical distinctions thus provide a richer, more nuanced conceptual vocabulary for translating lively, emergent food relations into written text.

2.3.3 Pragmatic utopianism in CFs

Consequently, this study thus argues for 'pragmatic utopianism' as a way to avoid viewing CFs through teleologies of utopic and/or dystopic transformation. Pragmatic utopianism rewrites the function of utopian thinking, rejecting linear teleologies towards ideals in favour of "fusing dreams and the practicality of action" (Jaster, 2021: 545). By redefining utopian thinking as a sort of

anti-anti-utopianism, where hope might be lived out realistically by acknowledging and working with or between existing constraints, pragmatic utopianism incorporates common critiques of utopianism into its approach (Inch, 2021). This avoids the challenges of utopic thinking identified by anti-utopian thinkers, which condemn utopianism for being mired in a long tradition of over-optimism that is unrealistic at best, or dangerous erasure of minority experiences and perspectives at worst (Papastephanou et al., 2024). Instead, pragmatic utopianism follows in the footsteps of philosophers like Jameson (2007) and Levitas (2013) who see utopianism as a means of "estranging ourselves from the present" to gain new insights. Hence, pragmatic utopianism lacks the radical, idealistic aspirations of utopianism, instead offering a more realist stance that manifests as a willingness to make concessions in the face of non-ideal conditions (Ginn & Ascensão, 2018).

Pragmatic utopianism also rejects the existential stability of utopia. Instead of conceiving of utopia as having a fixed form or fixed existence in the sociomaterial world, this study follows Traill (2023) in seeing pragmatic utopianism as an "ongoing practice and ... horizon" (p. 5). Referencing Cooper (2013)'s writings on everyday utopia, where utopianism is experienced as evanescent moments rather than a stable atmosphere, mundane practices become the means by which utopian ideals are not just realised, but also tested for feasibility against the ever-changing realities of lived experience. An emphasis on evolving practice is thus intrinsic to the exercise of pragmatic utopianism — a 'pragmatic' approach cannot exist without attempts to refine both utopian ideals and the means by which the ideals are achieved, drawing new connections in each iteration (Claeys, 2022). The lens of pragmatic utopianism thus provides new ways for thinking about food relations in the urban; a sort of 'counter-city' that shifts attention away from capitalocentric readings without necessarily constituting opposing alternatives (Dombroski et al., 2023). By 'staying with the trouble' without falling into pure utopia/dystopia (Haraway, 2018), pragmatic utopianism remains open to exploring how alternative narratives, subjectivities and practices might provide resources for productive interventions, even if these alternatives do not constitute fully-formed solutions.

2.4 The urban in community farming

2.4.1 Understanding community urban farming

While there is no established definition of what 'counts' as community urban farming (CF), this study aligns the term with two bodies of literature: on 'community' and 'urban farming'. The former focuses on 'community' as a contested term, where definitional boundaries in both theory and practice shift constantly. The latter focuses on farm spaces in urban areas. Both bodies of literature are discussed below.

'Community' has long been understood in academia as a contested designation. Traditionally, 'community' has been defined in terms of the people residing within a spatial area or engagement with (a) given institution(s) or civil society group(s) (Bell & Newby, 1971; Putnam, 2000). However, it is contemporarily studied more loosely in terms of self-identification: a situationally contingent definition that accounts for diverse sense(s) of belonging (Zanbar, 2020) and can even account for non-humans as having a stake in — and thus part of — communities as actants (Miller, 2020). Drawing from commons research, this working definition of 'community' moves away from clear rationalities of resource management and/or sharing via fixed institutions and rules in Ostrom (1990)'s seminal formation to embrace community as comprising multifarious 'practices of commoning' where community is built on simply perceiving that there is something held collectively, tangibly or intangibly. As Altmann (2020) suggests, there are social and cultural functions to commoning, and not just material-distributary or proprietary: it is a form of relationality and not just a mode of governance, something that has been long recognised by indigenous studies but is, perhaps, less established in urban studies (Yates, 2021). Hence, this represents an academic shift towards studying processes of commoning, rather than verifying whether a formation is 'truly' a commons or not (Gibson-Graham et al., 2016). CFs can thus be understood as communities that are 1) functional (collective management of the geographic farm space through participation in farm activities); 2) social (identification as part of the same group); and 3) emotional (relationality between self, other participants, biodiversity, land and other non-humans that are part of the CF).

'Urban farming' comprises a wide range of practices shaped by the specificities of each city's relationships with agriculture and food. Research on urban farming comprises both sites of agricultural production within urban areas (e.g. Kirby et al., 2021; Mir et al., 2022) and agriculture where urbanites are involved in farm activities (Cifuentes et al., 2021), such as in Community-Supported Agriculture which often involves city dwellers contributing to non- and peri-urban agriculture (Vidal Merino et al., 2021; Parrot et al., 2024). Urban farming is thus definitionally separate from other alternative agri-food systems such as food cooperatives where urbanites support non-urban food producers in their food purchases (Vincent & Feola, 2020). Moreover, the focus on food production in urban farming differs from urban gardening, which may also involve growing edible plants, but is more focused on growing for beautification or recreational leisure (Ginn & Ascensão, 2018). Hence, urban gardens may overlap with urban farms when food-growing is its predominant occupation, but also comprises spaces that are drastically different from urban farms in their characteristics and motivations. In sum, urban farming involves not just commercial or emotional relations with agriculture, but involves material, land-based placemaking through occupation of city space and/or urbanites' physical labour in food growing. In this study, given that the cases examined are intra-urban farms, 'urban farming' will be taken to refer to farming taking place within city limits.

2.4.2 Urban farming typologies

Although the realities of urban farming involve a wide spectrum of complexities, the academic research available can be categorised into different typologies (See Appendix 8.4). The typologies, listed in a table in Appendix 8.1, reflect different taxonomies, and include (non-exhaustible) examples encountered in the process of conducting this literature review. These typologies are non-categorical and are often employed simultaneously to describe a given farm as a combination of composite variables.

There is a significant body of academic literature on urban farming in Europe, spanning a range of disciplines from Urban Studies to Cultural Studies or Food and Agricultural Studies. While historical studies tend to focus on the elimination of 'unhygienic' urban farming in pursuit of the orderly, modern city (Gandy, 2006), ironically, contemporary urban studies tends to view urban farming through the lens of urban beautification and liveability. For instance, Kirby et al. (2021) suggests that urban farming has been viewed strongly as contributing to city well-being. As a multifunctional land use combining food security, environmental sustainability, recreation and psychological well-being, these conceptions align urban farming with other green spaces like parks, which have long been celebrated as essential to European cities, from utopian imaginings like Howard's Garden City (Blazy et al., 2022) to the contemporary Green Cities Partnership policy agenda by the EU (UAEU, 2024). This emphasis on urban farming as crucial for its role in enhancing quality of life also translates into the discursive narratives surrounding CF, where CFs are often studied in terms of their role in improving urban liveability through forging symbiotic relations with community and nature (Zareba, 2021). Additionally, CF in Northern Europe is closely associated with community or allotment gardening — initially, allotment gardens were established in rapidly growing 20th-century industrial cities to enable low-income groups to grow their own food (Gregis et al., 2021), and persisted over time with a growing focus on recreational use over production (though often existing in hybrid combinations) as these cities grew to become affluent (Breuste, 2010). Specifically, Ponizy et al. (2021), charting the evolution of these spaces in European cities where they were a prominent feature, notes that CF or allotment gardening with a focus on food production has had a strong presence in the UK (since the 18th century); Germany, France and Poland (in the 19th century); Austria (by the turn of the 20th century); Estonia (post-World War II); and Portugal (21st century). Academic research on CFs today is thus firmly positioned within the realms of environmental stewardship and social well-being rather than in terms of agricultural necessity, even if the CFs do serve productivist functions as well (Ilieva et al., 2022).

Conversely, academic interest in Southeast Asian urban farming is a more recent development. While Southeast Asian cities often followed a similar history of eliminating urban farming as part of modernisation, as Nor et al. (2021) have noted in the cases of Manila, Jakarta and

Kuala Lumpur, such change is both partial and ongoing, particularly as the drive towards modernisation took place unevenly and gradually in the second half of the 20th century, in the midst of and following decades of regional conflicts left by decolonisation processes (Padawangi, 2022). As such, the Southeast Asian relationship with urban farming and CF is far more varied, reflecting the vastly different paths of urban development and governance taken by the nations. The urban farming landscape is thus not dominated by particular forms, and instead comprises hybrids ranging from makeshift appropriations of space to premium farming plots, from windowsills to large land tracts, growing foods from a wide range of cultures. Moreover, since global research on urban farming is heavily dominated by Western universities (Srinivasan & Yadav, 2023), there has been a dearth of research on urban farming in Southeast Asia. Salim et al. (2019), in a scan of publications on urban farming in Southeast Asia (1991-2018), noted that there were few publications until 2014, when the annual number of articles more than tripled to 16, and has largely remained around that range ever since. Small-scale urban farming (including CF) comprises a small proportion of these articles at 9; yet this is the second highest number of articles on any given theme in the dataset. Although Singapore remains an exception, with a significant number of articles published on urban farming (e.g. Mok et al., 2020; Ng, 2020; Jalais, 2021), there are few articles focused on CF over technological innovation or governance (Nicholas & Harré, 2024). Additionally, while van Veenhuizen and Danso (2007) found that there were 7 million engaged in urban farming in East and Southeast Asia, there were no recent estimates available for Southeast Asia or CF or other community-based forms of agriculture like community gardening, making it difficult to approximate the pervasiveness of urban farming based on academic sources.

Given that the urban population in Southeast Asia is estimated to reach 729 million by 2050 at an urbanisation rate of 60% (UNDESA, 2019) with Jakarta, Manila, Ho Chi Minh, Hanoi and Bangkok having already reached populations of more than 10 million since the UNDESA survey (Badan Pusat Statistik Jakarta, 2021; Philippine Statistics Authority, 2020; General Statistics Office of Vietnam, 2020; Statistical Yearbook Thailand, 2024), it is clear that rapid rural-urban migration and expansion is taking place, with rural agricultural workers increasingly moving into cities. Moreover, while academic discourses on European CFs tend to focus on recreational place-making and education, with food security as a secondary contribution, urban farming discourses in Southeast Asia place greater emphasis on CF contributions to food resilience. In both Southeast Asian countries striving to achieve food self-sufficiency (e.g. Indonesia; the Philippines) and those seeking a hybrid approach of diversification and increased domestic production (e.g. Malaysia, Singapore), there is a strong emphasis on urban production as a buffer against food safety, economic and environmental shocks — particularly since Southeast Asian countries are generally not affluent and face significant challenges to stable governance (Sundram, 2023). However, geographic location is also crucial to understanding the way CF is often positioned as holding potential to become a social and material

resource for communities in times of crisis (Abdillah et al., 2023). Southeast Asia is geographically located in the middle of multiple monsoon systems (Indo-Australian; Indian-Indochina; East Asian; Borneo-Australian; Australian monsoons) and thus particularly susceptible to extreme weather and climate disasters brought about by global warming (Khadka et al., 2022), from intensified drought (Zhang et al., 2021) to extreme rainfall (Diallo et al., 2024) and more frequent tropical cyclones (Chen et al., 2020) — all of which disrupt crop cycles and agricultural production, thereby altering the dynamic between rural and urban food systems. These changes suggest that there is an urgent need for greater urban research on urban farming in Southeast Asia at all scales, from technological developments like smart vertical farming (Zaręba et al., 2021) to changing sociocultural relations with food, agriculture and land that give rise to initiatives like CFs (Duangputtan & Mishima, 2023).

2.5 Identifying a research gap

This study identifies several research gaps based on this literature review:

- 1) Scale of analysis: There is a rich urban and food studies literature seeking to study food relations at the macroscopic scale of socioecological transformation, whether as part of civil society movements or systems. However, there is less work on more exploratory trajectories that are more visible at smaller scales. While there is also significant research on more individual scale of affective experiences and embodiment, which is more open-ended than transformations research, there is less meso-scale research at the scale of the local community. This study thus locates itself at the level of meso-scale research, and seeks to conceptualise food relations in CF as moving in multiple, uncertain trajectories along 'lines of becoming' (Ingold, 2021) rather than linear teleologies of transformation.
- 2) Site of analysis: As identified in 2.4.2, there is a lack of English-language research on urban farming in Southeast Asia despite growing interest due to a confluence of economic, historical and political factors. Research on community urban farming (CF) in particular remains minimal relative to the abundance of knowledge about CF in other regions. This study thus attempts to reduce this knowledge inequality through inclusion of one case from Singapore, which is often only studied through the lenses of governance, technological innovation or capitalism in urban studies.
- 3) **Nature of analysis**: While comparative approaches are not new to urban studies, in CF research, the body of comparative studies working with vastly different geographical and cultural contexts is small. This study thus adds to this growing field by comparing CFs from two culturally and geographically different cities that have not been compared before in terms of urban farming, despite their many other similarities.

3. Research design

3.1 Overview

Much research focuses on community urban farms (CFs) as transformative utopian projects. Such an approach does not account for the possibility that CFs may also be entangled in sociopolitical contexts that render ambiguous CFs' future trajectories. Rejecting the assumption that CFs are/should be oriented towards specific notions of success, this study seeks to understand the aspirations and dynamics of CFs as place-based, shaped by the ever-evolving societies they are embedded in, and thus not fixed trajectories. This approach aims to expand research on CFs to include studies that can conceptualise less linear teleologies of transformation, broadening the metrics for evaluating CFs' impact on food relations beyond the binary of 'success' and 'failure'.

This research gap led me to my research question:

To what extent do community urban farms shape their participants' food relations?

This study will focus on three central themes relating to the participants' involvement in CF: discursive food relations, lived food relations in CFs, and lived food relations in everyday life. Such thematic focus contains two binaries: between discursive and lived relationships with food; and between food in CF and food in everyday life. The focus on discursive and lived relationships with food allows one to uncover the *nature* of CF's influence, evaluating the types of food relations formed. The bifurcated focus between relationships with food in CF and in everyday life then allows one to analyse the causal link between CFs and participants' emergent food relations, thus examining the *extent* of CFs' influence. The main research question can thus be further subdivided into three sub-research questions focused on the aforementioned three central themes. These sub-research questions are then investigated using a guiding framework that provides a theoretical basis for this study and informs my practical methodology (Figure 1):

Scope of study		Theoretical framework	Methodology			
Sub-research questions Thematic foc		Thematic focus	These relations are constituted by	Data collection methods		Data analysis methods
RQ 1	How do participants narrate the relationship(s) between food and the respective CFs?	Discursive food relations	Visceral and vital affordances that emerge from specific actor-networks	Sensory autoethnography via	Somi atmotored	Critical discourse
RQ 2	How do CF practices shape participants' food relations?	relations in CFs affordances that		participatory observation	Semi-structured interviews supported by food logs	analysis Sensory ethnographic
RQ 3	How do participants' everyday practices shape their food relations?	Lived food relations in everyday life		Sensory ethnography via food logs		analysis

Figure 1: Table providing an overview of this study's research design (Author's own)

3.2 Theoretical framework

This study is grounded accordingly in the philosophies of three theoretical approaches:

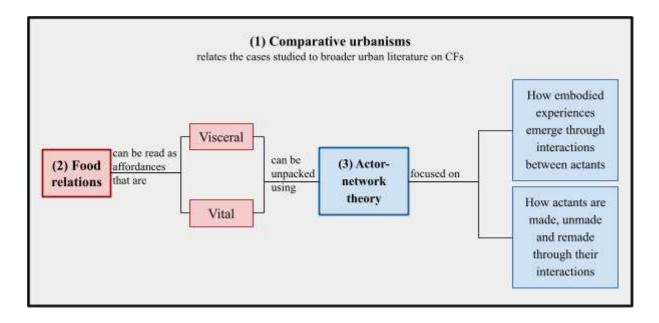


Figure 2: Schematic diagram demonstrating how the three theoretical frames used in this study are brought together (Author's own)

3.2.1 Comparative urbanisms as a theoretical teleology of study application

While the literature review covers the academic discussions within this body of work in greater detail, the key contribution of comparative urbanisms in this study is its emphasis on treating cities as 'ordinary' (Robinson, 2013). Comparison between 'ordinary' cities acts as a theoretical philosophy for knowledge production here, where cities are neither sites for theory production nor application alone. Instead, following poststructuralist geography's call to treat knowledge production as an iterative process cycling through mid-range theory and context-specific application (Yeung, 2023), this study hopes to produce insights that are both **procedurally generalisable** (e.g. x practices are associated with stronger x relationships with food) and **causally situated** (e.g. x cultural influence creates an approach to food that is x). Hence, this study can be seen as a teleological undertaking where knowledge of the two cases serves to inform understandings of other community urban farms (CFs).

3.2.2 Visceral and vital food relations as a theoretical ontology of food

As seen in the literature review, academic literature on food relations can broadly be divided into studies that focus on 'visceral' and 'vital' food relations. Drawing on feminist geographies of

embodied experience and more-than-representational approaches, 'visceral' food stems from the premise that food encounters, from production to consumption, are always intimate personal experiences — "the sensations, moods, and ways of being that emerge from our sensory engagement with ... material and discursive environments" (Longhurst et al., 2009: 334). At the same, following Bourdieusian ideas of taste as social/cultural capital, 'visceral' approaches avoid individualistic self-centrism by claiming that sensory experience is sociopolitical; a site of encounter where structural forces come together with chaotic, messy bodily intensities in the everyday (Hayes-Conroy et al., 2020). 'Vital' food relations thus complement the 'visceral' by turning towards relationality. With a heavy focus on materialities, 'vital' approaches look at how not just food and human materialities, but diverse assemblages of social, political, cultural and economic food relations are co-constitutive as well (Goodman, 2016). Grounded in Bennett (2010)'s work on 'vibrant matter', 'vital' food relations thus encourage us to rethink non-humans, both living and non-living things, as being 'lively' and dynamic actants with agency in shaping food relations. These two modes of categorisation thus constitute a working **theoretical ontology** of food adopted for this study, delineating a twofold mode of food relations.

3.2.3 Latourian Actor-network theory (ANT) as theoretical epistemology for analysis

Emerging as part of the poststructuralist turn which critiqued overemphasis on representation and symbolic meaning in human geography, Latour's central proposition is an understanding of agency as a distributed achievement (Justesen, 2020), emerging from human and non-human interactions (the actor-network) amongst both human and non-human actors (known as actants). Relations analysed under an ANT approach are thus assumed to be both static and dynamic, ever in-the-making and relationally produced. While the academic literature on ANT is wide ranging, often merging ANT with similar approaches that also conceive lively, sociomaterial worlds (e.g. Bennett (2010)'s aforementioned work is grounded in ANT but draws from conceptual vocabularies in assemblage thinking as well), a specifically Latourian ANT is characterised by emphasis on causal explanation: as Latour writes, "it is not permitted to say: 'No one mentions it. I have no proof but I know there is some hidden actor at work here behind the scene.' ... presence ... has to be demonstrated each time anew; it can never be simply postulated." (Latour, 2005: 53). Since this study is explanatory in nature, the causal focus of Latourian ANT provides a productive **epistemological** frame for learning how we come to identify and understand emergent relationships with food.

3.3 Methodology

This study will focus on three central themes relating to the participants' involvement in community urban farming (CF): discursive food relations, lived food relations in CFs, and lived food

relations in everyday life (Figure 3a-b). Such thematic focus contains two binaries: between food in CF and food in everyday life; and between discursive and lived relationships with food. The focus on discursive and lived relationships with food allows one to uncover the *nature* of CF's influence, evaluating the degree to which CFs have cognitive, affective or material impacts on participants' relationships with food. The bifurcated focus between relationships with food in CF and in everyday life then allows one to analyse the causal link between CFs and participants' emergent food relations, thus examining the *extent* of CFs' influence (Figure 3a).

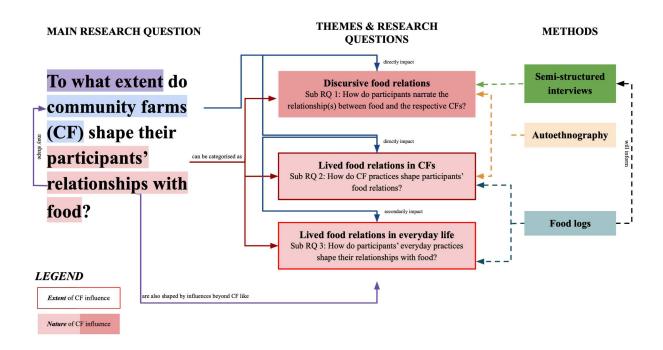


Figure 3a: Flow chart showing how data sources are incorporated into the study to answer research questions (Author's own)

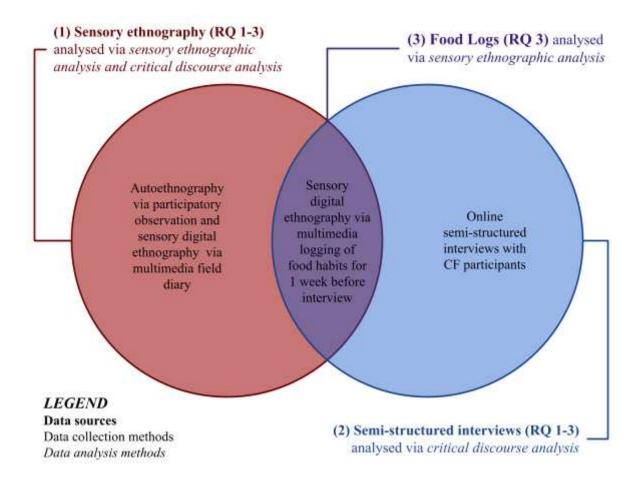


Figure 3b: Venn diagram showing how data is collected from data sources and used in analysis
(Author's own)

At the same time, the diversity of data collection and data analytic methods used leave this study open to flexibility in examining participant-CF-food dynamics. Having a variety of sources and strategies for collecting and analysing data provides multiple perspectives on the same set(s) of relationships with food, thereby ensuring that other potential dynamics (e.g. relationships with food reshaping CFs, external influences on relationships with food) are accounted for.

3.3.1 Data collection methods

This study focuses on three overlapping data sources: (1) sensory ethnography; (2) semi-structured interviews; and (3) food logs. Participants were selected via snowball sampling instigated by encounters during the ethnographic process to create a sample that is both varied and representative of regular engagement with the respective CFs. 'Regularity' is self-defined in order to create a sample of people that see CFs as a part of their lives, but will focus specifically on volunteers and farm employees to ensure that there is direct engagement in the farm work of the CF (as opposed to administrative staff, managing stakeholders etc.)

Sensory ethnography is conducted via two modes — autoethnography and sensory ethnography (Figure 3b). Firstly, autoethnography is conducted while volunteering at the CFs. I volunteered as a farm volunteer at two CFs, WeltTellerFeld in Vienna and Ground-Up Initiative (GUI) in Singapore (Figure 4). Given that relationships with food can encompass a wide range of dynamics, from material relationships with biological matter to sociocultural symbolic meaning, autoethnography can serve as a versatile data collection method able to produce various forms of knowledge. By employing the self as an instrument of data collection, this study hopes to be attuned to the subjectivity of relationships with food, capturing the intersections between the material, symbolic, relational and affective dimensions through first-hand embodied experience (Hall & Holmes, 2020). As a relative newcomer to the CFs studied, participatory observation allows me to be simultaneously attuned to how CF participation might result in relationships with food that differ from societal norms, while also experiencing for myself, cognitively, sensorially and emotionally, how various ideas and practices are interpreted and normalised (Pink, 2015). Drawing on the insights of classical phenomenology (Husserl & Moran, 2012), such autoethnography thus provides access to more transient 'affects' and 'atmospheres' that require one's presence to access such forms of experience (Lorimer, 2015). However, noting how critical phenomenology recognises that experience is deeply shaped by positionality (Magrì & McQueen 2022), I aim to adopt a reflexive approach to my autoethnography by paying especial attention to sociopolitical influences and emotional intensities that may influence impressions of the material and social world(s) (Bille et al., 2015).

CF	Volunteer dates	Volunteer frequency
WeltTellerFeld, Vienna	March to June 2024, at fortnightly Mitmach-Tage sessions	5 sessions, each about 4-5h long depending on tasks available
Ground-Up Initiative, Singapore	July to August 2024, at daily volunteer sessions and weekly Balik Kampung programmes	6 sessions, each about 3-4h long depending on tasks available

Figure 4: Table showing the researcher's involvement in CF as part of ethnographic fieldwork. More details on the respective CFs can be found in Chapter 4 (Author's own)

Secondly, sensory ethnography enhanced my research by allowing me to record autoethnographic insights in a multimedia field diary and incorporate CF participants' sensory experiences via food logs. Following Pink (2015), the senses are a source of data often neglected as an object of analysis in qualitative studies, with research often favouring the visual over other sensory input. However, sensory experiences are rich repositories of knowledge, shedding insight on perception, memory, imagination and knowledge formation/transmission that go beyond verbal

expressions. These sources add further complexity when incorporated into research via digital tools like video/audio recordings and photographs, which serve as reference points that archive past experiences and mediate in fieldwork processes by allowing non-linguistic input to be collected. Moreover, the addition of food logs in this study also allows participants to assert agency over the process of knowledge production. This allowed the study to be shaped by participants' experiences and their perspectives on these documented encounters (Zepeda & Deal, 2008), supplementing autoethnographic data and ensuring that a range of sensorial encounters beyond that of the research can be analysed and communicated.

Semi-structured interviews thus act as a natural counterpart to sensory ethnography, providing a means by which impressions noted in the field diary and food logs may be clarified and nuanced through in-depth conversation (see Appendix 8.5 for Interview Guide). As a platform for dialogue on other food relations that may not have been evident over the short period of documentation, the interviews ensure that the researcher's findings are representative of ongoing developments. Additionally, the food logs can prompt recall and highlight food habits associated with CF participation Synthesising data from both interviews as well as the more embodied methods (autoethnography, food logs) will thus create a more holistic interpretation of relationships with food beyond the visible and material (van Berkel & Verburg, 2012), capturing both the symbolic and everyday (Hall & Holmes, 2020).

3.3.2 Data analysis methods

Two complementary data analysis methods are used in this study — critical discourse analysis (CDA) and sensory ethnographic analysis.

CDA generally centers around linguistic analysis as a medium by which one might understand how social realities and imaginaries are communicated and co-constituted through language. Fairclough's (1992) framework for CDA is a seminal example of such linguistic analysis. Beginning with the key assumption that discourses shape "our role and engagement with power in a social structure" Fairclough's framework aims to uncover these relations of power (Miles, 2010: 370). However, language is only capable of capturing specific instances from a given perspective, and has been cautioned as having limited ability to communicate affective and sensorial impressions. Rose (2013) has put forth visual media as an alternative communication mode — visual media like images can serve as aids in communicating sensorial impressions, while also serving as a prompt associating visual data with symbolic meanings extending beyond the moment captured (Holmes & Hall, 2020). Videos can have a similar effect, while having the additional benefit of being able to capture dynamism or change. Nevertheless, only through dialogue can the actors involved in creating these

multimedia explain their intents and interpretation, so textual analysis of these conversations remains crucial.

Following Lury and Wakeford's (2012) call for inventive methods, this study has a bespoke CDA framework. Discourse analysis was conducted on all textual data using NVivo 12, incorporating methodological flexibility into a hybrid quantitative/qualitative method of data analysis. Key ideas and impressions were identified discretionarily, then consolidated using a frequency matrix calculating the degree of correlation between ideas. Colloquial and non-English terminology, being the exception rather than the norm in the data collected, was kept but defined in English in the transcript texts used for coding. However, transcripts were edited for errors in grammar and syntax for ease of understanding. This quantitative component was then used to inform qualitative thematic analysis (Nowell et al., 2017) (Figure 5).

Fairclough's framework		Adapted use in this study		
Level	Mode of analysis	Source	Data analysed	
MICRO I EVEL	Textual analysis of	Semi-structured interviews,	Content and language used — word choice, comparisons and contrasts, metaphors	
MICRO-LEVEL	content and language used	autoethnography, food diaries	Multimedia used — type of media, media source, context in which media and text are linked, word choice and content	
	Discursive practice in the immediate context in which the text is employed	Semi-structured interviews, autoethnography, food diaries	Discursive practices by which relationships with food are delineated and defined	
MESO-LEVEL			Narrated embodied practices by which relationships with food are enacted	
			Narrated affective practices by which relationships with food are experienced	
MACRO-LEVEL	Coherence/Conflict between discursive findings and social practice in broader societal relations	Semi-structured interviews, food logs	Different contexts and scales at which discourses are mobilised	

Figure 5: Table outlining the discourse analysis framework used in this study (Author's own)

Nonetheless, an inescapable tension between sensory experiences and their interpretation via linguistic explanation remains present within the use of CDA. Turning to sensory ethnographic analysis thus provides a means by which this tension may be mediated. As an interdisciplinary approach to analysis (Pink, 2010), adopted by disciplines from geography to history (Classen, 2023), there is no standardised reference point in the manner of Fairclough's CDA framework. Instead, researchers often advocate an emphasis on flexibility, where the mode of sensory ethnographic analysis is contingent on the object of study, from walking (e.g. Kartal, 2021), cooking (e.g. Rhys-Taylor, 2020) and even clubbing (e.g. Tutenges, 2021), all of which focus on each of the five senses to varying degrees (Pink, 2015). This study thus uses sensory ethnographic analysis as both a "means of inquiry" and an "object of study" (p. 334) complementing CDA (Figure 6).

Mode of sensory ethnographic analysis	Data analysed	Customised use in this study
Means of inquiry	Sensorial impressions by which food relations are characterised and/or mediated	Provides evidence that may supplement or contradict linguistic discourses used in CDA. Allows for analysis of how and to what extent different senses are significant to food relations.
Object of study	Fixity and flux in the sensorial input apprehended and interpreted by study subjects over regular engagement with CF	Provides evidence of embodied changes or lack thereof as a resent of regular engagement with CF

Figure 6: Table outlining the sensory ethnography framework used in this study (Author's own)

Combining CDA and sensory ethnographic analysis allows this study to create a bespoke set of qualitative codes that account for both sensory and linguistic data (Figure 7).

Data analysis method	Codes			
	Type of food relation		Coding nodes * WeltTellerFeld; GUI; both	
CDA	Narratives	About collective food relations	Ecological justice Communal praxis Cultural heritage Social justice	
		About individual food relations	Affective ties Nutritional wellbeing	
		About CF	Spaces of care	

			Spaces of learning-by-doing Sense of place Urban escapism
CDA and Sensory ethnographic analysis	Affordances	In CF	Activist subjectivities Citizenship subjectivities Communal care Intercultural exchange Solidarity Therapeutic rest
		In everyday life	Global encounter Dietary supplement Metabolic experimentation Personal moral development Urban place-making

Figure 7: Table listing the qualitative codes used in this study (Author's own)

Intersections between the codes thus reveal the nature and extent of the affordances that emerge from participants' regular engagement with their CFs, allowing emergent food relations in WeltTellerFeld and Ground-Up Initiative (GUI) to be explored in Chapter 5.

3.4 Positionality

This study recognises that a researcher's positionality is an integral element of any study, where all findings are 'situated knowledges' (Haraway, 1988) derived from the inescapable perspective of the researcher and thus impacted by the worldview of the researcher in question (Hitchings & Latham, 2019). Thus, while biases are inherent in any positionality, so too is the unique vantage point offered by each researcher.

This study thus extends an approach of critical generosity, where one's positionality is not just cursorily acknowledged as a formality but is employed strategically as an ethical practice (Zembylas, 2023). Following Soediro and Glas (2020), who encourage researchers to practice 'active reflexivity' via a fourfold method — recording assumptions around positionality; routinizing and systemizing reflexivity; bringing other actors into the process; and 'showing work' in the publication process — this study aims to incorporate the researcher's positionality into all parts of the research process.

I inhabited different positionalities across the two farms studied. In WeltTellerFeld, Vienna, as a student foreign not just to the country and city, but also to the continent, I was severely limited in my understanding of language and culture. While other volunteers all spoke fluent English and I

understood basic German, ensuring that there were little to no communication problems, my physical appearance, accent, and unfamiliarity with both Viennese and Austrian culture marked me irrevocably as an 'outsider' or 'social intruder' (Shah, 2004). This status may have led me to misinterpret situational dynamics or for other participants to act differently due to my presence. To mitigate the effects of 'outsiderism', I sought to ask as many questions as possible to avoid making assumptions and clarify unknown practices or ideas. Additionally, having a thesis supervisor of German nationality who has long lived in Austria also mediated such differences: she could explain, but also interrogate, norms taken for granted by native Austrians. However, following Yip (2024), who has recognised that thinking through insiderism/outsiderism as a binary can be problematically inaccurate in many cases, I also acknowledge that my status as a researcher provided common ground with participants. Many of these participants had been or were involved in higher education in the humanities and social sciences, and thus we were able to share a common intellectual vocabulary for communication. Moreover, just as the boundary between insiderism/outsiderism is always in flux may evolve in perception over time (Dhillon & Thomas, 2019), getting to know other participants over successive volunteering sessions reduced any misunderstandings produced from difference.

Conversely, my positionality as a local born and raised in Singapore was advantageous as insiderism for my Singapore fieldwork at Ground-Up Initiative (GUI). Being a local provided a basis of common knowledge, connections and culture for my interactions with participants, putting them at ease to speak candidly (Roulston, 2022). The benefits of insiderism were especially apparent when respondents struggled with articulation, as they could draw on other local analogies or use colloquial Singlish, Mandarin, or Chinese dialect to communicate with me. Being Hokkien Chinese myself, such a connection was especially crucial to this farm as there were many older participants whose first language was Mandarin or Hokkien. However, such insiderism may also manifest as subjective bias, where having grown up in the local culture and social hierarchies may have limited my ability to be critical (Ozano & Khatri, 2018) or attend to ideas that do not cohere with my personal worldview (Zulfikar, 2014). To reduce inadvertent omissions, I transcribed all interviews verbatim so they could be reexamined for overlooked ideas, and spoke about my impressions at both farms with others from a range of positionalities, as per Soediro and Glas' (2020) suggestion that the final research product should have been created with feedback from many actors. In doing so, and by remaining in contact with the CFs, I strive for my reflections on positionality to move from theoretical abstraction to practical application in research and practice (Alejandro, 2020).

3.5 Study limitations and further research

At the methodological level, this study was limited in its application of a comparative approach to a two-way comparison. While selecting only two cases was the most practically feasible

choice, this two-way comparison also inadvertently projects an artificial binary, where the sociocultural and environmental seem misleadingly dichotomous due to the nature of the cases chosen. Further research would thus more strongly corroborate the inference made in this study that these are two of many different trajectories community urban farms (CFs) can take. A more nuanced comparison might, perhaps, be made by comparing multiple cases within each of the two cities, which might provide greater insight into the extent to which broader structural shifts in food relations might be possible.

At the practical level, this study would have benefitted from a longer timeframe for ethnographic study. This extended timeframe would have provided this study with more accurate data, as a larger sample of participants could have been studied. For instance, research could have been conducted during CF-run workshops, which are often attended by one-off or casual volunteers. Any contrasts between these infrequent volunteers and regular participants would have shed light on the dynamics of changing food relations. For instance, one would be able to differentiate between changes to food relations wrought by immediate impressions and changes caused by prolonged engagement in CF. Similarly, engagement with stakeholders in close contact with CF participants, such as household members, would have identified the possibility of cascading effects. Such differentiations would have been insightful in understanding the causal mechanisms that facilitate desired changes, and how they might have secondary effects on others not directly involved in CF.

4. Case background

4.1 Community urban farming landscapes

4.1.1 ... in Vienna

The agricultural industry has long been significant not just to Austria (nearly 9.9 billion EUR in 2024), but to Vienna as well (10 234 million EUR in 2023) (Statistics Austria, 2024). 15% of land area in Vienna is devoted to agricultural crops (Vienna Tourism Board, n.d.), with local farms covering a third of Vienna's vegetable consumption. Moreover, the city planning strategy, STEP 2025, explicitly promotes urban agriculture not just in existing spaces, but in urban residual spaces as well, a commitment that bodes well for urban farming (Stadt Wien, 2014; Mach & Vernay, 2023).

Urban farming is thus prominent in the city's metabolism and urban imaginaries. These imaginaries are further supported by history: during the Red Vienna era, urban farmers and gardeners were edged out to outer city areas as part of the Social Democratic push to increase public housing through the construction of superblocks, which required large amounts of land (Altes & Faludi, 1995). These regulatory efforts were met with significant resistance, giving rise to 'wild settlements' of urban farms by low-income local communities who wished to grow their own food (Hauer & Krammer, 2023). These spaces underwent further change during World War II, as Nazi appropriation displaced Jewish users and allowed these spaces to be occupied by 'Aryan' middle-class groups that used them for recreational planting instead of depending on them for sustenance (Meller, 2017). By the 2000s, these 'wild settlements' were formalised into legal urban farms, allotment plots and community gardens. However, given that the site boundaries and (collective/individual) ownership of these informal settlements was often blurred, definitional differences between 'farms' 'gardens' and 'allotments' were often vague, with everyday access to land dependent more on the amount of social resistance experienced than legal rights (ibid.).

Traces of such definitional interchangeability and ambiguity in community membership remain in Vienna's community urban farming (CF) landscape today. Although CFs with legal tenure in Vienna are generally registered with Garteln in Wien, the Viennese branch of Bio Forschung Austria, Austria's research institute for organic farming and an official City of Vienna partner, the precise nature of the organisations' activities is not immediately clear (Garteln in Wien, n.d.). Through Garteln in Wien, CF activities are categorised as community gardens, vegetable plots for rent, community-made agriculture, corner gardens, gardens in public housing and so on (Garteln in Wien, 2021). However, in practice, for organisations in categories that do not explicitly state an involvement in farming (e.g. community-made agriculture), community members generally have the autonomy to

decide the proportion of (non-)edible plants that they wish to plant (Garteln in Wien, n.d.). Hence, they may — and often do — have strong emphasis on vegetable production, much like the former 'wild settlements'.

However, Exner and Schützenberger (2018) have suggested that these ambiguities may be crystallising into more definite categories. Specifically, they argue that community and allotment gardens, while both managed collectively, are differing increasingly in form and public discourse, Allotments, often located in peripheral districts, tend to be fenced while community gardens are not — regardless of whether these community gardens are municipally funded or grassroots initiatives. While the allotments are not always locked, particularly if the space is conventionally used as a pathway, the visual element of the fence creates a certain exclusivity. Since community gardens are increasingly ascribed progressive environmental, social and cultural values in policy and media discourse, while allotments are ignored, this study contends that a new CF landscape of exclusion is emerging in Vienna — divided between private, personal allotments and community gardens dominated by the creative class. Thus, while allotments and community gardens may have previously been community spaces, under a post-Fordist 21st century regime, they are increasingly divided between privatisation (allotments for those able to afford them) and the domain of a more left-leaning cultural elite (community gardens for those with leisure time to volunteer). This argument is corroborated by Kumnig (2017), who argues that Donaufeld, (where my case, WeltTellerFeld, is located) presents an instructive case study on selective municipal preservation of specific CFs that project a desired 'participatory' 'green' urban imaginary. Conversely, undesirable 'squatters' like SoliLa!, a controversial farming collective that called attention to state enclosures of smallholder farms and histories of CF 'Nazification' (Kumnig & Rosol, 2020), was evicted in 2013 (Möhrs et al., 2013).

Hence, CF participation in Vienna may not only be interpreted as an indicator of a specific socioenvironmental ethos, but also as an indicator of specific forms of privilege reinforced by Vienna's existing urban governance regime. The CF landscape in Vienna, as depicted by these studies, thus appears to reflect emergent urban socionatures, where the city is increasingly divided along latent class-based and ideological fault lines. Nonetheless, given that not all CFs in Vienna — including community gardens — are municipally managed, one must acknowledge that CFs may not always align with state agendas or societal discourses, and thus continue to hold potential to transcend these fault lines in their activities.

4.1.2 ... in Singapore

Singapore has a vastly different relationship with farming and food production relative to Vienna or Austria. As a city-state and island nation categorised as completely urbanised (World Bank,

n.d.), it has neither an agricultural hinterland on which it can draw for food, nor the land area needed to carry out large-scale urban farming. Most farming activities, whether small-scale commercial farming or subsistence farming found in the kampungs, have gradually disappeared with Singapore's evolution from a low- to high-income nation over the past 60 years (Zakaria et al., 2024). CF is a fairly recent phenomenon: while community gardens have long existed in residential areas as a common neighbourhood feature, it is only since COVID-19 that CF has grown to prominence in local discourse (Ludher et al., 2021; Song et al., 2022). In these narratives, as CF participation becomes more mainstream, it is variously conceived as a rare way to connect with nature in a dense urban environment (Nicholas et al., 2023), build community through common interests, and/or (re)discover lost cultural knowledge on planting and cooking that might have been held several generations ago (Neo, 2016). Agriculture comprises such a small percentage of its GDP that it is categorised under 'Other Goods and Industries' (195.7 million SGD) (Singapore Department of Statistics, 2023), and less than 1% of its land is used for farming (Mok et al., 2020) — clearly dwarfed by the Viennese agricultural industry. To improve food security, it currently imports more than 90% of its food, diversified amongst 187 countries to build resilience against shocks (Singapore Food Agency, 2023). Moreover, to further improve food sovereignty, in 2019, Singapore also set the ambitious target of satisfying 30% of domestic food consumption with locally produced food by 2030, up from 10% in 2019. It aims to achieve this '30 by 30' target largely through technological innovation and investment in SMEs, drawing both from existing expertise (e.g. in vertical farming) and new developments (e.g. aquaponics, AI-assisted agriculture).

However, there has been increasing doubt about the feasibility of this target for several reasons (Tham, 2024). Firstly, much of the technology to be adopted by 2030 is still in its infancy, and may not be commercially viable, particularly in the current global economic climate of high global inflation (Mok et al., 2020). For instance, local production of vegetables and seafood decreased by 15% and 8% respectively from 2022-2023 because of inflationary pressures, increases in energy prices and elevated manpower costs (Singapore Food Agency, 2023). Many farms are still grappling with construction delays caused by the COVID-19 pandemic as well. Secondly, unconvinced by promises of superior quality, consumers have been reluctant to purchase domestically produced food when they are more expensive than imports due to high production costs, thereby causing demand to flag (Tham, 2024) — a trend predicted by Bohnes et al. (2020) when studying aquaculture. Lastly, urbanites have displayed hesitance in adopting alternative foods like insects (Giacalone & Jaeger, 2023) despite Singapore's food culture being characterised by high cultural diversity and cosmopolitanism (Reddy & van Dam, 2020). These indicators suggest that there is a misalignment between state aspirations and societal acceptance regarding the evolution of food relations in Singapore. CF thus emerges, both in state (e.g. Singapore Food Agency, 2024) and academic discourse (e.g. Nicholas et al., 2023) as a means by which new food subjectivities might be inculcated by building new cognitive and emotional relations to environment and society (Rut & Davies, 2018). These connections, encouraging new food relations through narratives of localism and care, often reflect pre-existing aspirations of Singaporean CFs, many of which focus on building emotional and cognitive bonds with nature, local community and cultural heritage (Wang, 2021). Hence, the aspirations of CFs seem to now be converging with state agendas in a remarkably opportune moment. In a city where food is a synecdoche for identity (Reddy & Van Dam, 2020) and is often used as an analogy for harmony between different cultures — a Singaporean 'rojak' embracing difference as complementarity (Schneider-Mayerson, 2020) as a counterpoint to the Western model of 'melting pot' integration — the impact that CFs might have on food relations holds the potential for Singapore to explore how environmental, social and cultural values, narratives and practices might change for the better.

4.2 Case studies

4.2.1 WeltTellerFeld, Vienna

WeltTellerFeld is a community urban farm (CF) located in Schilfweg near the Oberer Mühlwasser, at the intersection between a residential area and the edge of Nationalpark Donau-Auen, about 5 minutes from the nearest public bus stop. The 0.3 ha CF is part of the Kleine Stadt Farm, a 5 ha collective of CFs and other socioecological initiatives which comprise the largest urban farming project in Austria (Kleine Stadt Farm, n.d.). WeltTellerFeld is thus situated in close proximity to other Kleine Stadt Farm CFs like the Lobauerinnen, Land in Sicht and Barangay Center. The Kleine Stadt Farm also runs a farm shop selling seeds, plants and produce for and from its members, providing WeltTellerFeld with easy access to farming resources (ibid.). In addition to the Kleine Stadt Farm, WeltTellerFeld is also part of the Ernährungsrat Wien, a food policy council comprising about 30 individuals representing different food-related civil society initiatives in Vienna (Ernährungsrat Wien, n.d.). The council serves as a platform to build more socially just and ecologically sustainable food systems in Vienna by advising municipal policy and supporting its members' initiatives (ibid.). Ernährungsrat Wien thus provides WeltTellerFeld with a channel for accessing resources and knowledge, expanding educational outreach and connecting with food-related civil society groups (Brumer et al., 2023).

WeltTellerFeld focuses predominantly on engaging participants through volunteering at fortnightly Mitmach-Tage farming sessions, or paid workshops designed for youth and adults (WeltTellerFeld, 2025). WeltTellerFeld has seven employees, some of whom serve as partners to other food-related NGOs such as Brot für die Welt which focuses on issues of hunger and poverty, and Hallo Klima! which provides opportunities for practical climate action (ibid.). Although only one

employee is in charge of farm work, the other employees regularly participate in farm activities as workshop facilitators or Mitmach-Tage volunteers, and are assisted by participants in everyday farm tasks (ibid.).

WeltTellerFeld is structured around the concept of showing people what it takes in the world (Welt) to fill one's plate (Teller), depicted in the field (Feld), where the farm is. Based on Bruckner et al. (2016)'s concept, the CF is thus structured as a visual representation of the land needed to grow the agricultural crops that sustain the average annual food consumption of a person in Austria. The farm is thus divided accordingly using coloured markers — 45% dedicated to locally produced crops and 55% to crops produced abroad, with 67% allocated to plants needed to produce animal products and 33% for plant foods. Hence, this visual design serves as an educational tool for both volunteers and workshop attendees, directly connecting global food production to individual consumption. Together with the farm work done during sessions, WeltTellerFeld hopes to draw attention to the space, natural resources and labour that sustains Vienna's food system but remain discursively, emotionally and visually 'hidden' from the city's residents — thereby providing impetus for participants to live more nutritionally healthy, sustainable lives.

4.2.2 Ground-Up Initiative, Singapore

Ground-Up Initiative (GUI) is a CF located in Lorong Chencharu, Yishun, a residential town in northeastern Singapore. The 2.6 ha of land, leased from the state since 2008, is delimited to the north by a stream that supports farming activities, and is densely surrounded by vegetation common to Singapore. These features help to create a sense of separation from the city, despite the space being located only 5 min from a main road and 10 min from the nearest metro station.

Although farming is the dominant activity at GUI in terms of volunteers involved, a significant amount of space is also allocated to GUI's other units — woodwork and earth oven — which often support and/or are supported by farm activities (Ground-Up Initiative, n.d.). There are three main employees in charge of the farming unit, although their work is supported by GUI management, part-timers and volunteers who help run everyday farm activities (ibid.). Volunteers can sign up for shifts every day, where they participate in tasks ranging from soil tilling to compost making and harvesting. The most popular shift is GUI's flagship Saturday programme, Balik Kampung, where experienced participants help newcomers try out a range of tasks and celebrate with a volunteer-led and cooked lunch made from GUI's crops (ibid.). Additionally, GUI runs paid farm workshops that educate attendees about Singapore's food systems and ecosystems. Through these workshops and volunteering sessions, GUI hopes to raise awareness on the personal, social and environmental harms caused by mainstream food systems, and increase appreciation for the resources

and labour involved in food production (Benjumea et al., 2022). It is hoped that through farming, participants will grow more connected to nature and community, and thus become more caring.

GUI practices soil-based organic farming by growing a variety of vegetables and herbs commonly produced and eaten in Singapore, such as bok choy, winged beans and bitter gourds. It also has several fruit trees producing rambutans, bananas and papayas (Ground-Up Initiative, n.d.). Produce is sold both to volunteers and at their weekly farmers' market, but a significant portion is also set aside for donation to a local temple involved in tackling food insecurity in Singapore. This approach, where caring for the environment is inseparable from care for the community, envisions a '21st Century Kampung' based on 5Gs — being gracious, green, giving, grounded and grateful. These principles, formulated in direct opposition to what is known in popular local parlance as the 5Cs (cash, car, credit card, condominium and country club), thus position GUI as a rejection of the societal materialism that the 5Cs represent (Ground-Up Initiative, n.d.). GUI's '21st Century Kampung' thus advocates, instead, returning to a way of living nostalgically associated with the kampung. This ideal of the kampung, where a slower pace of life is believed to have produced more genuine and harmonious relations with nature, culture, society and self (Chong, 2018), thus presents farming not just as a means of cultivating alternative food relations, but more crucially, as cultivating an alternative life philosophy.

4.2.3 Justification of cases chosen

Vastly separated by different geographical, political and cultural environments despite their common nature as CFs, potential for meaningful comparative study between WeltTellerFeld and GUI is not immediately apparent. However, as seen in Figure 8, a closer review of the CFs reveals remarkably similar structural conditions and superficial differences.

Scale of comparison	Key similarities			Key differences	
	Туре	WeltTellerFeld	GUI	WeltTellerFeld	GUI
MICRO -SCALE: Farm	Organisational status	Non-profit NGO			
	Land area	0.3ha of cropland	2.6 ha, with about 0.39 ha of cropland	Predominantly used for farming	Divided between farming, woodworking and cooking
	Farming techniques	Soil-based, organic farming growing vegetables, fruit and herbs			
	Modes of	Regular volunteering sessions		Volunteering	Volunteering

	participant involvement	Educational workshops for youth and adults		sessions run seasonally due to the temperate climate.	sessions run all year round due to equatorial climate.
MACRO -SCALE: City and beyond	Funding structure	Multiscalar funding from the City of Vienna, federal ministries (BMK, BML, ADA), the EU (Erasmus+ projects), private foundations and local/regional corporate sponsors. Income also obtained via paid educational workshops and tours.	Multiscalar funding from state authorities (Singapore Green Building Council, SG Eco Fund) and local/international corporate sponsors. Income also obtained by renting out space for events, and via paid educational workshops and tours.	Draws funding from municipal, state and regional supranational governance structures (EU).	Municipal government is the same as the state government. No regional supranational governance structures.
	Public sector	Strong policy emphasis on increasing local food production and consumption (2020 Food Action Plan, Vienna; 2020 '30 by 30', Singapore) Set in a broader policy environment supporting more sustainable food systems, reduced emissions, healthier eating and improved food safety standards (Vienna — 2020 Food Action Plan, 2022 Smart City Strategy Vienna; Singapore — 2020 '30 by 30', 2021 Singapore Green Plan 2030). Both cities have relatively stable governance regimes, where the ruling party (SPÖ, Vienna; PAP, Singapore) has remained in power for many decades.		2020 Food Action Plan further emphasises organic production (Food Action Cities, 2023).	2020 '30 by 30' goal places specific emphasis on food-related R&D.
	Civil society	Growing engagement with food and environment issues			

Figure 8: Comparison table outlining the similarities and differences between the two cases, WeltTellerFeld and GUI (Author's own)

As non-governmental initiatives working in partnership with state, civil society and corporate actors, both CFs clearly adopt a cooperative approach to cultivating alternative food relations. Not only do they work with existing foodscapes for change instead of championing a radical rejection of the cities' food systems, they also receive support from both state and private institutions in their endeavours. The alternative food relations they seek to cultivate also hold strong thematic similarities: intimate connections to land and food, nutritionally- and environmentally-informed food choices, and

appreciation for the (geographically and emotionally) distant resources and labour involved in their cities' food provisioning. Moreover, the CFs' focus on participatory engagement on the farms reflects a common pedagogical approach and emphasis on education, where bodily interaction with food production is integral to cultivating alternative food relations. The CFs' many structural similarities thus provide a common basis for analysis, so this study may focus on investigating how unique food affordances arise from each CF, despite their outward similarities. Comparative study of WeltTellerFeld and GUI thus not only broadens knowledge of the diversity of CFs that exist across cities, but also provides fertile ground for understanding why such diversity exists and the learning that may emerge from difference.

5. Discussion

This chapter analyses the findings from the fieldwork conducted at WeltTellerFeld, Vienna and Ground-Up Initiative (GUI), Singapore for this study. As mentioned in Chapter 1, the discussion follows a three-part structure to answer the main research question: "To what extent do community urban farms shape their participants' food relations?". Chapters 5.1-3 each cover a sub-research question (Sub-RQ), with Chapter 5.1 covering common narratives across the two community urban farms (CFs) and Chapters 5.2-3 covering areas in which participant practices diverge across the two cases, with sub-chapters divided by the two cases. Hence, Chapter 5 is organised accordingly:

Sub-RQ 1 (Chapter 5.1): How do participants **narrate the relationship(s)** between food and the respective CFs?

Chapter 5.1.1 A bodily relationship with food

Chapter 5.1.2 A spatial relationship with food

Chapter 5.1.3 A social relationship with food

Sub-RQ 2 (Chapter 5.2): How do CF practices shape participants' food relations?

- 5.2.1 "养泥土来养菜, 养菜来养人": food-self relations
- 5.2.2 "Farming is a kind of social change": food-society relations
- 5.2.3 "Like a whole different world": food-space/time relations

Sub-RQ 3 (Chapter 5.3): How do participants' everyday practices shape their food relations?

- 5.3.1 Metabolic flows foster ...
- 5.3.2 Experiential knowledges foster ...

5.1 Discursive food relations

The ways in which CF participants narrate their food relations reflect the principles, ideas and aspirations underpinning their explanations. These discourses are thus integral in tracing the extent to which CF participation shapes participants' food relations, as meaning is constructed through the ways in which different signifiers are employed to support knowledge claims.

Hence, this chapter seeks to answer the question: "How do participants narrate the relationship(s) between food and the respective CFs?" (Sub-RQ 1) by exploring the ways in which CF participants narrate the relationships between food and the CFs. The discussion begins by identifying key food values in the participants' bodily relationship(s) with food, before analysing how these food values are discursively connected to both the physical and social space of the CF.

5.1.1 A bodily relationship with food

Participants in both CFs espouse food values that are remarkably similar. Qualitative coding of interview transcripts (see Figure 7 for codes) reveals that interviewees across both cases raised common thematic ideas regarding the roles that they felt food should play in one's life.

Firstly, participants emphasised the value of sensorially diverse food. This is reflected in the language used by interviewees, which regularly drew on the five senses to positively describe encounters with food:

"... so tasty, so interesting ... There are some things like pak choi or tatsoi that I like much more because they stay more crunchy [than spinach] ... and also, I like to see how tomatoes have so many varieties, not just brown [or] red like in the supermarkets, [but also] yellow or striped" (Respondent 1, 2025)

"I was depressed because I had an ear problem that affected my balance ... [but] when *I breathed* in the air, [and] *I looked* at the [farm] greenery, I don't know why, I just felt better physically and that broke the cycle of depression and now I don't have these health problems" (Respondent F, 2025)

In these embodied encounters with food, sensory stimulation was identified as a specific catalyst for improved life quality, both physically and emotionally. Moreover, my ethnographic fieldwork revealed that the perceived uniqueness of such intimate personal encounters further enhanced their value — participants in both CFs frequently built whole conversations around comparison of their different impressions, down to identifying even minute differences in sensorial impressions (e.g. sweet-salty vs salty-sweet). This precise attention to detail reflected a strong sense of wonderment and curiosity regarding the individuality of visceral food relations, thus highlighting how greatly participants valued the sensory nature of food.

Secondly, participants also believed that this visceral food relation was inseparable from a more vitalistic relation, where they actively employed foods' sensory qualities to engineer personal well-being.

"I've already created this habitual thing in my body that if I eat a lot of meat, it will taste bad and my body will give me the signal that I'm not feeling well. Only if it's a lot, not when it's just one meal. I started getting stomach aches, indigestion and cramps. All these things start to tell me that I need to kind of reduce my meat consumption and after two days of not eating meat I totally got back to normal." (Respondent B, 2025)

"There is a difference in the taste. You must eat it to know it ... When you buy it from the supermarket and you eat it, you can actually taste some chemical in it. But if you buy those organic stuff, it tastes much healthier" (Respondent A, 2025)

Given that participants met during volunteering sessions were able to explain biological processes like nutrient bioavailability in immense scientific detail, these anecdotes of 'tasting' nutritional value cannot be dismissed as unfounded fancies. Instead, it is more likely that participants conceive of visceral food qualities as working in tandem with scientific processes to create health. In such a vitalist conception, sensorial encounter thus becomes a key psychological actant that extends bodily well-being beyond the abstract concept of scientific nutrition towards affective experience, allowing participants' food relations to move from 'food from nowhere' (Campbell, 2009) to food grown through interactions with actants they are intimately connected to, including the farms and their bodily selves.

Thirdly, participants also valued food as a medium of connection, where food relations were not just an encounter for the self, but served as a means by which collective socioecological relations were conceptualised and narrated. Each interaction with food in its various forms, from seed to waste, embodied complex relations tying the food-object and participant-subject to a broader network of actants.

"I look more to the *Welt-Acker-Netzwerk* because they are so similar. There are still a lot of similarities between how we educate, how we plant, because they have maybe 50 square meters of barley, and we also have a similar size of barley. [Redacted employee's name] on the other hand, he's very *well connected locally*, so I think he would use those contacts first." (Respondent 1, 2025)

"If you imagine how [the food] gets started, and *the labour and love* that has been put into producing those vegetables, the food that I eat becomes more delicious. You imagine *the hands* that labour, *the sun and water* that was needed to grow [the vegetables], *the biodiversity* that prepared *the soil*. It's beyond the flavour of the food ... It's more of the effort that was put in" (Respondent E, 2025)

These quotes demonstrate how food is valued for its ability to make tangible connections to wider collective relations. Respondent 1 recognises that their food relations forge horizontal ties of knowledge and common experience with spaces and people involved in food production elsewhere. Similarly, Respondent E explicitly attributes non-human actants like 'sun' 'biodiversity' and 'soil' agential capacity in constituting the food they eat, rather than just the workers involved in food production. Additionally, the use of semantic choices like 'hands' and 'love' to describe food production underscore the intimacy with which the speaker feels connected to other relations across the food supply chain. Hence, engagement with food becomes the language by which geographically distant actants are rendered psychologically close. In the CFs studied here, this manifests specifically

as ties to culture, ecological and social justice, and communal praxis, transforming these relations unfolding 'elsewhere' into a deeply present part of the participants' food relations. Instead of a linear imaginary culminating in the consumption of the food, participants' emphasis on the multiplicity of relations and actants held within a given food-object recognises that these actants' lives persist far beyond that which contributed to the object.

5.1.2 A spatial relationship with food

Having established what participants' food values are, this section turns to understanding how participants narrate the role that the CFs play in (re)producing these food values.

In interviews with participants from both CFs, the most prominent discourse by far was the centrality of 'learning-by-doing' in (re)producing the aforementioned food values. Participants overwhelmingly emphasised the importance of experiential learning through active participation in the CF as the means by which they develop, express, reinforce and transmit food values. This narrative of 'learning-by-doing' presents the physical space of the farm as an essential actant at both a visceral and vital level. At a visceral level, participants emphasised the tactile geography of the farm as integral to the (re)production of food values. Often drawing on soil-based analogies of 'rooting' and 'grounding', participants suggested that the very materiality of the earth is impactful in creating a sense of reality that emotionally connects one to food systems:

"the education is really *rooted in the experience of the field*" (Respondent 1, 2025)

"It's very, very interactive and the kids always work in the field ... there are a lot of school workshops and stuff where it's very theoretical but *the opportunity to actually work with the soil*, that's quite rare" (Respondent 2, 2025)

"my first experience with touching the soil [made me think], wow, you know that's where our food comes from. You never think about where your vegetables come from, when you go into the supermarket you usually just stick it in a plastic bag and go, but now *you see the soil, the roots, and the carrots one by one*" (Respondent F, 2025)

Such 'learning by doing' is identified by participants as a catalyst for developing new environmental sensibilities. By building tactile and emotional familiarity with food and farm biogeographies, participants' argued that their personal food relations gained greater nuance in terms of embodied and environmental knowledge of the actor-networks of their food systems — becoming 'food from somewhere' in opposition to participant-described 'food from nowhere' (Campbell, 2009) where you "never think about where [food] come[s] from" (Respondent F, 2025). This knowledge

often translates into a greater appreciation (or even affinity) for less prominent food system actants like soil and insects, (re)producing with the aforementioned food values.

"I've seen students who try farming for the first time, right? Then they see [a] snail, and they're like "eee!", but then *after a while they get used to it* ... We show them that it's harmless and we also explain why it's beneficial for the soil then *they tend to get acquainted* with [the biodiversity] more" (Respondent C, 2025)

"I used to bring wear gloves to the farm so I don't have to touch the soil ... [but now] I'd rather not even wear gloves because *I need to feel the plants* when I'm weeding [so I can differentiate vegetables and weeds more easily], and I would rather hold tools without gloves because I can grip them better ... I'm *not so scared of dirt*" (Respondent F, 2025)

"Actually working" with the materiality of the earth thus becomes synecdoche for a mode of living that is more sensitive to and appreciative of the food relations one is entangled in. This sensitivity is presented as a contrast to an ambiguously defined mainstream mode of city living, framed pejoratively as a binary opposite to relational sensitivity. Like in Enthoven and Van den Broeck (2021), if food relations in the CF are perceived to be 'grounded' forms of 'active participation' that are 'one with nature', mainstream food relations are 'abstract' and 'disengaged' or 'apathetic' to broader socio-environmental relations:

"When you just touch the soil, you feel *this sense of [being] one with nature* that you'd never find in Singapore because *everywhere is materialism and consumption* all around you ... It's like a *sanctuary* to me" (Respondent A, 2025)

"What would I describe Ground-Up Initiative (GUI) as? I think it's a *fairy tale* in Singapore. I would also describe it as providing *an alternative narrative to the conventional* way of living." (Respondent G, 2025)

"[WeltTellerFeld] is *a beautiful place* to be ... you can still reach it very nicely with the public transport, but it's *somewhat in nature* so you can *get away from the city*." (Respondent 3, 2025)

The ambiguity with which these two modes of being (in the CF, in the city) are narrated (Respondents G; 3), with each defined only in contrast to a vague other, suggests that this binary serves a more symbolic than practical role in narrating the impact of the CFs on participants' food relations. Rather than providing accurate depictions of mainstream or CF food relations, they should be interpreted as representing a perceived divide between CF and urban landscapes, where the CFs are desirable because of a perceived utopic intimacy with nature. The aesthetic attractiveness of these CF landscapes thus makes the (re)production of the aforementioned food values even more compelling by creating a common sense of something precious to be protected.

While the CFs' visceral relation to food may have left strong affective impressions on participants, these impressions were also supported by cognitive knowledge acquisition. Interaction with the farms was also perceived as forging vitalist food relations for participants. By serving as a microcosm in which characteristics of contemporary food systems could be more easily visualised, the CFs help to "make these complex topics tangible" (Respondent 4, 2025) and "find an emotional connection to food and the global food system" (Respondent D, 2025), thereby making a stronger case for the adoption of the aforementioned values. WeltTellerFeld and GUI participants' approaches to tackling the perceived ills of their food system(s) are thus aligned with CFs studied by Vincent and Feola (2020), where the need to go beyond treating food as an inert substance is an unfulfilled precondition before any structural change can become a possibility; a working through and with existing food systems rather than a wholesale rejection. For instance, WeltTellerFeld participants recounted how using a fenced-off space during talks or briefings was especially impactful embodied storytelling that allowed participants to experience the cramped conditions that industrially raised chickens live in (Respondent 3). Similarly, preparing a communal meal using vegetables grown and harvested on-site allowed GUI participants to visualise how a vast amount of labour was needed to produce even a small amount of vegetables, which would be further diminished in volume by cooking processes (Respondents B; D; F). These experiences thus serve to make the more abstract ecological and social hardships of food systems comprehensible at the participants' personal scale(s), particularly given their dearth of direct contact with agroindustrial production.

Food relations formed through anecdotal encounters at the farm thus become the means by which food systems are rendered comprehensible at a human scale. Visceral and vital relations complement each other: embodied engagement with farm materialities builds place-based ties and sensibilities; while the geographic space of the farm also aids participants in visualising abstract urban food systems. This dual relation of visceral personal experience, and vitalistic cognitive representation thus reanimates participants' food relations by connecting the personal to the systemic.

5.1.3 A social relationship with food

While the physical materialities of the CFs provide compellingly (re)produce the aforementioned food values, the CFs also serve as sociocultural spaces that render these food values communal. The act of sharing food serves as a medium of social connection:

"We don't want to shame them, of course, for their choices, because that's not productive. It's about *enjoying food* and *how we can create a positive food environment* for everyone" (Respondent 3, 2025)

"It's beyond the food, it's how you share the food and how you build community with the food. You see, people gather because of food, people build community over food, tell stories over food, so I think it's just also a means for people to connect with each other." (Respondent E, 2025)

Participants were adamant in framing the CFs as social spaces where food values were not actively or indirectly imposed on others. While they hoped that others would adopt similar values through engagement with the physical space of the CF, as well as with the community of people, they refused to discursively frame the CFs as spaces primarily aimed at transforming food relations. Instead, they both claimed that the CFs sought to build social spaces where people felt comfortable enough to forge personal ties. Participants' responses can thus be read as an exercise of pragmatic utopianism (Traill, 2023) — arguing that it was neither practically feasible nor morally desirable to prioritise desired transformation(s) of food relations at the cost of interpersonal relations. Instead, an overwhelming majority of the participants felt that strong interpersonal relationships were the only means by which acceptance of participants' food values by others would occur.

Interestingly, such narration of the CFs as social spaces for forming interpersonal relationships encompassed relationships with non-human actants as well. A number of participants from both CFs recounted the sociality that their interactions with non-human actants, primarily plants and animals, brought them as well. While differentiated from human relationships, participants also considered non-human actants as part of the CF community for the companionship they provided:

"I appreciate how plants grow and their relationships ... I think it's also [about] *trying to understand the plants*. For me, *it cultivates in me, caring not only for the plants but for people*. You try to understand them, and try to build a relationship with them, and then things will be harmonious."

(Respondent G, 2025)

"When I'm there, seeing how the crops develop, I'm never there alone because even if I am not with my colleagues or the volunteers *I am with the field*." (Respondent 2, 2025)

"When I harvest, I talk to the plants. I don't know, *sometimes I think I'm crazy*, but I talk to the chickens too. I think it's like *thanking nature* for providing for me" (Respondent A, 2025)

These quotes demonstrate a sense of interdependence, where non-human actants cared for on the farm are also seen as providing care for participants. By emphasising the sociality of their relationships with non-human actants, these participants narrate and explain their non-human interactions in a manner that reflects the personal intimacy of their food-growing relations in the CFs. Given the acknowledgement of "sometimes I think I'm crazy", it is evident that while these perceptions of non-human relationships are present in the CFs, they remain outside of mainstream food relations. This highlights the perceived role of CFs in not just shaping participants' food values,

but in influencing the very roles that actants play in participants' food relations, such that food not only becomes 'from somewhere' (Campbell, 2009), but also made with 'someone(s)'.

5.1.4 Chapter summary

This chapter has explored Sub-RQ 1: "How do participants narrate the relationship(s) between food and the respective CFs?". Beginning with a discussion of food values, the chapter explored how participants in both CFs narrated their food relations in similar ways despite their vastly different geographical and sociocultural contexts. Tying sensorially rich encounters with food-objects and other actants to complex processes occurring at scales ranging from that of the body to that of the global, participants refused to define food relations as clear, fixed relationships. Instead, drawing on the idea that CF developed spatial and social relationships with food, participants highlighted the importance of CFs as spaces of diverse possibilities for human and non-human relationships. Building inclusive communities was thus perceived as paramount in creating conditions by which food values might be explored with, but not imposed on, others. The prevalence of such highly similar discursive food relations thus reflects the remarkable existence of common narratives across two seemingly distanced contexts.

5.2 Lived food relations in the community urban farms

Having established that the community urban farms (CFs) in both Vienna and Singapore foster common food values and participant narratives, this chapter turns to lived food relations. Focusing on participants' food relations in practice, this chapter evaluates the ways and extent to which engagement in CF practices shapes participants' food relations through the question: "How do CF practices shape participants' food relations?" (Sub-RQ 2).

These food relations will be framed in terms of the affordances they provide, allowing one to examine the ideas manifested through each CF's practices. In this chapter, affordances across the two CFs are organised across a threefold categorisation regarding the ways in which food relates to **self**, **society** and **conceptions of space/time** through CF practices. Actor-network theory is then used as a theoretical frame to unpack the actants and relationships that constitute and support these affordances. Identifying and tracing these actor-networks thus uncovers the extent to which participants' food relations in the CFs can be attributed to CF engagement, as opposed to personal or societal attributes.

5.2.1 "养泥土来养菜, 养菜来养人": food-self relations

Practices in the two CFs, WeltTellerFeld (Vienna) and Ground-Up Initiative (GUI) (Singapore), afford contrasting food relations with the self. While participants spoke of their food values in remarkably similar terms (Chapter 5.1), turning one's attention to CF practices and the actor-networks supporting these practices reveals a direct contrast.

Reinforcement of existing food values (WeltTellerFeld)

CF practices served to reinforce existing food values of all WeltTellerFeld participants interviewed in this study. To these participants, participating in CF served as a means by which they could show solidarity over various food-related issues, particularly ecological and social injustices. In these cases, CF practices afforded the opportunity to transform pre-existing principles into reality, by embodying these food values in their contributions:

"If you are willing to give up your Sunday or Saturday to work at a farm where you don't get any money from the produce that is produced there, *you have certain values*. This says something about a person, right? There is never anyone who asks, "can I get a certificate that shows I was here on Saturday?". So *this also shows that [they have] an interior motive to support the cause.*"

(Respondent 3, 2025)

While interviewees acknowledged that not all volunteers shared similar values with them, they argued that regular participants (the focus of this study) overwhelmingly held common food values. When speaking of 'the cause' or 'doing better', interviewees made references to similar CF practices: reducing carbon emissions at shared meals by eating less to no meat and sourcing produce locally and seasonally, supporting organic (in this case, chemical-free) food production, and raising public awareness through working in the field. Instead of serving as a catalyst for shaping food relations, WeltTellerFeld practices should therefore be interpreted as a reflection of participants' existing food relations. For instance, many regular participants were already vegetarian or vegan prior to joining WeltTellerFeld, and have professional ties to other food advocacy organisations, such as Vienna's Food Policy Council or NGO Brot für die Welt. WeltTellerFeld's tendency to reinforce existing food values is thus afforded largely by the common values of the regular participants, as manifested through CF activity.

Although these affiliations reduce the extent to which CF participation plays a role in altering participants' food values, CF still contributes to shaping lived food relations. In particular, participants argued that the practice of running educational workshops at the WeltTellerFeld meant that they could live out their food values to a greater extent — extending participants' food relations from the personal to the societal.

"As an individual, of course, you have a choice and it's important ... but then *there's the structural level which is even more important*. And I think that's what I'm trying to do with the Welteller Feld, which has *a bigger reach* than just my own personal food consumption" (Respondent 2, 2025)

The practice of running workshops, WeltTellerFeld's flagship programme, is enabled by actants at a range of scales. Viennese public schools are core actants driving demand for these workshops. Their relation to the WeltTellerFeld is twofold — their students are workshop attendees and/or volunteers, and more importantly, the schools are voluntary advocates publicising WeltTellerFeld to Vienna's education sector. According to one of WeltTellerFeld's founders, WeltTellerFeld "did not really influence" the high uptake of workshops by schools through marketing; instead, WeltTellerFeld was popularised amongst local Viennese schools by "word of mouth" (Respondent 2, 2025). This fairly organic popularisation was perceived by interviewees as vitalistic. In this formation, WeltTellerFeld seemingly took on a life of its own in becoming known beyond food advocacy circles without intensive promotion by its staff or regular participants — where CF "speaks for itself" (Respondent 3, 2025) both to promote food advocacy and to sustain WeltTellerFeld as an educational initiative. Moreover, since a majority of the regular participants interviewed were involved in the workshops in some capacity, whether directly or indirectly, WeltTellerFeld's workshop-based public advocacy work became a cornerstone of regular participants' food relations in the CF.

Nonetheless, alliances with other actants also provide important scaffolding. For instance, MA 22 (Vienna's Ministry for Environmental Protection) provides workshop funding, and WeltTellerFeld's membership in 'Kleine Stadt Farm' provides them with land access and easy access to farming supplies that align with their values. Not only do these actants logistically enable the workshops, they also transform these workshops into attractive opportunities by reducing costs — municipal funding means that workshops can be provided for free to all public school students (Respondent 4). This assemblage of municipal funds (increasing public school demand), Kleine Stadt Farm land, farm supplies (creation and maintenance of farm) and public schools (increasing awareness of WeltTellerFeld's existence) are thus all instrumental to running workshops.

Furthermore, when viewed from the perspective of participants' personal food relations, the workshops become actants in their own right holding participants accountable to their individual principles in deeply personal ways:

"At the WeltTellerFeld, I felt so *conflicted by how I behaved in the moment* [and] what I told the people [at workshops]. I thought, oh God, I have to change my routine. It's really terrible, it does not fit my personal values. Then it *motivated me again* to source my vegetables locally." (Respondent 2, 2025)

"You just feel *more coherent with your attitude* when you actually start to do something. People feel more in line with the attitudes that they already had, but didn't do anything [until they found] their place [in WeltTellerFeld]" (Respondent 1, 2025)

"Especially at that moment where my personal behavior did not match my conviction, it (engaging with WeltTellerFeld workshops) s*trengthened the push to really go back* to what I find important."

(Respondent 5, 2025)

Hence, although the WeltTellerFeld does not alter participants' food values due to the nature of the people regularly involved in WeltTellerFeld, CF participation still shapes food relations by affording the reinforcement of existing food values. This reinforcement occurs in two important areas via the practice of educational workshops: 1) extending participants' food relations from the individual to the collective; and 2) holding participants accountable to their food values as a part of their personal identity.

Exploration of new food values (GUI)

Conversely, CF practices at GUI afforded the exploration of new food values far more often than they reinforced existing ideas. This phenomenon is partially due to the nature of actants involved — during my ethnographic fieldwork, I noted that participants had a wider range of motivations for engaging in CF than at WeltTellerFeld. While WeltTellerFeld participants were largely united by

common food values that they had adopted prior to engaging in CF, GUI participants were united by a more general desire to support civil society by volunteering their time, rather than a specific interest in food. Moreover, the wider diversity of GUI participants' demographic backgrounds — age, ethnicity, nationality, religion — reflected a broader range of cultural assumptions, habits, belief systems and experiences. This diversity of actants meant that unlike in WeltTellerFeld, CF practices are not carried out with a common foundation of similar food values. Instead, participants' food relations evolved in varying trajectories based on personal encounters at GUI, as individuals adopt, reject and shape common food values in practice:

"Actually there are a lot of vegetables that I don't like ...I think at the start *I felt uncomfortable and I felt bad not to eat* [the food at communal meals] so *I used to go back before the meal*" (Respondent F, 2025)

"I actually had difficulties with [cooking] because usually I incorporate meat into my dishes so when I was told to cook organic vegetarian food, I had a hard time ... It was a bit pressurising to see the chefs — they are very experienced and they cook very fanciful and delicious vegan dishes — [while]

I'm just cooking a very simple and plain dish". (Respondent G, 2025)

"Actually, *it's quite sad* because we are also filtering out the ugly food as well, even on the farm. The [other volunteers] would be like, "the customer wouldn't want to buy [this one] because **it's too ugly even for ugly food**" ... but I would eat it so I think it's still fine" (Respondent B, 2025)

Collective CF practices, such as harvesting or communal meals, reveal tensions between participants' personal food values and/or interpretations of common food values. These frictions are exacerbated by non-human actants themselves — unlike WeltTellerFeld, where the temperate climate allows farming to be likened by WeltTellerFeld volunteers to "just another kind of outdoor activity", GUI participants highlighted how Singapore's equatorial climate intensifies the unfamiliarity of farming relative to other urban outdoor activities. These affective impressions were quantitatively corroborated by fieldwork conditions during this study: while Vienna had gentle temperatures of 18-25 degrees Celsius and humidity levels under 50%, in Singapore, conditions were around 30-34 degrees Celsius and humidity levels of at least 85%. Such weather conditions were regularly described by participants as "pleasant" and "good for farming" in Vienna, whereas the participants in Singapore never failed to complain about thermal discomfort, even going so far as to advise volunteers to bring a change of clothes for hygiene reasons. Moreover, the impact that climate has on biodiversity range meant that GUI participants encountered far more types of biodiversity than WeltTellerFeld participants (see Appendix 8.2). This made it impossible to see farming as similar to other types of outdoor activity, as GUI farming practices, while similar in technique to those at WeltTellerFeld, unearthed far more relations with actants from sun to soil. Conversely, the greater homogeneity of participants at WeltTellerFeld, together with the lower frequency of unfamiliar

non-human encounters, resulted in fewer frictions. Thus, not only does the diversity of volunteers' 'starting points' mean that GUI participants differ from WeltTellerFeld participants in their emphasis on adopting, rather than reinforcing food values, the uptake of these food values is also more uneven across GUI due to divergent experiences.

Although encounters with unfamiliar actants could create friction, GUI's CF practices themselves also afforded the exploration of new food values by providing the means by which participants could reconcile or overcome tensions. The practice of communal cooking was particularly integral in this regard. By not just allowing, but encouraging newer participants to lead cooking activities, food relations within the CF become more democratised:

"We always share recipes. They ask me how I use the bitter gourd from the farm ... and they've also taught me how to cook the sweet potato leaves." (Respondent A, 2025)

"She cooked the 冬粉 (a type of glass noodles eaten in Polynesia, East Asia, South Asia and Southeast Asia) in a *Thai style* … for me it's very unique … [Another person] cooked more in an *Indian style*, recently she went around the farm plucking leaves, flowers that *I didn't even know were edible* … It made it *meaningful to eat these things that come from within the farm*" (Respondent E, 2025)

As actants from across the farm, from plants to traditional cultural knowledge, are drawn into communal cooking, participants are able to incorporate the familiar into foreign food experiences, casting strange food encounters in a positive light. Moreover, while communal cooking was a strict rules-based practice (e.g. budgets, vegetarian food only), these rules were perceived as flexible practices implemented to improve inclusivity rather than rigid restrictions. This positive perception is likely due to the fact that this cooking took place in a broader network of actants that exhibited inclusivity and openness in other farm practices:

"Everyone has their own ways of doing things but I think we take in all their inputs and we kind of merge them together ... [For example], we say that we must put the eggshells in the corners, [so] the snails cannot get in. Then there's this person from India who would say that you [should] powder the eggshells and throw them on the soil. [So] we try out everything on our farm [before] we see which is better for the plants" (Respondent A, 2025)

"No one asks, what are you? Engineer, doctor. Oh you [are a] smart one and this one is only a cleaner ... Even when you just sit down for a short while to rest they will ask you [how your family is and share their experiences] ... It's like how our mums take care of us so *I feel very loved* when I'm there and *I just grew in confidence*" (Respondent F, 2025)

Such inclusivity, exhibited through the actor-networks of communal cooking, afforded greater adoption of new food values. As stated by one participant, "养泥土来养菜, 养菜来养人 (One cultivates the soil to grow vegetables, and one grows vegetables to cultivate the self)" (Respondent E, 2025) — through the opportunities provided by the practices of communal cooking and eating, CF became a means by which participants were motivated by friendship to collectively explore whatever alternative food values they might encounter through social interactions.

"I definitely think that *they want to share with you the best that they can offer*. So how can I not try their food?" (Respondent C, 2025)

"I used to go back before the meal [but now] I eat with them. *If your friends ask you to stay then you will stay*. After that, I slowly started to eat with them every other day" (Respondent D, 2025)

Ultimately, practices like communal cooking and communal decision-making afford far more potential to diversify participants' food relations than to create friction. However, these enabling affordances are not produced from diversity alone, but because the actants that constitute this diversity related to each other in assemblages centred around respect and generosity. This creates a culture of pragmatic utopianism (Jaster, 2021), where participants are open to trajectories of change along multiple 'lines of becoming' (Ingold, 2021), but continue to use their individual discernment in deciding which changes in food relations are personally desirable or feasible.

5.2.2 "Farming is a kind of social change": food-society relations

CF practices also shape food relations between the participants and the societies they live in. CF practices afford participants alternative food-society relations through the actor-networks that participants are embedded in. This section focuses on the actor-networks constituting volunteering cultures in Vienna and Singapore in order to understand how they shape the societal impact of the two CFs' practices.

Individualistic food advocacy (WeltTellerFeld)

In WeltTellerFeld, CF practices create affordances of individualistic food advocacy, advocating for the independent adoption of more socially and ecologically just food habits. This food advocacy is individualistic less in the sense of being self-centred, and more in terms of being oriented towards independent, individual involvement rather than as part of a collective group. Such food advocacy takes place predominantly through public education via the aforementioned workshops, which seek to extend participants' food values into the realm of collective action. However, food advocacy is present in the norms established at WeltTellerFeld as well. For instance, the farm is openly accessible to the public throughout the week even when there are no staff or volunteers

present, allowing it to function as a recreational public space. Following Wylie (2007), who argues that spatial landscapes can be understood as texts constituted by material signifiers of meaning, the landscape of WeltTellerFeld becomes a text that expresses WeltTellerFeld's food values to the public. This occurs literally, through the large, interactive signboards placed throughout the farm to impart factual knowledge on food systems in Vienna, Austria and the world (see Figure 9).

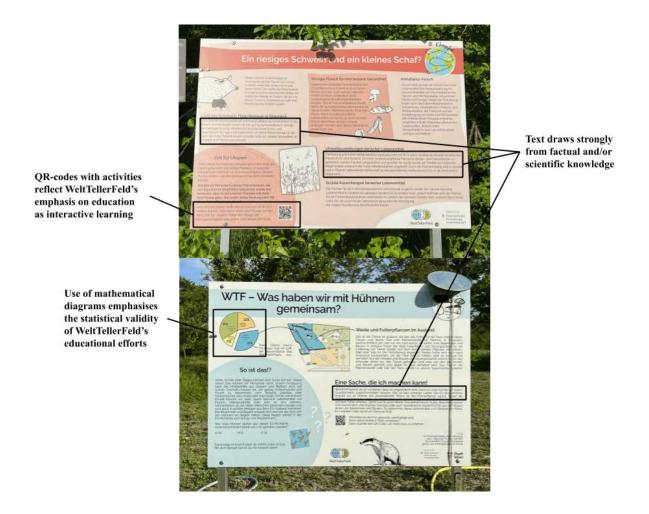


Figure 9: Annotated photographs of the WeltTellerFeld signboards demonstrating their educational strategies (Author's own)

WeltTellerFeld's planting practices also afford such food advocacy through the crops chosen, planting techniques, and their distribution across the farm. Referencing Bruckner et al. (2019)'s Food and Agriculture Biomass Input — Output model, the farm is laid out as a visual representation of the land and crops needed to support the average diet of one person in Austria.

"For the average diet of *one person* in Austria you require this 3000 square meters, and that shows what is being produced for direct consumption ... and the other, larger share for production of animal-based food products ... we display that on the field and *hope to get people to understand the*

connections between individual lifestyles and global challenges such as climate change, land use, biodiversity crisis, etc. via this consumption." (Respondent 1, 2025)

This planting system thus visually displays the large amount of land, resources and labour required for food production, as well as the significant dependence of the Viennese urban food system on foods outside of Vienna. The farm layout, crops and signage thus become actants involved in food advocacy. More specifically, WeltTellerFeld's planting practices transform the spatial landscape into a legible text emphasising how, in Austria, people's relations to food as consumers has significant socioecological repercussions. As people with the most frequent contact with WeltTellerFeld landscape, participants not only become complicit in relations of informational food advocacy between WeltTellerFeld and the city, they also become active contributors through their efforts to construct, maintain and explain the farm landscape.

The predominance of informational advocacy affordances between participants and the city is further explained by Vienna's volunteering culture, which limits the potential for alternative food advocacy practices to emerge. According to participants interviewed, volunteering in Vienna is generally seen as a recreational activity, engaged in for pleasure when one has leisure time:

"The culture of volunteering is more sort of seeing it as *something that you do as extra*, recreationally *rather than as a responsibility or a duty*" (Respondent 1, 2025)

"It's not like the Food Policy Council *where you really have to be more intrinsically motivated* [by food issues], but you think, *oh yeah*, *why not*, it's a nice spring day. Get active outside, learn a bit."

(Respondent 5, 2025)

"Voluntary work is very much perceived as being something you do voluntarily [because you want to], so *you can of course decide at the last second* if you come or not." (Respondent 3, 2025)

Participants believed that the WeltTellerFeld's inability to extend its pool of regular volunteers beyond individuals interested in food issues lay in the individualistic way that volunteer work is perceived in Vienna. Categorised alongside other outdoor recreational activities like 'hiking' or 'spending time with friends', participating in WeltTellerFeld becomes an individual — rather than collective — activity that is externally perceived as one of many independent choices for personal enjoyment in Vienna. While this may not impact participants' food relations directly, it diminishes the possibilities for food advocacy practices. Across several months of ethnographic fieldwork, there was only one non-staff volunteer that would participate regularly other than myself. Such limited and irregular manpower resulted in an overall dearth in not just farming knowledge, but also in knowledge of the sociophysical WeltTellerFeld landscape itself. Volunteers were primarily dependent on guidance from the two founders — the only two participants that were constantly present. This created a vicious

cycle: the recreation-oriented, individualistic volunteer culture in Vienna diminishes volunteer availability and experience; creating overdependence on a few regular participants who can make informed decisions, thereby decreasing the sense of ownership that new volunteers might have towards the WeltTellerFeld, which further disincentivised new volunteers from making a regular commitment to CF.

"We are really not the kind of people who want to be any kind of boss. I really hate hierarchies ... [we would be] so happy to share a part of the cake and give away some of the work ... We want to give others the place to make it their project in the very same manner, but that is hard to implement. I think *I don't know how it could better be done*" (Respondent 1, 2025)

"We all have to organize ourselves. If you are purely volunteer-based, then it's really hard to also find the time to improve that structure, even though it's so super necessary." (Respondent 2, 2025)

Moreover, this vicious cycle is exacerbated by the desire of WeltTellerFeld's leadership to create a horizontal, democratic culture. While such a lack of hierarchy allows those who are already involved in and/or knowledgeable about food advocacy to actively contribute to WeltTellerFeld practices, it fails to provide a sense of structure for more casual volunteers with no intrinsic interest in food relations, preventing casual volunteers from gaining initiative across volunteer sessions. I observed this both in myself and in other volunteers during the ethnographic fieldwork, where casual volunteers with gardening experience but no significant interest in food issues would venture technical suggestions, but would not be able to share personal opinions on food issues. Similarly, even as someone with both gardening experience and personal interest in food issues, I was initially hesitant to make decisions or offer suggestions, and only grew to have greater initiative as I became more familiar with the site and people. In these cases, the limited presence of actants that could afford volunteers greater initiative — such as tool labels, directional signage, instructional guides prevents casual volunteers from gaining a sense of ownership. The disabling affect of Vienna's individualistic volunteering culture on WeltTellerFeld volunteering is thus combined with active decisions that foster specific CF practices (e.g. overreliance on regular participants' guidance) or lack thereof (e.g. failure to create actants that facilitate non-hierarchical participation beyond horizontal leadership). Consequently, there is a twofold effect on participants' food relations with society, where 1) CF participation has not been able to expand beyond the portion of civil society already engaged in food advocacy; and 2) farm activities are limited by manpower and expertise constraints. Hence, while WeltTellerFeld may be a significant actant shaping diverse participants' individual food relations, its CF practices and the actor-networks they are embedded in have resulted in an inability to widen this community of participants.

Collectivistic citizenship subjectivities (GUI)

In GUI, CF participation affords citizenship subjectivities, motivating participants to treat their food relations as part of their pre-existing belief systems. Specifically, participants contextualise CF food values and relations within existing societal frameworks of Singaporean civic norms, where it is the individual's duty to serve the wider community. Such citizenship subjectivities are inculcated through routinised CF practices during volunteering sessions (see Appendix 8.2; examples include daily farm chores and post-session cleaning tasks). These routines emphasise horizontality and accountability through the interdependence of volunteers within and across successive sessions.

By encouraging volunteers to take ownership over basic actions, these CF practices articulate volunteers' personal positive impacts, allowing them to build confidence. Repeated over time, this sense of responsibility motivates participants to take initiative over CF practices at a larger scale — from guiding newer volunteers to suggesting or implementing ideas:

"Some of the students that come here for [compulsory] community service, they wear masks [and] don't want to talk, then they *slowly open up* ... and even when they don't have to, they come back and now they're *leading groups* ... *very empowering* for them" (Respondent F, 2025)

"[Long term volunteers] do really leave some impact on me. Say, [name of friend], he makes a conscious effort to deposit his food waste in the farm or brings plastic to recycle. I mean, he doesn't need to do that but at least he's making an effort. I think when every individual makes such a small effort it has an impact on me to do better for myself' (Respondent G, 2025)

Participants recounted how this sense of initiative led them to transform social relations beyond the CF at the individual and collective scales. For instance, many participants I met during ethnographic fieldwork joyfully spoke of "what we owe to society" or "duty". These accounts were replete with references to citizen responsibilities, regardless of whether the interviewees had formal Singaporean citizenship or not:

"Over time, it evolved into a place where I had acquired enough knowledge to conduct farm tours. Then, it became a platform for me to share with other people. So, *it's no longer just about me, but about what I can do for other[s] (both human and non-human)*" (Respondent D, 2025)

"[It's like] 好公民 (name of the Mandarin-medium civics and moral education curricula used in Singapore's local schools; literally: *good citizen*) in primary/secondary school, but *here you actually learn to become a person who can make a change ...* farming is not just about agriculture, *it is a kind of social change too*" (Respondent C, 2025)

In extending civic duties beyond the conventional human/social the more-than-human/agricultural, participants not only build on, but also enhance, existing civic frameworks, developing new nuances in citizen subjectivities. Through CF practices, participants began to consider more-than-human actants as a medium for forging social change - and more importantly, also as members of urban society in their own right. This paradigmatic shift indicates new moral and cognitive ties afforded by food relations in CF. However, this strong sense of ownership does not necessarily demonstrate that CF practices shape participants' food relations to a large extent. Firstly, it is unclear whether such a sense of initiative arose specifically from CF practices as opposed to external societal influences. There is strong formal emphasis on collectivism in Singapore, supported by a heavily institutionalised culture of mandated civil society involvement (Poole, 2016). For instance, volunteering experience contributes towards national examination scores and can improve residency applications (Thaiyalan and Choo, 2024; Wong, 2024). Combined with the aforementioned educational curricula centered around citizenship responsibilities, these policy frameworks serve as actants inculcating a strong sense of social responsibility where state-sanctioned, socially 'appropriate' citizen participation is comprised by contribution to pre-existing civil society spaces like GUI. Volunteering is thus frequently framed as a societal duty, rather than a recreational preference. Hence, taking the initiative to contribute to food relations through CF practices might simply reflect an application of latent citizenship subjectivities in practice, rather than the introduction of new values.

Secondly, even when CF practices may have fostered such citizenship subjectivities, this sense of ownership was not applied specifically to *food* relations by all participants. This is reflected both in ethnographic fieldwork and interviews, where many participants described CF as contributing to more general moral change, even rejecting the premise that their food relations had changed. For these participants, growing and sharing food merely served as a medium by which social and moral lessons not directly associated with food were imparted:

"I see that *it's more than just doing agriculture*, it's also a place where people are helping each other, and it's doing something for the community" (Respondent A, 2025)

"Farmers don't just do farming. Farmers have to solve all the everyday issues in the farm. GUI does give the opportunities and also the confidence ... In the corporate world, [when things go wrong], instead of praising you for initiative, you will get blamed for creating an incident. But in GUI [CF practices] make us responsible for decisions, and we mitigate our own risks, and we even get appreciated for having this kind of initiative." (Respondent E, 2025)

In these cases, CF does not directly shape participants' food practices. Instead, CF shapes food relations by forging new moral and cognitive ties between civic duty and food, where food and

agriculture is both a part of society itself to which one owes a duty, and a medium for carrying out societal duties.

5.2.3 "Like a whole different world": food-space/time relations

Lastly, CF practices also afford participants from WeltTellerFeld and GUI different relations towards space/time. These conceptions of space/time tend to be centered around specific imaginaries as reference points, with participants from each CF drawing from a specific idealised landscape: the countryside in WeltTellerFeld, and the kampung in GUI. Significantly, participants overwhelmingly employed these specific landscapes as reference points to describe conceptions of space/time in each CF, demonstrating the cohesiveness and strength of the imaginaries within the CF communities. By providing a vocabulary by which participants might articulate envisioned food relations, these imaginaries constitute utopic ideals that inspire participants' lived practices.

While previous sections revealed a duality in the two CFs' food relations towards self and society, the vastly different sociocultural landscapes of Vienna and Singapore suggest that these idealised conceptions of space/time should be read as two of infinite trajectories, rather than as a binary contrast. Nonetheless, they remain noteworthy as an explanatory tool for how similar discursive food relations may evolve in highly different trajectories of practice, when mediated by vastly different sociocultural imaginaries.

Space/time of the countryside (WeltTellerFeld)

Many WeltTellerFeld participants drew on an idealised imaginary of the countryside to explain the effect that CF practices had on them when they worked on the farm. This allowed them to connect CF practices of farm maintenance such as planting, weeding, or tilling to a sense of ecological refuge that draws on a long history of imagining the countryside as a place of therapeutic rest (Williams, 1975; Yarwood, 2023).

"What actually still resonates with me is that I grew up in a small village on the mountain in Tyrol ... I was there [at the neighbour's farm] all day mostly, so I think that stayed with me. [Now] when it's really about working with the soil, maybe weeding, or mowing the lawn, it's very meditative, and reminds me of that." (Respondent 2, 2025)

"It's *peaceful*, it's quiet. *You hardly know you are in Vienna* and I think sometimes that is what we need, to get away from the city and *slow down* ... When you are here it is *easy to remember how* were are connected to nature" (Respondent 4, 2025)

"It's like a whole different world ... we have this moment of of sharing food and just enjoying the food in nature so it helps me to ground myself" (Respondent 5, 2025)

These quotes imagine CF practices at WeltTellerFeld as a way to experience a different space/time away from the city of Vienna. Drawing both from long-held archetypes of rurality and personal experiences in actually-existing rural Austrian landscapes as referrents, the universalist ideal of 'the countryside' is employed as an object of desire. This imaginary thus transforms WeltTellerFeld into a space of peace and respite from the 'city', which is associated pejoratively with frenetic energy and man-made artifice. Moreover, given that these archetypes are referenced by people who are cognisant that the realities of the Austrian countryside may not reflect their ideals, it is evident that this imaginary is intentionally harnessed as a representational device to envision the WeltTellerFeld landscape in terms of a harmonious, well-functioning ecosystem. By affording WeltTellerFeld a different perceived space/time, participants can conceptualise CF as a kind of (temporary) escapism from the realities of living in Vienna.

CF practices, focused on repetitive, simple tasks involving physical labour, are instrumental in fostering such perceptions. Intimacy is derived from participants' prolonged interaction with individual ecological actants like biodiversity and crops, which evoke connections to the imagined landscape of the countryside. Food on the farm, framed as the antithesis of food in the city, which is predominantly found in supermarkets and "does not grow on trees or in soil", thus holds greater meaning to participants through their personal knowledge of the individual actants and relations entangled in its production. The countryside/city synecdoche thus evokes a contrast between the perceived intimacy and specificity of (desirable) CF food relations and an abstracted set of (undesirable) mainstream urban foods. Food is thereby animated with an agential capacity to cognitively and emotionally remind one of the relations embedded in their production, encouraging CF participants to make food choices more aligned with their food values:

"[Being at WeltTellerFeld allows for] being conscious of how something is produced and what kind of suffering goes into the food ... *You can taste the suffering if you have the knowledge*." (Respondent 3, 2025)

Moreover, such recognition that the imaginary of the countryside is not a lived reality affords it greater motivational impetus in the eyes of participants by serving as an aspirational ideal. Respondent 3 provides further evidence that CF participants vitalistically 'taste' the suffering of food by acknowledging how it is common knowledge that meat production and industrial agriculture play significant roles in conservative and/or lower-income Austrian identities:

"In Austria, it's such a hard topic to talk about ... people hate it if you try to make them not eat meat ... especially in the countryside, where people are more conservative — they won't change their food habits because to them it is too woke" (Respondent 4, 2025)

"For example, [lower income] children have much more industrial food in their diet, which you can buy cheap from Hofer. They never think to eat bio (organic) because it's more expensive so [they think] it's bad ... there's a resentment, where because you can't afford it, so you'd rather talk bad about it' (Respondent 3, 2025)

Thus, although the lived realities of the Austrian countryside may not fully align with WeltTellerFeld's food values, the space/time of the countryside is still selectively employed by WeltTellerFeld participants as an aspirational imaginary — affording utopic inspiration during CF practices rather than a realistic model for food relations.

Space/time of the kampung (GUI)

While the spatially-oriented imaginary of the countryside employed by WeltTellerFeld participants is built on idealised representation of existing rural spaces, the imaginary of the kampung references a temporally distant utopia. While not necessarily representative of historic kampungs, which could also be unsanitary, fragile and rife with social tensions, the kampung has come to represent the urbanisation of Singapore as a Faustian exchange of a slower, more caring space/time for material prosperity. Like the Austrian countryside, it serves as a motif most commonly referenced in terms of the 'kampung spirit' — an approach to life idealised as more genuine and kind towards humans and non-humans alike in its simplicity and collectivist orientation (see Glossary of Terms).

In GUI, the kampung is referenced to describe space/time relations with food not unlike those espoused by WeltTellerFeld participants regarding the countryside:

"The impression that I'm getting [is that] GUI wants to impart the kampung lifestyle ... *Growing* your own food. *Gathering together*, eating together, that kind of thing" (Respondent C, 2025)

"They have a kind of initiative in the older generations [when they lived in the kampung], but the younger generation does not have it any more. So *it's a degradation of human expertise*" (Respondent B, 2025)

"The aunties — *they tell beautiful stories* about what they do with this, what they do with that ... Even [with] just one veggie, they can make up a lot of menus and medicines ... *Even with the same ingredients, they can do a lot of things*." (Respondent A, 2025)

The space/time of the idealised kampung thus holds in common with the WeltTellerFeld countryside a sense of relationality connecting one with nature and people through food. However, its specific cultural history as a mode of living lost to time adds an additional element of nostalgia for the past, believed to be a time of greater resourcefulness afforded by traditional and/or cultural knowledge. The strength of the kampung imaginary thus reflects the participants' sense of moral

values and cultural knowledges lost in the present to an elusive past way of living. Simultaneously, this sense of nostalgia fosters intergenerational exchange by building respect for the elderly and a desire for knowledge sharing. The idealised space/time of the kampung, in representing more culturally informed and epistemologically flexible food relations, thus transforms elderly volunteers from ordinary volunteers into living archives of kampung life who will disappear with time (kampungs have been gradually removed from the city since the 1960s; see Glossary of Terms). Thus, elderly volunteers' roles as valued repositories of past food knowledge(s) affords them — and the non-human food/agricultural actants they hold traditional knowledge of — greater respect.

5.2.4 Chapter summary

By exploring Sub-RQ 2: "How do CF practices shape participants' food relations?", this chapter has demonstrated that the highly similar food narratives discussed in 5.1 are manifested as vastly different pathways in practice. The situated actor-networks of the two CFs afford contrasting food relations with the self, society and space/time based on the realities they are embedded in. While participants at WeltTellerFeld tended towards reinforcing individual food values, CF was more likely to be a means by which GUI participants collectively explored, and even adopted, new food values. Such food-self relations are inextricable from food-society relations, which were divided across the cases between volunteering practices affording individualistic food advocacy (WeltTellerFeld) and collectivistic citizenship subjectivities (GUI). These vastly dissimilar orientations — working towards materialising a pre-existing set of ideal food relations (WeltTellerFeld) and explorative curiosity about alternatives to mainstream food relations (GUI) — are clearly embodied in the cultural specificities that constitute participants' food-space/time relations. Such cultural specificity was embodied in the space/time imaginaries behind participants' food relations. In WeltTellerFeld, the space/time of the imagined (Austrian) countryside afforded a utopic vision for participants' food relations, transforming CF into a series of ever-shifting environmental practices of manifesting food relations idealised by this imaginary. In GUI, the space/time of the imagined kampung encouraged intergenerational sociocultural exchange by inspiring in participants a desire to recover an elusive past through 'lost' traditional knowledges. This divergence in the type of influence CFs have on participants' values reflects not just different trajectories of food relations despite similar discourses, but also different extents to which the farms themselves contribute to these relations.

5.3 Lived food relations in everyday life

The space of the community urban farm (CF), as a food-growing and food-sharing space, is one where the centrality of food relations is immediately evident. However, since food is a living necessity, food relations extend far beyond lived relations in CFs, which make up only a portion of participants' lives. This study thus turns to everyday practices to understand how beliefs and lessons derived from CF participation interact with participants' everyday lives. By asking the question: "How do participants' everyday practices shape their food relations?" (Sub-RQ 3), this chapter examines **metabolic flows** and **knowledges** to understand what everyday practices afford participants' food relations, and why.

5.3.1 Metabolic flows foster ...

This section examines the metabolic flows between food materials and bodies in order to understand the food relations these metabolisms afford participants. As fragmentary archives (Agostinho et al., 2019), participants' food diaries treat meals as artefacts of encounter, shedding insight on what materials become entangled in participants' diets, and their implications for their food relations.

... dietary dependability (WeltTellerFeld)

WeltTellerFeld participants' food diaries exhibited extensive similarities in terms of the foods incorporated. All participants were able to consistently keep vegan or vegetarian diets, regardless of the setting of their meals (e.g. individual/shared meals; at home/food establishments). Moreover, each meal had a predictable composition of carbohydrate, meat-substitute (e.g. cheese, tofu, mushrooms), and at least two types of fruits or vegetables, generally homemade and with balanced portions of each type of food (See Appendix 8.4). Furthermore, while there was a regularity in food preparation techniques, with the majority of meals being made using healthier techniques like baking or eating fresh, the materials comprising these meals exhibited a high degree of variability, with food materials generally not prepared the same way twice in a week.

While such consistency in everyday food practices reflects a strong bodily discipline, the ability to commit so thoroughly to diets aligned with the emphases on nutrition, socioecological sustainability and food advocacy found in WeltTellerFeld reflects a versatility in the strategies adopted to suit personal circumstances. For instance, when interviewed, participants specifically emphasised that maintaining a diet with low to no meat consumption (and thus more socioecologically sustainable food relations due to lower carbon emissions) was not just for environmental and bodily well-being.

Instead, they argued that their very bodies became living proof of the nutritional and economic viability of 'alternative' vegan or vegetarian diets as opposed to mainstream omnivorous diets:

"I had a colleague who was vegan back at the time. He brought his food every day to work and that was really the thing that clicked in my head because *I just saw what he ate every day and I got some idea of what I could eat* and it was actually like really cool food." (Respondent 5, 2025)

"I think it's like gendering your language or not saying [racial slur now considered taboo in Vienna due to increased exchange with other races]. I feel like how we eat changes and gets *more inclusive* over the years *when you see more people eating in alternative ways*." (Respondent 4, 2025)

The participants' diets thus transformed their bodies into microsites of individual food advocacy, rendering the personal inescapably political through the metabolic actor-networks participants are embedded in. Participants identified several key actant relations. Firstly, the widespread availability of vegan or vegetarian food in Vienna makes incorporating desired food materials into one's diet highly accessible. This allowed them to improvise a wide variety of strategies for living out desired food values within the context of their personal, everyday lives.

"I would definitely prefer to buy from 'bio' supermarkets or 'unwrapped' stores but they are super expensive and not so common. 95% of my shopping, I do it at SPAR or Lidl ... I always go to SPAR and stock up on my tofu so I do the rest of my grocery shopping there as well, but I try to buy bio food. It's not 100% [aligned] with my values, but I just can't afford it and it's quite close to 100% already" (Respondent 4, 2025)

"Everyone knows that [we] are vegan [at work] so *when we share food everyone just brings vegan* [food] naturally, it's very respectful" (Respondent 2, 2025)

There was a high degree of contentment as they felt that vegan or vegetarian food materials were both fairly spatially accessible and socially acceptable in Vienna. This ability to fulfil their aspirations was partly due to ample provision by mainstream urban food actants like supermarkets, but was also significantly supplemented by more niche sources like farmers' markets and CF. These sources provided direct access to food materials that met their ideals precisely — in terms of freshness, socioecological sustainability and affordability in ways that corroborate the sub-trends observed by Klimek et al. (2021):

"[The food at a farmer's market] was so fresh, so tasty, so interesting — things from ginger to peanuts, to all kinds of salad; *things that I had never eaten*. There are some things like pak choi or tatsoi or mango that I only got to know here." (Respondent 1, 2025)

"I'm always curious and *I buy those to see how they taste* ... and the price was *much cheaper than in organic supermarkets*." (Respondent 2, 2025)

"It's not ideal but I try ... When I'm at the WeltTellerFeld I have the chance to go to the [Kleine Stadt Farm] Hofladen (farm shop, where agricultural goods produced by a farm are sold directly in an on-site shop in the German-speaking and broader European world) to buy groceries, so that is much better too" (Respondent 4, 2025)

Moreover, their farming experiences with CF also encouraged many participants to experiment with home-growing. Although such food production was small scale, it provided a consistent and not insignificant source of food that met participants' ideals:

"A lot of my food (at least 2.5 meals per week) comes from my garden. Not like the most, but I try [to plant] as much as possible and as efficiently as possible" (Respondent 1, 2025)

"I only I have a very small balcony so I'm very limited in my food production possibilities, but then I was still inspired to try growing these *mini cucumbers, and now I grow other things*" (Respondent 2, 2025)

It must, however, be acknowledged that participants' ability to employ such a wide range of strategies in service of dietary dependability is not only due to personal discipline and resourcefulness, but their status as upper-middle-class individuals with regular income. Even as they recognised income and time as a constraining actant preventing them from consuming in ways perfectly aligned with their food ideals (e.g. only consuming from local, non-supermarket, sustainable sources), they also highlighted how these actants simultaneously enabled their access to food materials that were personally acceptable to them, and provided them with the space needed to grow foods. Hence, WeltTellerFeld's everyday food sourcing practices, supported by upper-middle-class lifestyles, personal dietary discipline and widespread urban availability, afforded participants a strong dietary dependability — allowing them to generally consume and produce food in desired ways, albeit with room for improvement.

... dietary diversity (GUI)

Ground-Up Initiative (GUI) participants' food diaries, characterised by their diversity, afforded vastly different food relations. Unlike WeltTellerFeld participants, who predominantly consumed Western cuisines, GUI participants drew from a wide range of cultural influences (Appendix 8.4). For many participants, interaction with CF participants afforded cultural exchange in recipes and food sources, which was then incorporated into their everyday food practices — whether in home cooking or in food ordered outside.

Moreover, such cultural exchange went beyond visceral dietary relations. Food served as a medium by which unfamiliar cultural beliefs and environments could be made 'lively' for participants as they incorporated them into their personal lives:

"Singapore doesn't really talk about seasonal food ... Now, [after learning about eating seasonally from Chinese GUI participants], when I go grocery shopping [with] my parents, I will ask them 'Is this in season?' because if it is, *it's definitely healthier for both ourselves and for the planet to eat seasonal foods*" (Respondent D, 2025)

"They shared their knowledge [on] what plants have to offer. It's not just food — they have medicinal properties, there are so many cultural, historical backgrounds associated with plants that *I was really* fascinated and wanted to learn more" (Respondent G, 2025)

Participants highlighted how their food materials chosen were influenced by Singapore's highly diverse food environment, but had only developed nuanced knowledge of these food materials as a result of friendships formed at GUI. Such overflow of social exchanges in CF into everyday life, in animating unfamiliar cultures, increased the centrality of food in lived relations and enabled participants to develop new food cultures. A culture of improving food waste metabolisms was particularly prevalent:

"[Now] when I cook my food, *I make sure that I will cook just enough* so I can finish it. I do not throw away food. That's my number one principle" (Respondent D, 2025)

"So usually, I would just eat and if there's food waste then I would just leave it there. But in GUI there's a culture where we just take what we can finish, and after we take that amount of food, we ensure that we eat it up because it is lovingly cooked by others to share [their food cultures]. That's a good habit. So, I bring [the practice] home and I try to finish my food ... Little changes like using the water more mindful[ly], and recycling my milk cartons." (Respondent A, 2025)

However, participants' greater appreciation for food increased the food materials in their diets, rather than replacing existing food habits with more socioecologically sustainable habits (e.g. replacing foods with higher carbon emissions like meat or imported food). Instead, such exposure was primarily framed in terms of the personal enjoyment participants derived.

"Using an earth oven cannot be associated with sustainability — in fact it's using charcoal to heat up the oven ... it's about how all these extra efforts, the unique way of making that bread or pizza, is actually to give appreciation to food. Through the process of making, you can see that it's something quite elegant and it brings joy" (Respondent E, 2025)

"Many of us will say, 'Why would I do that? We are young, there are still *so many foods that we have never tried* — *why would I restrict myself with these rules* [on what I should eat]?" (Respondent D, 2025)

Although strong visceral food relations of gustatory enjoyment may have made participants unwilling to give up certain food relations, vitalistic relations with other actants also contribute to disincentivising change. Firstly, organic and locally-grown foods are perceived as unaffordable and luxurious by participants, increasing the barriers for switching. For instance, during my ethnographic fieldwork, volunteers were reluctant to purchase the vegetables grown at GUI because they were 10-20% more expensive than those sold in supermarkets and local markets — a fact corroborated by Nakajima (2022). Instead, they would collect unwanted vegetables from the farm or only buy GUI vegetables as an occasional 'treat'. Moreover, the material economy of the local urban food system in Singapore presents high barriers-to-entry for local farms seeking to enter the industry (Nakajima, 2022). With major food retailers (e.g. NTUC Fairprice, Dairy Farm International, Sheng Siong) accounting for more than 50% of Singapore's market share, local farms face immense competition and little bargaining power over agricultural contracts, often resulting in higher distributional costs (Kwek, 2025). These factors, together with growing concerns over the rising cost of living, further increased participants' unwillingness to spend on alternative foods (Ngu et al., 2023):

"At least for my family, they don't really go for the organic [vegetables], they just go for the most value-for-money kind of purchases ... *It's really a bit hard to say that I should be paying a higher price for organic food* or more sustainable food when I can be going for the cheaper option."

(Respondent C, 2025)

Secondly, sociofamilial networks play a strong role in participants' food relations. Singapore has a strong sociofamilial welfare system, where caregiving is heavily reliant on family members (Teo, 2010; Woods, 2021). Many individuals, therefore, live in multigenerational homes or spend time regularly with extended family. Such interdependence thus extends to everyday food relations as well, leaving many participants subject to the dietary preferences of their households. This may cause them to adopt food choices that do not align with their food values, because they value familial harmony more:

"Meat is a staple food in my family and *they can't live without meat*. So basically, *I go with the flow* because I'm not the one cooking." (Respondent D, 2025)

"I usually don't say anything because *it's a bit touchy*, right? ... When we talk to each other, I feel like most of them think that eating vegetables is not healthy enough and you need to eat meat for sustenance and growth" (Respondent F, 2025)

"With other people, I kind of accommodate [them] more, I'm okay with them ordering meat ... but when I'm on my own I try to stick to vegetarian food" (Respondent B, 2025)

Thirdly, hawker food, which often contains meat, is a cornerstone of Singaporean identity. As a cheap, conveniently accessible food source, historically sold by itinerant hawkers to workers, it has been a staple in urban food metabolism even before the city became an independent nation (Low, 2025). Regular consumption of hawker food by locals today is thus both a cultural habit and a functional adaptation to the fast pace of urban life. Moreover, its multicultural hybridity, combining food materials and culinary practices from multiple places, has transformed it into a symbol of heritage and UNESCO-recognised national pride (Shee, 2023). This is reflected in participants' food logs (Appendix 8.4) — hawker food and other foods prepared outside the home played a prominent role in many participants' food practices. For many participants and the sociofamilial actants they are closely bound to, switching from meat to alternative foods would be to give up hawker food, and thus tantamount to removing a mainstay of daily life and personal identity:

"[When] people go for food, usually they'll eat *chicken rice*, *soto ayam*, *char siew*. Or [their child] likes *fishball noodles*. Yeah, so *we still need meat* lah." (Respondent G, 2025)

"I love meat — I know it is bad for the environment but *how can you ask me to give up the bao I* have eaten every day since I was 5? Hokkien mee, chicken biryani, ba kut teh, so many foods that I cannot live without ... I can change all my other food habits except this one" (Respondent F, 2025)

"Sometimes I tell the [hawker] auntie I [am] vegetarian, but then she will give me fish or the fried rice with tiny tiny bits of meat and tell me it doesn't count. Then what can I do? *She does it out of kindness* because she wants me to enjoy the good food so *I cannot say no*" (Respondent D, 2025)

The high amount of dietary diversity in participants' everyday food practices, and the gustatory enjoyment derived from it, thus presents a significant barrier to changes in participants' food relations. Although everyday food metabolisms amongst participants afford them greater dietary diversity, further supported by CF engagement, it may translate into more culturally appreciative food relations without changes to the socioenvironmental sustainability of food habits.

5.3.2 Experiential knowledges foster ...

Everyday practices, in cultivating habitual routines, also afford various forms of experiential knowledges. This section analyses how food serves as a foundation upon which experiential knowledge fosters urban place-making (WeltTellerFeld) and personal moral development (GUI).

... urban place-making (WeltTellerFeld)

WeltTellerFeld participants' domestic practices of food production create urban place-making affordances. By navigating Vienna in pursuit of affordable, socioecologically sustainable food, the city becomes understood by participants in terms of the food it provides them in everyday life. Over successive interactions with specific places and routes, experiential knowledge is developed, shaping unique relations between urban places, the food bought there, and the participants. Amongst participants, such affinity is especially prominent in the space of the home. As a private space archetypically viewed as a refuge away from the urban (Gerhard and Malachuk, 2024), it is participants' food-making and -growing practices that contribute a new dimension to place-making, where more-than-human ecological actants become intimate household companions:

"We grew cucumbers on our balcony last year, and we appreciated those little cucumbers *like they* were made out of gold. If you see something grow from the moment you put in the little seed till you can harvest it, it becomes a part of you" (Respondent 3, 2025)

"If you plant raspberries on your balcony they taste much sweeter than if you buy them. *It doesn't* matter if they are really sweeter or not, but they taste sweeter because you taste the labor that you put in there to them and the time you spent with them" (Respondent 5, 2025)

This range of intimate ecological ties, cared for as a part of participants' daily routines thus allowed them to build deeply personal food relations through the emotions evoked. Thus, 'home' becomes associated not just with refuge, but as a place of active nurturing and mutual care between participants and their plants. Moreover, these domestic food practices shape broader urban food relations by connecting foods at home to foods in other places, often through chance conversations. For instance, many of the meals shared at WeltTellerFeld were a mix of WeltTellerFeld-produced, home-produced and Kleine Stadt Farm-produced foods, often mixed in with ingredients from local farmers' markets. An exercise in pragmatic utopianism (Jaster, 2021), seizing opportunities for exploration and improvement when they arise, food thus became an actant exchanging place-making affordances between participants. Through these food relations, participants are then intimately tied to a broad spectrum of locations across Vienna that the remaining participants may never have visited:

"It's very important for small-scale civil society activities [like WeltTellerFeld] to share ... A lot of effort can be avoided by just sharing experiences ... we would share all our information, our educational material, our sources, because what could be better than someone else doing the same?

Everyone has this attitude towards sharing" (Respondent 1, 2025)

"[Redacted] tells me about food she has prepared and where she got the ingredients she used. And that inspires me to try other stuff or to visit a new place [to get food]" (Respondent 2, 2025)

In creating such a network of urban places through their connections to food eaten together, new food relations are produced amongst the other participants when they are incorporated into everyday practices. Hence, experiential knowledge afforded by participants' everyday food practices not only contributes to individual urban place-making, but when shared through CF practices like eating together, creates a positive feedback loop by inspiring new everyday practices.

... personal moral development (GUI)

Conversely, GUI participants' everyday food practices transform food into a catalyst affording personal character development. This is especially reflected in participants' food-growing efforts, which allow them to develop experiential knowledge of plant species and environmental actants:

"There's *a lot of rain* ... *The sun is going to be blocked by [the] HDB block* (abbreviation for high-rise public housing developed by the Singapore Housing & Development Board, a government agency. HDB housing accounts for more than 80% of Singaporeans' homes, with the majority owning these homes) itself so definitely it won't be the same [as my previous apartment], but it can present an opportunity to experiment, maybe with *dou miao or beansprouts* ... and when [we] come to the other half of the year the sunlight will be quite good then we can change it to *kangkong or chives*" (Respondent E, 2025)

Surprisingly, whether or not these food-growing efforts were successful was generally less significant to participants than the moral lessons they could derive from these experiences:

"Why are we doing all these things [when the rate of success is so low]? *The faith must be very strong* ... if we cannot keep hanging onto it, [if] we cannot sustain it [we] must always be prepared to let go. No matter what, *if [you] still can live happily that is somehow also a way to live life*, it's just *[about] do[ing] what is the best right now*" (Respondent E, 2025)

"I mean being environmentally friendly is a goal that I have ... But *the important part is not the food*, it's that *it's a journey* that I do at my own pace. Yeah, *sedikit sedikit, lama lama jadi bukit* (Malay proverb that emphasises the ability of small, incremental efforts to create success; literally: "bit by bit, slowly, it becomes a hill)." (Respondent A, 2025)

In these cases, the experiential knowledge that participants develop from everyday practices shapes their ability to adopt or reject food habits. Unlike in the case of WeltTellerFeld participants, who focused directly on food relations, moral relations afforded by their food relations (or the lack thereof) are more significant to GUI participants, even when these moral lessons do not shape lived food practices. While similar to Goodman et al. (2012)'s study of American CFs in that certain food relations (in this case, food habits) were not significantly altered, the case of GUI does not necessarily

reflect the same uncritical reproduction of food values as observed by Goodman et al. (2012). Instead, it reflects the ongoing tension between participants' food values and other sociocultural priorities highlighted in 5.3.1. While remaining only partially resolved, these tensions serve as a catalyst triggering new changes to participants' moral development; an exercise in pragmatic utopianism (Jaster, 2021) that seizes new encounters as opportunities to improvise and learn.

5.3.3 Chapter summary

This chapter has explored Sub-RQ 3: "How do participants' everyday practices shape their food relations?" by exploring participants' everyday practices in terms of metabolic flows and experiential knowledges. WeltTellerFeld's dietary dependability and urban place-making affordances reflect a strong environmental orientation concerned with food relations as a means to improve personal socioecological sustainability within Vienna's foodscape. Food relations thus serve as a medium for broader socioenvironmental engagement within and beyond the city. This contrasts starkly with GUI, where ecological and food relations are framed more as approaches affording dietary diversity and character development — primarily prioritising food as a medium for sociocultural relations. These two trajectories, respectively oriented towards more spatial or societal engagement, demonstrate how CF can shape food relations in myriad ways rather than following a single teleological trajectory. However, these changes never permit food relations to remain perceptually isolated — the close entanglement of far-ranging actor-networks and their actants becomes all the more inescapable instead.

6. Conclusions

To conclude, this study has explored the research question, "To what extent do community urban farms (CFs) shape their participants' food relations?". Reflecting Robinson (2013)'s call to study 'ordinary cities' and forge new connections, this study analyses two CFs, WeltTellerFeld in Vienna and Ground-Up Initiative (GUI) in Singapore, using a comparative urbanisms approach (Robinson, 2022). By combining actor-network theory, which places both human and non-human actants on a neutral plane for analysis, with affordance theory, which focuses analysis on the actor-networks most relevant to the affordances studied, the role of CF in shaping participants' visceral and vital food relations is uncovered.

Chapter 5.1, on discursive food relations, established that participants across the two CFs espoused remarkably similar food values and narratives despite their different sociocultural and geographical contexts. However, Chapters 5.2-3, in turning to food relations in practice, revealed divergent food practices. In Chapter 5.2, focused on practices in the CFs, this diversity was embodied by the individuality of CF participation (WeltTellerFeld) and a lack of common objectives when engaging in CF (GUI). CF served as a conduit for WeltTellerFeld participants to manifest individual ideals for food relations in reality, whereas in GUI, CF allowed participants to collectively explore the contours of multiple alternative food relations without fixed objectives. Chapter 5.3 turned to practices in everyday life, which demonstrated how food relations primarily served as medium(s) for socioenvironmental (WeltTellerFeld) and sociocultural (GUI) engagement respectively. Participants' everyday food relations exhibited significant diversity across both cases due to the unique priorities and resources afforded by pre-existing personal actor-networks.

By establishing that even CFs with similar values and narratives may diverge significantly in practice, this study argues against the tendency of urban research to conceptualise CF overwhelmingly in terms of teleologies of (successful/failed) urban transformation (e.g. Blättel-Mink et al., 2017; Enthoven & Van den Broeck, 2021; Vincent & Feola, 2020). CF should not just be read as following a linear trajectory of collective change, but as collectives where incremental, uncertain changes might occur along multiple 'lines of becoming' (Ingold, 2021) without necessarily constituting wholesale transformations in individual and/or collective food relations. Both societal and geographic context and participants' personal actor-networks afford certain food relations in one CF, while disabling other affordances. In WeltTellerFeld, CF fostered a community of like-minded food activists, creating a space of where food-based place-making and advocacy could occur. Such commonality also prevented WeltTellerFeld from developing the diversity of GUI, where this spectrum of cultural backgrounds and motivations allowed participants to explore and learn from vastly different perspectives, shaping GUI food relations in wider-ranging ways. However, the unity of

WeltTellerFeld participants also meant that CF shaped WeltTellerFeld food relations to a deeper extent through solidarity, while in GUI CF often fostered moral development in non-food related trajectories. Nonetheless, given that the actants involved are filled with agential capacity, these actor-networks, and thus food relations, may continue to evolve. For instance, WeltTellerFeld is crafting longer-term workshops to encourage more volunteers to become regular participants, while GUI has just moved to a new farm site following the reclamation of their land by the state — major changes that might give rise to vastly different actor-networks and affordances. By analysing how these CFs and their participants are moving along ambiguous trajectories that are both multiple and specific, these two CFs provide a rich intellectual resource for 1) imagining diverse urban food relations; 2) identifying practically viable alternatives; and 3) understanding actually-existing communities and their capabilities.

These myriad trajectories in-the-making show that CF can shape urban food relations in desultory ways that do not correspond to narratives of successful/failed outcomes. While CF-driven collective outcomes are often emphasised in CF literature (see Appendix 8.1), such surface collectivity is afforded by the participants' unique actor-networks and the deeply individual choices these networks mediate, rather than a uniform unity of purpose and action. This highly diverse spectrum of trajectories thus makes a strong case for studying CFs in terms of 'lines of becoming' (Ingold, 2021) and not just teleologies of successful/failed urban transformation. Learning from cases moving in ever-shifting, multiple trajectories, as an ongoing practice, is itself an opportunistic exercise of pragmatic utopianism (Traill, 2023). By refusing to view relations and actants as fixed, we open ourselves up to drawing insights from complex, messy urban realities that do not always fit into neat categories for analysis.

7. Bibliography

7.1 Text sources

Abdillah, A., Widianingsih, I., Buchari, R. A., & Nurasa, H. (2023). Implications of urban farming on urban resilience in Indonesia: Systematic literature review and research identification. *Cogent Food and Agriculture*, *9*(1), Article 2216484.

Agostinho, D., D'Ignazio, C., Ring, A., Thylstrup, N. B., & Veel, K. (2019). Uncertain archives: Approaching the unknowns, errors, and vulnerabilities of big data through cultural theories of the archive. *Surveillance & Society*, 17(3/4), 422-441.

Alejandro, A. (2020) "Reflexive Discourse Analysis: A methodology for the practice of reflexivity," *European Journal of International Relations*, 27(1), 150-174.

Altes, W. K. K., & Faludi, A. (1995). Why the greening of Red Vienna did not come to pass: An unknown chapter of the Garden City movement 1919 — 1934. *European Planning Studies*, *3*(2), 205-225.

Altmann, P. (2020). The commons as colonisation — the well-intentioned appropriation of buen vivir. *Bulletin of Latin American Research*, 39(1), 83-97.

Alvarez, S. E., Dagnino, E. and Escobar, A. (1998) The Cultural and the Political in Latin American Social Movements. In Alvarez, S. E., Dagnino, E. and Escobar, A. (Eds.), *Cultures of Politics/Politics of Cultures: Re-visioning Latin American Social Movements* (pp. 1-30). Boulder, CO: Westview Press.

Anderson, C. R., Bruil, J., Chappell, M. J., Kiss, C., & Pimbert, M. P. (2021). Agroecology now!: Transformations towards more just and sustainable food systems. Springer Nature.

Angelo, H., & Goh, K. (2021). Out in space: Difference and abstraction in planetary urbanization. *International Journal of Urban and Regional Research*, 45(4), 732-744.

Araghi, F. (2003). Food regimes and the production of value: Some methodological issues. *The Journal of Peasant Studies*, *30*(2), 41-70.

Artmann, M., Sartison, K., & Ives, C. D. (2021). Urban gardening as a means for fostering embodied urban human — food connection? A case study on urban vegetable gardens in Germany. *Sustainability Science*, *16*, 967-981.

Baganz, G., Baganz, E., Baganz, D., Kloas, W., & Lohrberg, F. (2021). Urban rooftop uses: Competition and potentials from the perspective of farming and aquaponics — A Berlin Case Study. In REAL CORP 2021, 26th International Conference on Urban Development, Regional Planning and Information Society, CITIES 20.50 — Creating Habitats for the 3rd Millennium: Smart-Sustainable-Climate Neutral, pp. 1015-1028. Competence Center of Urban and Regional Planning.

Bailkey, M., Greenstein, R. (2024) "Farming Inside Cities" — A Look Back After Two Decades. In Raja S, Caton Campbell M, Judelsohn A, Born B, Morales A (Eds.), *Planning for Equitable Urban Agriculture in the United States*, pp. 49-66. Springer International Publishing.

Barghusen, R., Sattler, C., Deijl, L., Weebers, C., & Matzdorf, B. (2021). Motivations of farmers to participate in collective agri-environmental schemes: the case of Dutch agricultural collectives. *Ecosystems and People*, 17(1), 539-555.

Bell, C., & Newby, H. (1971). *Community Studies: An Introduction to the Sociology of the Local Community* (1st ed.). Routledge. https://doi.org/10.4324/9781003213765

Béné, C. (2022). Why the Great Food Transformation may not happen — A deep-dive into our food systems' political economy, controversies and politics of evidence. *World Development*, 154, Article 105881.

Benjumea, D. M., Kato, Y., & Chong, K. H. (2022). Participatory approaches to enact meaningful interconnectedness with the natural environment: a case study in Singapore. *Cities & Health*, *6*(*6*), 1134-1151.

Bennett, J. (2010). Vibrant matter: A political ecology of things. Duke University Press.

Ben-Othmen, M. A., Cardoze, V., Hani, J., & Sauvee, L. (2023). Community-based urban agriculture for food justice: a review. *Urban and Regional Agriculture*, 11-40.

Bernstein, H. (2016). Agrarian political economy and modern world capitalism: the contributions of food regime analysis. *The Journal of Peasant Studies*, 43(3), 611-647.

Berray, M. (2019). A critical literary review of the melting pot and salad bowl assimilation and integration theories. *Journal of Ethnic and Cultural Studies*, 6(1), 142-151.

Bhadouria, R., Tripathi, S., Singh, P., Joshi, P.K., Singh, R. (2023). Urban Metabolism and Global Climate Change: An Overview. In Bhadouria, R., Tripathi, S., Singh, P., Joshi, P.K. and Singh, R. (Eds.), *Urban Metabolism and Climate Change*. Springer, Cham.

- Bille, M., Bjerregaard, P. and Sørensen, T.F. (2015). Staging atmospheres: Materiality, culture, and the texture of the in-between. *Emotion, space and society, 15*, 31-38.
- Blanchette, A. (2020). *Porkopolis: American animality, standardized life, and the factory farm.* Duke University Press.
- Blättel-Mink, B., Boddenberg, M., Gunkel, L., Schmitz, S., & Vaessen, F. (2017). Beyond the market—New practices of supply in times of crisis: The example community-supported agriculture. *International Journal of Consumer Studies*, *41*(4), 415-421.
- Blazy, R., Hrehorowicz-Gaber, H., Sandu, I. G., & Hrehorowicz-Nowak, A. (2022). Garden Cities And Heritage Of The Howard's Idea In Europe With Particular Consideration Of Poland. *International Journal Of Conservation Science*, *13*(3), 805-822.
- Blue, G., & Rock, M. (2011). Trans-biopolitics: Complexity in interspecies relations. *Health*. *2010;15(4)*, 353-368.
- Blue, G., & Rock, M. (2020). Genomic trans-biopolitics: Why more-than-human geography is critical amid the COVID-19 pandemic. *Dialogues in Human Geography*, *10(2)*, 287-290.
- Bohnes, F. A., Rodriguez, U. P., Nielsen, M., & Laurent, A. (2020). Are aquaculture growth policies in high-income countries due diligence or illusionary dreams? Foreseeing policy implications on seafood production in Singapore. *Food Policy*, *93*, Article 101885.
- Borras Jr, S. M. (2023). La Via Campesina transforming agrarian and knowledge politics, and co-constructing a field: a laudatio. *The Journal of Peasant Studies*, *50(2)*, 691-724.
- Bouzarovski, S. (2022). Just transitions: A political ecology critique. *Antipode*, 54(4), 1003-1020.
- Brand, U., Görg, C., & Wissen, M. (2020). Overcoming neoliberal globalization: Social-ecological transformation from a Polanyian perspective and beyond. *Globalizations*, *17(1)*, 161-176.
 - Braun, B. (Ed.). (2018). Futures: Imagining Socioecological Transformation. Routledge.
- Brenner, N., & Schmid, C. (2011). *Planetary urbanization//Urban Constellations*. Berlin: Jovis.
- Breuste, J., Artmann, M. (2023). Allotment Gardens Contribute to Urban Ecosystem Service: Case Study Salzburg, Austria. In Breuste, J., Artmann, M., Ioja, C. and Qureshi, S. (Eds.), *Making Green Cities. Cities and Nature*. Springer, Cham.

- Broad, G. M. (2020). Know Your Indoor Farmer: Square Roots, Techno-Local Food, and Transparency as Publicity. *American Behavioral Scientist*, 64(11), 1588-1606.
- Broekhof, S. M., & van der Valk, A. J. (2012). Planning and the quest for sustainable food systems: explorations of unknown territory in planning research. In Viljoen, A. and Wiskerke, J. S. C. (Eds.), *Sustainable food planning: Evolving theory and practice*. Wageningen Academic.
- Bruckmeier, K. (2024). Food Systems and Social-Ecological Transformation. In Bruckmeier, K. (Ed.), *The Anthropocene and its Future: The Challenges of Accelerating Social and Ecological Change*. Cham: Springer International Publishing.
- Bruckner, M., Wood, R., Moran, D., Kuschnig, N., Wieland, H., Maus, V., & Börner, J. (2019). FABIO—the construction of the food and agriculture biomass input output model. *Environmental Science & Technology*, 53(19), 11302-11312.
- Brumer, A., Wezel, A., Dauber, J., Breland, T. A., & Grard, B. (2023). Development of agroecology in Austria and Germany. *Open Research Europe*, *3*, 25.
- Brundtland, G. H. (1987). Brundtland Report: Our Common Future. *Comissão Mundial*, 4(1), 17-25.
- Burch, D., & Lawrence, G. (2009). Towards a third food regime: behind the transformation. *Agriculture and human values*, 26, 267-279.
- Cavicchi, B., & Hegnes, A. W. (2021). Scoping out elements of sociocultural adaptation in European urban agriculture. *Frontiers in Sustainable Food Systems*, *5*, 701160.
- Campbell, H. (2009). Breaking new ground in food regime theory: corporate environmentalism, ecological feedbacks and the 'food from somewhere' regime?. *Agriculture and Human Values*, *26*, 309-319.
- Carolan, M. (2019). "Urban Farming Is Going High Tech": Digital Urban Agriculture's Links to Gentrification and Land Use. *Journal of the American Planning Association*, 86(1), 47 59.
 - Carson, R. (1962). Silent Spring. London: Penguin Books.
- Cavicchi, B., & Hegnes, A. W. (2021). Scoping out elements of sociocultural adaptation in European urban agriculture. *Frontiers in Sustainable Food Systems*, *5*, 701160.
- Chatterjee, S., & Subramaniam, B. (Eds.) (2021). *Meat!: a transnational analysis*. Duke University Press.

- Claeys, G. (2022) *Utopianism for a Dying Planet: Life after Consumerism*. Oxford: Princeton University Press.
- Classen, C. (2023). Worlds of sense: Exploring the senses in history and across cultures. Routledge.
- Chen, A., Giese, M., & Chen, D. (2020). Flood impact on Mainland Southeast Asia between 1985 and 2018—The role of tropical cyclones. *Journal of Flood Risk Management*, *13(2)*, e12598.
- Chong, K. H. (2018). Reclamation of urban voids and the return of the "kampung spirit" in Singapore's public housing. *Creative Ageing Cities*, 19-46. Routledge.
- Chong, I., & Proctor, R. W. (2020). On the evolution of a radical concept: Affordances according to Gibson and their subsequent use and development. *Perspectives on Psychological Science*, *15(1)*, 117-132.
- Cifuentes, M. L., Freyer, B., Sonnino, R., & Fiala, V. (2021). Embedding sustainable diets into urban food strategies: A multi-actor approach. *Geoforum*, 122, 11-21.
- Clapp, J., & Ruder, S. L. (2020). Precision technologies for agriculture: Digital farming, gene-edited crops, and the politics of sustainability. *Global Environmental Politics*, 20(3), 49-69.
- Clerino, P., & Fargue-Lelièvre, A. (2020). Formalizing objectives and criteria for urban agriculture sustainability with a participatory approach. *Sustainability*, *12*(18), 7503.
- Cooper, D. (2013). Everyday utopias: The conceptual life of promising spaces. Duke University Press.
- Conti, C., Hall, A., Orr, A., Hambloch, C., & Mausch, K. (2024). Embracing Complexity at Play. How Food and Agriculture Interventions Could Better Navigate the Unpredictable Dynamics of Agri-Food Systems. *Agricultural Systems*, *220*, 104080.
- Davis, M. (2002). Late Victorian holocausts: El Niño famines and the making of the third world. Verso Books.
- Deleuze, G. (1987). *A thousand plateaus: Capitalism and schizophrenia*. University of Minnesota Press.
- Dhillon, J.K., and Thomas, N. (2019). Ethics of engagement and insider-outsider perspectives: issues and dilemmas in cross-cultural interpretation. *International Journal of Research & Method in Education*, 42 (4), 442-453. doi:10.1080/1743727X.2018.1533939.

Diallo, I., Xue, Y., Chen, Q., Ren, X., & Guo, W. (2024). Effects of spring Tibetan Plateau land temperature anomalies on early summer floods/droughts over the monsoon regions of South East Asia. *Climate Dynamics*, *62*(4), 2659-2681.

Diehl, J. A. (2020). Growing for Sydney: Exploring the urban food system through farmers' social networks. *Sustainability*, *12*(8), 3346.

Diehl, J. A., Sweeney, E., Wong, B., Sia, C. S., Yao, H., & Prabhudesai, M. (2020). Feeding cities: Singapore's approach to land use planning for urban agriculture. *Global Food Security*, *26*, 100377.

Diekmann, L. O., Gray, L. C., & Thai, C. L. (2020). More than food: The social benefits of localized urban food systems. *Frontiers in Sustainable Food Systems*, *4*, 534219.

Dombroski, K., Conradson, D., Diprose, G., Healy, S., & Yates, A. (2023). Cultivating commoners: Infrastructures and subjectivities for a postcapitalist counter-city. *Cities*, *143*, 104635.

Donato, C., & Monsurrò, L. (2024). An exploratory study on emotional consequents of visceral food pleasure. *Qualitative Market Research: An International Journal*, 27(1), 19-41.

Duangputtan, P., & Mishima, N. (2023). Participatory Placemaking for Inclusive Food Security: A Case Study of Chiang Mai Urban Farm, Thailand. *Sustainable Development Goals Series*, 205-217. Cham: Springer International Publishing.

Dubová, L., Macháč, J., & Vacková, A. (2020). Food provision, social interaction or relaxation: Which drivers are vital to being a member of community gardens in Czech cities?. *Sustainability*, 12(22), 9588

Ehrnström-Fuentes, M., & Biese, I. (2023). The act of (de/re)growing: Prefiguring alternative organizational landscapes of socioecological transformations. *Human Relations*, *76(11)*, 1739-1766. https://doi.org/10.1177/00187267221112241

Emel, J., & Neo, H. (Eds.) (2015). Political ecologies of meat. Routledge.

Enthoven, L., & Van den Broeck, G. (2021). Local food systems: Reviewing two decades of research. *Agricultural Systems*, 193, 103226.

Ercilla-Montserrat, M., Sanjuan-Delmás, D., Sanyé-Mengual, E., Calvet-Mir, L., Banderas, K., Rieradevall, J., & Gabarrell, X. (2019). Analysis of the consumer's perception of urban food products from a soilless system in rooftop greenhouses: a case study from the Mediterranean area of Barcelona (Spain). *Agriculture and Human Values*, *36*, 375-393.

- Ergene, S., & Calás, M. B. (2023). Becoming naturecultural: Rethinking sustainability for a more-than-human world. *Organization Studies*, *44(12)*, 1961-1986.
- Esturiao, H., & Fischer, M. L. (2022). Multispecies Biopolitics: Docile and Killable Animals. Rev. *Bioetica & Derecho*, *55*, 147.
- Evans, A. B., & Miele, M. (2012). Between food and flesh: How animals are made to matter (and not matter) within food consumption practices. *Environment and Planning D: Society and Space*, 30(2), 298-314.
- Evans, J. R., & Lawson, T. (2020). From green to gold: agricultural revolution for food security. *Journal of Experimental Botany*, 71(7), 2211-2215.
- Exner, A., & Schützenberger, I. (2018). Creative Natures. Community gardening, social class and city development in Vienna. *Geoforum*, 92, 181-195.
- Fairclough, N. (1992) Critical discourse analysis: The critical study of language. *The Modern Language Journal*, *81(3)*, p. 428. https://doi.org/10.2307/329335.
- Faltmann, N. K. (2022). Urban gardening in Ho Chi Minh City: class, food safety concerns, and the crisis of confidence in farming. Food, Culture & Society, 26(4), 927-944. https://doi.org/10.1080/15528014.2022.2142753
- Farrer, J., & Wang, C. (2020). Who owns a cuisine? The grassroots politics of Japanese food in Europe. *Asian Anthropology*, 20(1), 12-29. https://doi.org/10.1080/1683478X.2020.1774960
- Fernandes, E., & Saraiva, A. (2022). Alternative consumer practices for a sustainable identity: the perspective of organic food consumption. Journal of marketing management, 38(3-4), 279-308.
- Follmann, A., Willkomm, M., & Dannenberg, P. (2021). As the city grows, what do farmers do? A systematic review of urban and peri-urban agriculture under rapid urban growth across the Global South. *Landscape and Urban Planning*, 215, Article 104186.
- Friedmann, H. (1987). International regimes of food and agriculture since 1870. *Peasants and Peasant Societies*, *2*, 247-258.
- Friedmann, H., & McMichael, P. (1989). Agriculture and the state system. *Sociologia ruralis*, 29(2).
- Friedmann, H. (2005), From Colonialism to Green Capitalism: Social Movements and Emergence of Food Regimes. In Buttel, F.H. and McMichael, P. (Eds.), *New Directions in the*

Sociology of Global Development (Research in Rural Sociology and Development, Vol. 11) (pp. 227-264), Emerald Group Publishing Limited. https://doi.org/10.1016/S1057-1922(05)11009-9

Gaard, G. (2017). Critical ecofeminism. Lexington Books.

Gandy, M. (2006). The bacteriological city and its discontents. *Historical Geography*, 34(6), 14-25.

Gandy, M. (2022). The zoonotic city: urban political ecology and the pandemic imaginary. *International Journal of Urban and Regional Research*, 46(2), 202-219.

Gerhard, U., & Malachuk, D. S. (2024). Revisiting the urban home: A critical approach. Environment and Planning C: Politics and Space, 23996544241302584.

Giacalone, D., & Jaeger, S. R. (2023). Consumer acceptance of novel sustainable food technologies: A multi-country survey. *Journal of Cleaner Production*, 408, 137119.

Gibson-Graham, J. K., Cameron, J., & Healy, S. (2016). Commoning as a postcapitalist politics 1. In Amin, A. and Howell, P. (Eds.), *Releasing the Commons: Rethinking the Futures of the Common* (pp. 192-212), Routledge.

Ginn, F., & Ascensão, E. (2018). Autonomy, erasure, and persistence in the urban gardening commons. *Antipode*, *50(4)*, 929-952.

Goodman, D., DuPuis, E. M., & Goodman, M. K. (2012). *Alternative food networks: Knowledge, practice, and politics*. Routledge.

Goodman, M. K. (2016). Food geographies I: Relational foodscapes and the busy-ness of being more-than-food. *Progress in Human Geography*, 40(2), 257-266.

Goodman, D. (2017). Agro-food studies in the 'age of ecology': nature, corporeality, bio-politics. In Munton, R. (ed)., *The Rural* (pp. 127-148), Routledge.

Gotoh, T., Takahashi, H., Nishimura, T., Kuchida, K., & Mannen, H. (2014). Meat produced by Japanese Black cattle and Wagyu. *Animal Frontiers*, *4*(4), 46-54.

Gregis, A., Ghisalberti, C., Sciascia, S., Sottile, F., & Peano, C. (2021). Community Garden Initiatives Addressing Health and Well-Being Outcomes: A Systematic Review of Infodemiology Aspects, Outcomes, and Target Populations. *International Journal of Environmental Research and Public Health*, 18(4), 1943. https://doi.org/10.3390/ijerph18041943

Hajian, M., & Kashani, S. J. (2021). Evolution of the concept of sustainability. From Brundtland Report to sustainable development goals. In Hussain, C. M. and Velasco-Munoz, J. F. (Eds.), *Sustainable resource management* (pp. 1-24). Elsevier.

Hall, S. (2007). The West and the rest: Discourse and power. In Das Gupta, T., James, C. E., Andersen, C., Galabuzi, G. and Maaka, R. C. A.(Eds.), *Race and Racialization: Essential Readings* (pp. 56-60). Canadian Scholars' Press Inc.

Haraway, D. (1988) "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies*, 14(3), 575-599. https://doi.org/10.4324/9781003001201-36.

Haraway, D. J. (2016). Staying with the Trouble. Duke University Press.

Haraway, D. (2018). Staying with the trouble for multispecies environmental justice. *Dialogues in Human Geography*, 8(1), 102-105.

Harriss, J., & Stewart, D. (2015). Science, Politics, and the Framing of Modern Agricultural Technologies. *The Oxford Handbook of Food, Politics, and Society*, 43-64.

Harvey, D. (1996). Justice, nature and the geography of difference. Wiley-Blackwell.

Hauer, F., & Krammer, A. (2023). Tracing the informal fringe: A large-scale study of 20th century 'wild'settlements in Vienna, Austria. *Habitat International*, 141, 102925.

Hayes-Conroy, A., Hayes-Conroy, J., Yamasaki, Y., & Saavedra, X. Q. (2020). Feminist Visceral Politics: From taste to territory. In Datta, A., Hopkins, P. Johnston, L., Olson, E. and Silva, J. M., *Routledge Handbook of Gender and Feminist Geographies* (pp. 379-388). Routledge.

Heinze, M. (2023). Between Self-Change and Social Change: On the Present of the Alternative Consumption Discourse of the 1970s. In Hellmann, K.-U., Klein, A. and Baule, B., *Consumer Policy from Below: Paradoxes, Perspectives, Problematizations* (pp. 135-152). Wiesbaden: Springer Fachmedien Wiesbaden.

Hetherington, K. (2020). Agribiopolitics: The health of plants and humans in the age of monocrops. *Environment and Planning D: Society and Space*, 38(4), 682-698.

Hincks, S., & Powell, R. (2022). Territorial stigmatisation beyond the city: Habitus, affordances and landscapes of industrial ruination. *Environment and Planning A: Economy and Space*, *54*(7), 1391-1410.

- Hitchings, R. and Latham, A. (2019) Qualitative methods II: On the presentation of 'geographical ethnography', *Progress in Human Geography*, 44(5), pp. 972 980. Available at: https://doi.org/10.1177/0309132519879986.
- Horst, M., McClintock, N., Hoey, L. (2024). The Intersection of Planning, Urban Agriculture, and Food Justice: A Review of the Literature. In Raja, S., Caton Campbell, M., Judelsohn, A., Born, B., Morales, A. (Eds.), *Planning for Equitable Urban Agriculture in the United States*. Springer, Cham. https://doi.org/10.1007/978-3-031-32076-7_6
- Houessou, M. D., van de Louw, M., & Sonneveld, B. G. (2020). What constraints the expansion of urban agriculture in Benin?. *Sustainability*, 12(14), 5774.
- Husserl, E., & Moran, D. (2012). *Ideas: General introduction to pure phenomenology*. Routledge.
- Ilieva, R. T., Cohen, N., Israel, M., Specht, K., Fox-Kämper, R., Fargue-Lelièvre, A., ... & Blythe, C. (2022). The socio-cultural benefits of urban agriculture: a review of the literature. *Land*, 11(5), 622.
 - Inch, A. (2021). For Utopian Planning. Planning Theory and Practice, 22(4), 634-638.
 - Ingold, T. (2021). Being alive: Essays on movement, knowledge and description. Routledge.
- Jaffe, J. and Gertler, M. (2006): Victual Vicissitudes: Consumer Deskilling and the (Gendered) Transformation of Food Systems. *Agriculture and Human Values*, *23* (2), pp. 143-162.
- Jalais, A. (2021). The Singapore "Garden City": The death and life of nature in an Asian City. In Rademacher, A. and Sivaramakrishnan, K., *Death and life of nature in Asian cities* (pp. 82-101). Hong Kong University Press.
- Jameson, F. (2007). Archaeologies of the future: The desire called utopia and other science fictions. Verso Books.
- Jaster, D. (2022). Pragmatic utopianism: from place to process. *International Journal of Politics, Culture, and Society, 35(4),* 545-565.
- Jonas, T. (2021). Regenerative agriculture and agroecology—what's in a name?'. *Food Ethics*, 24(6).
- Justesen, L. (2020). Actor-network theory as analytical approach. In Järvinen, M. and Mik-Meyer, N. (Eds.), *Qualitative Analysis: Eight Approaches for the Social Sciences* (pp. 329-343). SAGE Publications.

- Kartal, A. N. (2021). Sense Walking on Istiklal Street, Istanbul: Exploring Sensory Urban Changes. *Urbanities-Journal of Urban Ethnography*, 11(1), 65-78.
- Khadka, D., Babel, M. S., Abatan, A. A., & Collins, M. (2022). An evaluation of CMIP5 and CMIP6 climate models in simulating summer rainfall in the Southeast Asian monsoon domain. *International Journal of Climatology*, *42*(2), 1181-1202.
- Kingsley, J., Egerer, M., Nuttman, S., Keniger, L., Pettitt, P., Frantzeskaki, N., ... & Marsh, P. (2021). Urban agriculture as a nature-based solution to address socio-ecological challenges in Australian cities. *Urban Forestry & Urban Greening, 60*, Article 127059.
- Kirby, C. K., Specht, K., Fox-Kämper, R., Hawes, J. K., Cohen, N., Caputo, S., ... & Blythe, C. (2021). Differences in motivations and social impacts across urban agriculture types: Case studies in Europe and the US. *Landscape and Urban Planning*, *212*, Article 104110.
- Kirkby, J., O'Keefe, P., & Timberlake, L. (2023). Sustainable Development: An Introduction. in Kirkby, J., O'Keefe, P. and Timberlake, L. (Eds.), *The Earthscan reader in sustainable development* (pp. 1-14). Routledge.
- Klimek, M., Bingen, J., Freyer, B., & Paxton, R. (2021). From Schnitzel to Sustainability: Shifting Values at Vienna's Urban Farmers Markets. *Sustainability*, 13(15), 8327. https://doi.org/10.3390/su13158327
- Kreinin, H. (2020). Typologies of "Just Transitions": Towards Social-Ecological Transformation. WU Vienna University of Economics and Business. Ecological Economic Papers No. 35, https://doi.org/10.57938/4034bf15-97fa-490c-ad9d-50a8b35b0736
- Kumnig, S. (2017). Between Green Image Production, Participatory Politics and Growth: Urban Agriculture and Gardens in the Context of Neoliberal Urban Development in Vienna. *An International Journal for Critical Geographies*, 16(2), 232-248. https://doi.org/10.14288/acme.v16i2.1393
- Kumnig, S., & Rosol, M. (2020). Commoning land access: collective purchase and squatting of agricultural lands in Germany and Austria. In Exner, K., Kumnig, S. and Hochleithner, S. (Eds.), *Capitalism and the Commons* (pp. 35-49). Routledge.
- Kurfürst, S. (2020). *Grow at Home, Buy Local: (De)commodifying 'Rural' Vegetables and Herbs.* In Kurfürst, S. and Wehner, S. (Eds.), *Southeast Asian Transformations: Urban and Rural Developments in the 21st Century* (pp. 41-56). transcript Verlag, Bielefeld.

Langemeyer, J., Madrid-Lopez, C., Beltran, A. M., & Mendez, G. V. (2021). Urban agriculture—A necessary pathway towards urban resilience and global sustainability? *Landscape and Urban Planning*, 210, 104055.

Leal Londoño, M. D. P. (2011). The" farm shops" as platform for promoting local gastronomy and its potential associated with tourism: the case of Hofläden" (Mecklenburg-Vorpommern Germany) and "Agrobotigues" (Catalonia, Spain). *Estudios y Perspectivas en Turismo*, 20(4), 908-928.

Leder, S., Sugden, F., Raut, M., Ray, D., & Saikia, P. (2019). Ambivalences of collective farming. *International Journal of the Commons*, 13(1), 105-129.

Levitas, R. (2013). *Utopia as method: The imaginary reconstitution of society*. Springer.

Levkoe, C. Z., Knezevic, I., Appavoo, D., Moraes, A., & Scott, S. (2020). Serving up food studies online: Teaching about "food from somewhere" from nowhere. *Food, Culture & Society*, 23(3), 434-453.

Lohnes, J., & Pine, A. (2023). Feeding lines: Standing up in the neoliberal charitable food regime. *Human Geography*, 16(2), 212-220.

Loker, A., & Francis, C. (2020). Urban food sovereignty: urgent need for agroecology and systems thinking in a post-COVID-19 future. *Agroecology and Sustainable Food Systems*, 44(9), 1118-1123.

Lorimer, H. (2015). Afterword: non-representational theory and Me Too. In P. Vannini (Ed.), *Non-representational methodologies: Re-envisioning research* (pp. 177-187). New York & Oxon, Routledge.

Low, K. E. (2025). On the qualia of sensory food heritage in Singapore. *Food, Culture & Society*, 1-18.

Lury, C. and Wakeford, N. (2012) *Inventive methods*. London: Routledge.

Mach, I., & Vernay, B. R. (2023). How Pandemics Shape the Metropolitan Space: Impact of COVID-19 on Urban Development in Vienna and Tokyo. LIT Verlag.

Magrì, E., & McQueen, P. (2022). Critical phenomenology: An introduction. John Wiley & Sons.

Martin, M., & Molin, E. (2019). Environmental assessment of an urban vertical hydroponic farming system in Sweden. *Sustainability*, *11(15)*, 4124.

Marzuki, A., Jais, A. S. (2020) Urbanisation and the concerns for food security in Malaysia. *Planning Malaysia 18(3)*. https://doi.org/10.21837/pm.v18i13.786

Mayrhofer, R. (2021). Planning for Vita Activa—Labor, Work, and Action in a Communal Urban Gardening Project in Vienna. *Sustainability*, *13(17)*, 9864.

McMichael, P. (1984). Settlers and the agrarian question: Capitalism in colonial Australia. Cambridge University Press.

McMichael, P. (2005). Global development and the corporate food regime. In Buttel, F. H. and McMichael, P. *New directions in the sociology of global development: Vol. 11* (pp. 265-299). Emerald Group Publishing Limited.

McMichael, P. (2009). A food regime analysis of the 'world food crisis'. *Agriculture and Human Values*, 26, 281-295.

McMichael, P. (2020). Does China's 'going out' strategy prefigure a new food regime?. *The Journal of Peasant Studies*, 47(1), 116-154.

McPhearson, T., Cook, E. M., Berbés-Blázquez, M., Cheng, C., Grimm, N. B., Andersson, E., Barbosa, O., Chandler, D. G., Chang, H., Chester, M. V., Childers, D. L., Elser, S. R., Frantzeskaki, N., Grabowski, Z., Groffman, P., Hale, R. L., Iwaniec, D. M., Kabisch, N., Kennedy, C., Markolf, S. A., Matsler, A. M., McPhillips, L. E., Miller, T. R., Muñoz-Erickson, T. A., Rosi, E., Troxler, T. G. (2022). A social-ecological-technological systems framework for urban ecosystem services. *One Earth*, *5*(*5*), 505-518.

Meller, H. (2017). Citizens in pursuit of nature: Gardens, allotments and private space in European cities, 1850 — 2000. In Luckin, B. and Dieter, S. *Resources of the City: Contributions to an Environmental History of Modern Europe* (pp. 94-110). Routledge.

Miles, B. (2010). Discourse Analysis. In Salkind, N.J. (Ed.) *Encyclopedia of Research Design* (pp. 368-370). SAGE Publications, Inc. https://dx.doi.org/10.4135/978141296128

Miller, E. (2020). More-than-human agency: from the human economy to ecological livelihoods. In Gibson-Graham and J. K., Dombroski, K. *The Handbook of Diverse Economies* (pp. 402-410). Edward Elgar Publishing.

Mir, M. S., Naikoo, N. B., Kanth, R. H., Bahar, F. A., Bhat, M. A., Nazir, A., ... & Ahngar, T. A. (2022). Vertical farming: The future of agriculture: A review. *The Pharma Innovation Journal*, 11(2), 1175-1195.

- Möhrs, K., et al. (2013): The politics of land and food in cities in the North: Reclaiming urban agriculture and the struggle Solidarisch Landwirtschaften! (SoliLa!) in Austria. In Franco, J. and Borras Jr., S.M.: *Land concentration, land grabbing and people's struggles in Europe* (p. 82-113). Transnational Institute (TNI).
- Mok, W. K., Tan, Y. X., & Chen, W. N. (2020). Technology innovations for food security in Singapore: A case study of future food systems for an increasingly natural resource-scarce world. *Trends in Food Science & Technology, 102*, 155-168.
- Mueller, N. G., & Flachs, A. (2022). Domestication, crop breeding, and genetic modification are fundamentally different processes: implications for seed sovereignty and agrobiodiversity. *Agriculture and Human Values*, *39*(1), 455-472.
- Muhamad Nor, A. N., Abdul Aziz, H., Nawawi, S. A., Muhammad Jamil, R., Abas, M. A., Hambali, K. A., Yusoff, A. H., Ibrahim, N., Rafaai, N. H., Corstanje, R., Harris, J., Grafius, D., & Perotto-Baldivieso, H. L. (2021). Evolution of Green Space under Rapid Urban Expansion in Southeast Asian Cities. *Sustainability*, *13(21)*, Article 12024. https://doi.org/10.3390/su132112024
- Nakajima, M. (2022). Sustainable Food Consumption: Demand for Local Produce in Singapore. *Sustainability*, *14(19)*, Article 12330. https://doi.org/10.3390/su141912330
- Nally, D. & Kearns, G. (2020) 'Vegetative States: Potatoes, Affordances, and Survival Ecologies', *Antipode*, *52(5)*, 1373-1392.
- Neo, H. (2016). Placing Pig Farming in Post-Independence Singapore: Community, Development, and Landscapes of Rurality. Food, Foodways, and Foodscapes: Culture, Community, and Consumption in Post-Colonial Singapore, 83-102.
- Ng, H. (2020). Recognising the edible urban commons: Cultivating latent capacities for transformative governance in Singapore. *Urban Studies*, *57(7)*, 1417-1433. https://doi.org/10.1177/0042098019834248
- Nicholas, S. O., and Harré, N. (2024). The community contributions of urban farms in Singapore. *Agroecology and Sustainable Food Systems*, 48(10), 1544-1568.
- Nicholas, S. O., Groot, S., and Harré, N. (2023). Understanding urban agriculture in context: environmental, social, and psychological benefits of agriculture in Singapore. *Local Environment*, *28(11)*, 1446-1462. https://doi.org/10.1080/13549839.2023.2238721

- Nicholls, E., Ely, A., Birkin, L. et al. The contribution of small-scale food production in urban areas to the sustainable development goals: a review and case study. *Sustain Sci* 15, 1585-1599 (2020). https://doi.org/10.1007/s11625-020-00792-z
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, *16*(1). https://doi.org/10.1177/1609406917733847
- Ntihinyurwa, P. D., & de Vries, W. T. (2021). Farmland fragmentation, farmland consolidation and food security: Relationships, research lapses and future perspectives. *Land*, *10(2)*, 129.
- Nugraha, A., Paut, R., Ganjar Herdiansah, A., Withaningsih, S., Parikesit, & Abdoellah, O. S. (2024). Economic hurdles, social gains: unveiling the true motivations behind urban farming. *Cogent Food & Agriculture*, *10(1)*. https://doi.org/10.1080/23311932.2024.2408846
- Orsini, F., Pennisi, G., Michelon, N., Minelli, A., Bazzocchi, G., Sanyé-Mengual, E., & Gianquinto, G. (2020). Features and functions of multifunctional urban agriculture in the global north: a review. *Frontiers in Sustainable Food Systems*, *4*, 562513.
- Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action. Cambridge University Press.
- Ozano, K., and Khatri, R. (2018). Reflexivity, positionality and power in cross-cultural participatory action research with research assistants in rural Cambodia. *Educational Action Research*, 26(2), 190-204. doi:10.1080/09650792.2017.1331860
- Padawangi, R. (2022). *Urban Development in Southeast Asia*. Cambridge: Cambridge University Press.
- Parot, J., Wahlen, S., Schryro, J., & Weckenbrock, P. (2024). Food justice in community supported agriculture differentiating charitable and emancipatory social support actions. *Agriculture and Human Values*, 41(2), 685-699.
- Papastephanou, M., Antonacopoulou, E., & Drousioti, K. (2024). Rethinking, policy futures and utopianism. *Policy Futures in Education*, $\theta(0)$. https://doi.org/10.1177/14782103241283192
- Petersen, L. K. (2018). Engaging with nature through the dwelling practices in garden landscapes. *Social & Cultural Geography, 22(1),* 11-32. https://doi.org/10.1080/14649365.2018.1550803

Pettygrove, M., & Ghose, R. (2018). From "Rust Belt" to "Fresh Coast": Remaking the City through Food Justice and Urban Agriculture. *Annals of the American Association of Geographers*, 108(2), 591-603. https://doi.org/10.1080/24694452.2017.1402672

Pikner, T., Willman, K., & Jokinen, A. (2020). Urban commoning as a vehicle between government institutions and informality: Collective gardening practices in Tampere and Narva. *International Journal of Urban and Regional Research*, 44(4), 711-729.

Pink, S. (2010). The future of sensory anthropology/the anthropology of the senses. Social *Anthropology/Anthropologie Sociale*, 18(3), 331-333.

Pink, S. (2015). Doing sensory ethnography. London: SAGE.

Poniży, L., Latkowska, M. J., Breuste, J., Hursthouse, A., Joimel, S., Külvik, M., Leitão, T. E., Mizgajski, A., Voigt, A., Kacprzak, E., Maćkiewicz, B., & Szczepańska, M. (2021). The Rich Diversity of Urban Allotment Gardens in Europe: Contemporary Trends in the Context of Historical, Socio-Economic and Legal Conditions. *Sustainability*, *13(19)*, 11076. https://doi.org/10.3390/su131911076

Poole, B. (2016). Collectivism and Coercion: The Social Practice of 'Sharing' and Distinctive Uses of the Verb 'Share' in Contemporary Singapore. In Capone, A. and Mey, J. (Eds.), *Interdisciplinary Studies in Pragmatics, Culture and Society. Perspectives in Pragmatics, Philosophy & Psychology: Vol 4.* Springer, Cham. https://doi.org/10.1007/978-3-319-12616-6_34

Prause, L., Hackfort, S., & Lindgren, M. (2021). Digitalization and the third food regime. *Agriculture and Human Values*, *38*, 641-655.

Psarikidou, K. (2022). Understanding the Ago-Food Economy as a Knowledge Economy. In Psarikidou, K. (Ed.), *Reclaiming the Knowledge Economy: The Case of Alternative Agro-Food Networks* (pp. 45-72). Singapore: Springer Nature Singapore.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community.* Simon and Schuster.

Reardon, T., Timmer, C. P., Barrett, C. B., & Berdegué, J. (2003). The rise of supermarkets in Africa, Asia, and Latin America. *American Journal of Agricultural Economics*, 85(5), 1140-1146.

Reddy, G., & van Dam, R. M. (2020). Food, culture, and identity in multicultural societies: Insights from Singapore. *Appetite*, *149*, 104633.

- Renting, H.; Marsden, T. K. and Banks, J. (2003): Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development. *Environment and Planning A, 35 (3)*, pp. 393-411.
- Reisman, E., & Fairbairn, M. (2021). Agri-food systems and the Anthropocene. In Butler, D. R. (Ed.), *The Anthropocene* (pp. 57-67). Routledge.
- Rhys-Taylor, A. (2020). Food and multiculture: A sensory ethnography of East London. Routledge.
- Ribeiro-Duthie, A. C., Gale, F., & Murphy-Gregory, H. (2021). Fair trade governance: revisiting a framework to analyse challenges and opportunities for sustainable development towards a green economy. *Discover Sustainability*, *2*(1), 58.
- Rosa, R., Nogueira, M., & Azinheira, F. (2022). Spirituality, socialization and knowledge: a philosophical approach to the Slow Food agri-food system. *International Journal on Food System Dynamics*, *13*(4), 411-424.
- Rose, G. (2013) Visual methodologies: An introduction to researching with visual materials. London: SAGE.
- Rose, G. (2016). Doing family photography: The domestic, the public and the politics of sentiment. Routledge.
- Rostow, W. W. (1960). The stages of economic growth: A non-communist manifesto. Cambridge University Press.
 - Roulston, K. 2022. Interviewing: a guide to theory and practice. London: Sage.
- Russo, A., & Cirella, G. T. (2020). Edible green infrastructure for urban regeneration and food security: case studies from the Campania region. *Agriculture*, 10(8), 358.
- Rut, M., & Davies, A. R. (2018). Transitioning without confrontation? Shared food growing niches and sustainable food transitions in Singapore. *Geoforum*, *96*, 278-288.
- Rutt, R. L. (2020). Cultivating urban conviviality: urban farming in the shadows of Copenhagen's neoliberalisms. *Journal of Political Ecology, 27(1)*, 612-634.
- Salim, S. A., Yusof, Z. M., Ibharim, L. F. M., & Hajar, S. (2019) A Review Of Urban Farming Research: Taxonomy, Challenges And Future Research Direction. *Journal of Building Performance ISSN*, 10(2).

- Sartison, K., & Artmann, M. (2020). Edible cities An innovative nature-based solution for urban sustainability transformation? An explorative study of urban food production in German cities. *Urban Forestry & Urban Greening*, 49, 126604.
- Schermer, M. (2015). From "Food from Nowhere" to "Food from Here:" changing producer consumer relations in Austria. *Agriculture and Human Values*, *32*, 121-132.
- Schlosberg, D. (2019). From postmaterialism to sustainable materialism: the environmental politics of practice-based movements. *Environmental Politics*, 34(1), 92–112. https://doi.org/10.1080/09644016.2019.1587215
- Schneider-Mayerson, M. (2020). *Eating chilli crab in the Anthropocene: Environmental perspectives on life in Singapore*. Ethos Books.
- Settele, V., & da Silva, C. M. (2024). The non-human in agriculture: Technologies of agriculture and non-human aspects of farming. In O'Gorman, E., San Martín, W. Carey, M., and Swart, S. *The Routledge Handbook of Environmental History* (pp. 124-141). Routledge.
- Shah, S., 2004. The researcher/interviewer in intercultural context: a social intruder!. *British Educational Research Journal*, 30(4), 549 570.
- Shee, S. Y. (2023). Eating to become 'good' citizens: exploring the visceral biopolitics of eating in Singapore. *Cultural Geographies*, 30(1), 35-49.
- Simonow, J. (2020). After the "Late Victorian Holocausts": Transnational Responses to Famines and Malnutrition in India, c. 1900-1955 (Doctoral dissertation, ETH Zurich).
- Sioen, G. B. and Yokohari, M. (2022) Resilient Cities with Urban Agricultural Heritage: Tokyo. In Lohrberg, F., Christenn, K., Timpe, A., & Sancar, A. (Eds.), *Urban agricultural heritage*. Birkhäuser.
- Smith N. (1996) Spaces of vulnerability: The space of flows and the politics of scale. *Critique of Anthropology, 16*, 63-77.
- Smith, E. (2009). Imaginaries of development: The Rockefeller Foundation and rice research. *Science as Culture, 18(4)*, 461-482.
- Soedirgo, J., & Glas, A. (2020). Toward Active Reflexivity: Positionality and Practice in the Production of Knowledge. *Political Science & Politics*, 53(3), 527-531. doi:10.1017/S1049096519002233

- Song, S., Cheong, J. C., Lee, J. S., Tan, J. K., Chiam, Z., Arora, S., ... & Tan, H. T. (2022). Home gardening in Singapore: A feasibility study on the utilization of the vertical space of retrofitted high-rise public housing apartment buildings to increase urban vegetable self-sufficiency. *Urban Forestry & Urban Greening*, 78, Article 127755.
- Song, S., Lim, M. S., Richards, D. R., & Tan, H. T. W. (2022). Utilization of the food provisioning service of urban community gardens: Current status, contributors and their social acceptance in Singapore. *Sustainable Cities and Society*, 76, Article 103368.
- Srinivasan, K., & Yadav, V. K. An integrated literature review on Urban and peri-urban farming: exploring research themes and future directions. *Sustain Cities Soc.* 2023; 99, Article 104878.
- Strenchock, L. (2020). Germinating degrowth? On-farm adaptation and survival in Hungarian alternative food networks. In Nelson, A. and Edwards, F. *Food for Degrowth* (pp. 77-89). Routledge.
- Suarez, A., & Ume, C. (2024). Transforming food systems in the Global South: a radical approach. *Frontiers in Sustainable Food Systems*, 8, 1397100.
- Sundram, P. (2023). Food security in ASEAN: progress, challenges and future. *Frontiers in Sustainable Food Systems*, 7, 1260619.
- Surya, B., Syafri, S., Hadijah, H., Baharuddin, B., Fitriyah, A. T., & Sakti, H. H. (2020). Management of Slum-Based Urban Farming and Economic Empowerment of the Community of Makassar City, South Sulawesi, Indonesia. *Sustainability*, *12(18)*, 7324. https://doi.org/10.3390/su12187324
- Teo, Y. (2010). Shaping the Singapore family, producing the state and society. *Economy and Society*, 39(3), 337 359. https://doi.org/10.1080/03085147.2010.486215
- Thaiyalan, S. G., & Choo, L. W. (2024). A 'good' neoliberal citizen: A policy analysis of conceptions of young Singaporean citizens. *Policy Futures in Education*, 22(6), 1169-1185.
- Tilzey, M. (2019). Food regimes, capital, state, and class: Friedmann and McMichael revisited. *Sociologia Ruralis*, *59*(2), 230-254.
- Tornaghi, C., & Dehaene, M. (2020). The prefigurative power of urban political agroecology: rethinking the urbanisms of agroecological transitions for food system transformation. *Agroecology and Sustainable Food Systems*, 44(5), 594-610.
- Traill, H. (2023). The Practice of Collective Escape: Politics, Justice and Community in Urban Growing Projects. Policy Press.

- Tregear, A. (2011). Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of Rural Studies*, *27(4)*, 419-430.
- Tsing, A. L. (2015). The mushroom at the end of the world: On the possibility of life in capitalist ruins. Princeton University Press.
- Tutenges, S. (2021). Nightlife ethnography: A phenomenological approach. *The Oxford Handbook of Ethnographies of Crime and Criminal Justice*, 408.
- United Nations, Department of Economic and Social Affairs, Population Division. (2019). World Population Prospects 2019: Highlights (ST/ESA/SER.A/423).
- Van Berkel, D.B. and Verburg, P.H., 2014. Spatial quantification and valuation of cultural ecosystem services in an agricultural landscape. *Ecological Indicators*, *37*, pp.163-174.
- Van Veenhuizen, R., & Danso, G. (2007). *Profitability and sustainability of urban and periurban agriculture (Vol. 19)*. Food & Agriculture Organisation.
- Vermeulen, S. J., Park, T., Khoury, C. K., & Béné, C. (2020). Changing diets and the transformation of the global food system. *Annals of the New York Academy of Sciences*, 1478(1), 3-17.
- Vermunt, D. A., Negro, S. O., Van Laerhoven, F. S. J., Verweij, P. A., & Hekkert, M. P. (2020). Sustainability transitions in the agri-food sector: How ecology affects transition dynamics. *Environmental Innovation and Societal Transitions*, *36*, 236-249.
- Vidal Merino, M., Gajjar, S. P., Subedi, A., Polgar, A., & Van Den Hoof, C. (2021). Resilient governance regimes that support urban agriculture in Sub-Saharan cities: Learning from local challenges. *Frontiers in Sustainable Food Systems*, *5*, 692167.
- Vincent, O., & Feola, G. (2020). A framework for recognizing diversity beyond capitalism in agri-food systems. *Journal of Rural Studies*, 80, 302-313.
- Wang, J. (2021). The Sprouting Farms: You Are What You Grow. *Humanities*, 10(1), 27. https://doi.org/10.3390/h10010027
- Watson, D. L. B., & Cooper, C. M. (2021). Visceral geographic insight through a 'source to senses' approach to food flavour. *Progress in Human Geography*, 45(1), 111-135.
- Weidner, T., Yang, A., & Hamm, M. W. (2019). Consolidating the current knowledge on urban agriculture in productive urban food systems: Learnings, gaps and outlook. *Journal of Cleaner Production*, 209, 1637-1655.
 - Weis, A. J. (2007). The global food economy: The battle for the future of farming. Zed Books.

Wilkinson, T., & Chemero, A. (2024). Why it matters that affordances are relations. In Mangalam, M., Hajnal, A. and Kelty-Stephen, D. G. *The Modern Legacy of Gibson's Affordances for the Sciences of Organisms* (pp. 11-25). Routledge.

Williams, R. (1975). The country and the city. Oxford University Press.

Wong, G. (2024). Integration taxes and gestural integration: Access and limits to integration through new citizens' participation in state-sponsored grassroots volunteerism in Singapore. *Journal of Intercultural Studies*, 45(2), 292-309.

Woods, O. (2021). (Un)tethered masculinities, (mis)placed modernities: Queering futurity in contemporary Singapore. *Sexualities*, *24*(7), 891-905. https://doi.org/10.1177/13634607211028111

Xie, M., Li, M., Li, Z., Xu, M., Chen, Y., Wo, R., & Tong, D. (2020). Whom do urban agriculture parks provide landscape services to and how? A case study of Beijing, China. *Sustainability*, *12(12)*, 4967.

Yadav, S. P. S., Lahutiya, V., Ghimire, N. P., Yadav, B., & Paudel, P. (2023). Exploring innovation for sustainable agriculture: A systematic case study of permaculture in Nepal. *Heliyon*, *9*(5).

Yarwood, R. (2023). Rural geographies: People, place and the countryside. Routledge.

Yates, A. M. (2021). Transforming geographies: Performing Indigenous-Māori ontologies and ethics of more-than-human care in an era of ecological emergency. *New Zealand Geographer*, 77(2), 101-113.

Yip, S. Y. (2024). Positionality and reflexivity: negotiating insider-outsider positions within and across cultures. *International Journal of Research & Method in Education*, 47(3), 222-232.

Barnard, T. (Ed.) (2024). Singaporean Creatures: Histories of Humans and Other Animals in the Garden City. NUS Press Pte Ltd.

Zanbar, L. (2020). Sense of belonging and commitment as mediators of the effect of community features on active involvement in the community. *City & Community*, 19(3), 617-637.

Zembylas, M. (2023). Pedagogies of generosity: Towards a multidimensional understanding that nurtures 'critical generosity'. *Education, Citizenship and Social Justice, 20(1)*, 19-30. doi.org/10.1177/17461979231189183

Zepeda, L., & Deal, D. (2008). Think before you eat: photographic food diaries as intervention tools to change dietary decision making and attitudes. *International Journal of Consumer Studies*, 32(6), 692-698.

Zhang, L., Chen, Z., & Zhou, T. (2021). Human influence on the increasing drought risk over Southeast Asian monsoon region. *Geophysical Research Letters*, *48(11)*, e2021GL093777.

Zulfikar, T. (2014) "Researching my own backyard: Inquiries into an ethnographic study," *Ethnography and Education*, *9(3)*, pp. 373-386. Available at: https://doi.org/10.1080/17457823.2014.919869.

Zurayk, R. (2020). Pandemic and food security: A view from the Global South. *Journal of Agriculture, Food Systems, and Community Development, 9(3)*, 17.

7.2 Digital sources

Badan Pusat Statistik Jakarta (2021). Hasil Sensus Penduduk 2020. Statistics Indonesia (translated from Bahasa Indonesian). https://www.bps.go.id/id/pressrelease/2021/01/21/1854/hasil-sensus-penduduk--sp2020--pada-septem ber-2020-mencatat-jumlah-penduduk-sebesar-270-20-juta-jiwa-.html

Ernährungsrat Wien. (n.d.). Wer wir sind. https://ernaehrungsrat-wien.at/ueber-uns/wir/

Food Action Cities. (2023, October). Innovative Food Action Plan: Elevating Quality and Sustainability - Vienna, Austria. https://foodactioncities.org/case-studies/innovative-food-action-plan-elevating-quality-and-sustainabil ity-vienna-austria/

Garteln in Wien. (n.d.). Municipal, semi-public, and private organizations. https://www.garteln-in-wien.at/en/organisationen-alt/

Garteln in Wien. (n.d.). Community gardens. https://www.garteln-in-wien.at/en/community-gardens/

Garteln in Wien. (2021). Report on behalf of MA49 https://www.garteln-in-wien.at/wp-content/uploads/2021/11/Garteln-in-Wien-Gardening-in-Vienna-20 21.pdf

General Statistics Office of Vietnam (2020) Completed Results Of The 2019 Viet Nam Population And Housing Census.

https://www.nso.gov.vn/en/data-and-statistics/2020/11/completed-results-of-the-2019-viet-nam-popul ation-and-housing-census/

Ground-Up Initiative. (n.d.). Ground-Up Initiative — Connecting People, connecting Earth. healing the land, healing the human spirit. https://groundupinitiative.org/

Housing & Development Board. (2025). *HDB* | *About us.* https://www.hdb.gov.sg/about-us Kleine Stadt Farm. (2025). Kleine Stadt Farm. http://kleinestadtfarm.org/

Kwek, A. (2025) Retail Food. United States Department of Agriculture. https://apps.fas.usda.gov/newgainapi/Report/DownloadReportByFileName?fileName=Retail%20F oods Singapore Singapore 06-30-2021.pdf

Ludher, E., Hsu, K. F., & Sim, N. (2021). Preparing for a climate resilient Singapore. Centre for Liveable Cities, Singapore. https://knowledgehub.clc.gov.sg/publications-library/preparing-for-a-climate-resilient-singapore

Ministry of Sustainability and the Environment. (2024). Food. https://www.mse.gov.sg/policies/food

National Archives Singapore. (n.d.). Kampung spirit. https://www.nas.gov.sg/archivesonline/kampungspirit

Ngu, R., Tan, M., Straughan, P. T., Kim, S., Tov, W., Cheong, G., & Zhang, X. (2023). Concerns over the cost of living among older adults in Singapore. Centre for Research on Successful Aging,

Singapore. https://rosa.smu.edu.sg/sites/rosa.smu.edu.sg/files/Briefs/Feb%202023_Cost%20of%20Living/ROSA_ResearchBrief_CostofLiving_3.pdf

Phang, S. Y. and Helble, M. (2016, March). Housing Policies in Singapore. ADBI Working Paper 559, https://ssrn.com/abstract=2753487

Philippine Statistics Authority. (2020). Highlights of the Philippine Population 2020 Census of
Population.
https://psa.gov.ph/content/highlights-philippine-population-2020-census-population-and-housing-202
0-cph

Sage Reference. (n.d.). Urban Culture. Encyclopaedia of Urban Studies. https://sk.sagepub.com/ency/edvol/urbanstudies/chpt/urban-culture

Singapore Department of Statistics (2023) Gross Domestic Product by Agency. https://www.singstat.gov.sg/

Singapore Food Agency (2023) Singapore Food Statistics 2023. https://www.sfa.gov.sg/docs/default-source/publication/sg-food-statistics/singapore-food-statistics-20 23.pdf

Singapore Food Agency. (2024). Food for thought: Strengthening Singapore's food security as part of total defence: Industry, consumers and government in Unity. https://www.sfa.gov.sg/food-for-thought/article/detail/strengthening-singapore-s-food-security-as-part -of-total-defence-industry-consumers-and-government-in-unity

Stadt Wien. (2022). Smart Climate City Strategy Vienna. https://smartcity.wien.gv.at/wp-content/uploads/sites/3/2022/10/scwr_klima_poster_2022_web-EN_.p df

Stadt Wien (2014) STEP 2025 Urban Development Plan Vienna. https://smartcity.wien.gv.at/en/urban-development-plan-2025/

Statistical Yearbook Thailand. (2024) รายงานสถิติรายปีประเทศไทย (translated from Thai). https://www.nso.go.th/public/e-book/Statistical-Yearbook/SYB-2024/291/

Statistics Austria. (2024, December). Economic accounts for agriculture at national level. https://www.statistik.at/en/statistics/agriculture-and-forestry/agricultural-and-forestry-economy-and-prices/economic-accounts-for-agriculture/economic-accounts-for-agriculture-at-national-level

Statistics Austria. (2024, October). Regional economic accounts for agriculture. https://www.statistik.at/en/statistics/agriculture-and-forestry/agricultural-and-forestry-economy-and-prices/economic-accounts-for-agriculture/regional-economic-accounts-for-agriculture

Tham, D. (2024, June 29). IN FOCUS: Will Singapore meet its 30 by 30 food sustainability goal?. *Channel News Asia.* https://www.channelnewsasia.com/singapore/vegetables-seafood-singapore-food-price-cost-farmers-s ecurity-4442626.

Urban Action for the European Union (UAEU). (2024). *Greening Cities Partnership*. Retrieved February 2025, from https://www.urbanagenda.urban-initiative.eu/sites/default/files/2024-11/2024_11_01_GC_Action_Plan_FINAL_0.pdf.

Vienna Tourism Board. (n.d.). Viennese City Agriculture. vienna.info. https://www.wien.info/en/livable-vienna/sustainable-vienna/viennese-city-agriculture-425674#:~:text =In%20total%2C%206%2C336%20hectares%20are,area%20is%20even%20managed%20organically

WeltTellerFeld. (2025, January 29). Das Welttellerfeld. https://welttellerfeld.at/

 $World\ Bank.\ (n.d.).\ Urban\ population\ (\%\ of\ total\ population) --- Singapore.\ World\ Bank\ Open$ $Data.\ https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=SG$

8. Appendices

8.1 Table of community urban farming typologies

Taxonomy	Typologies	Remarks	Examples
Global North/South data and literature scans	Global North (Europe, North America, Oceania)	Follows a 'West and the Rest' (Hall, 2007) approach to categorisation, often assumed to be self-evident (e.g. Follman et al., 2021).	Weidner et al. (2019); Orsini et al. (2020) on the Global North
	Global South (the rest of the world)	There is some ambiguity in categorising highly developed non-Western countries like South Korea or Singapore, with studies divided between selective omission (e.g. Orsini et al., 2020, which only included Japan) or situating them in the Global North where these cities are seen perceived as fairly comparable to developed Western cities in their technological capabilities and commitment to building green and sustainable cities (e.g. Weidner et al., 2019).	Follman et al. (2021); Zurayk (2020) on the Global South Srinivasan and Yadav (2023) on both
Regional data and literature scans	Europe, North America, Sub-Saharan Africa, Latin America, etc.	Research is overwhelmingly concentrated in Europe (e.g. Cavicci and Hegnes, 2021) and North America (e.g. Horst et al., 2024). particularly Western Europe and USA (e.g. Broekhof and van der Valk, 2016), but also in Oceania. Orsini et al. (2020) found 288 papers on Europe, 97 on North America, 5 in Asia, and 80 in Oceania in a study of 470 papers. These publications also come predominantly from Western European and American universities, although these studies may involve collaborations with BRICS institutions (Srinivasan and Yadav, 2023). While there is a large body of work focused on (non-Western) developing regions, it is mainly viewed through the lens of hunger	Horst et al. (2024) on USA and Canada Salim et al. (2019) on Southeast Asia Broekhof and van der Valk (2016); Cavicci and Hegnes (2021) on Europe Kirby et al. (2021) on the US and Europe

		and food security (e.g. Zurayk, 2020). Follman et al. (2021) note a heavy bias within non-Western regions towards African cities in more recent research (2007-2019).	
Farming goals	Ecological/ environmental sustainability		Sartison and Artmann (2020) on German cities
	Correcting social and labour injustices		Pettygrove and Ghose (2018) on Milwaukee, USA
	Community-building		Clerino and Fargue-Lelièvre (2020) on French cities
	Physical health, food security and nutrition		Houessou et al. (2020) on Cotonou and Porto-Novo, Benin
	Mental well-being		Artmann et al. (2021) on Munich, Germany
	Education		Xie et al. (2020) on Beijing, China
	Recreation		Dubová et al. (2020) on Czech cities
	Sustaining heritage and culture		Sioen and Yokohari (2022) on Tokyo, Japan
	Commercial markets		Diehl (2020) on Sydney, Australia
	Poverty reduction		Surya et al. (2020) on Makassar City, Indonesia
	Research and (technological) development		Diehl et al. (2020) on Singapore, Singapore
Farming methods	Rooftop		Baganz et al. (2021) on Berlin, Germany
	Hydro/aquaponics		Martin and Molin (2019) on Stockholm, Sweden
	High-tech		Carolan (2019) on Denver, New York and San Francisco, USA
	Organic		Russo and Cirella (2020) on Lugo, Spain

	Vertical		Broad (2020) on New York, USA
	Permaculture		Yadav et al. (2023) on Kathmandu, Nepal
	Greenhouses/indoor farms		Ercilla-Montserrat (2019) on Barcelona, Spain
Labour participation	Volunteering		Rutt (2020) on Copenhagen, Denmark
	Registered institutional membership		Mayrhofer (2021) on Vienna, Austria
	Paid subscription		Breuste and Artmann (2023) on Salzburg, Austria
	Paid work		Nugraha et al. (2024) on Bandung, Indonesia
Management style	Centralised collective farm		Pikner et al. (2020) on Narva, Estonia and Tampere, Finland
	Allotment farm		Nicholls et al. (2023) on Brighton and Hove, UK
	Individual/family farm		Song et al. (2022) on Singapore, Singapore

8.2 Relevant field diary excerpts

8.2.1 Examples of species counts conducted during field visits

*counts are based on species identified and/or apprehended by CF participants, thus reflecting perceived species diversity rather than precise ecosystem dynamics. Local names are thus used instead of scientific names

WeltTellerFeld, 11 May 2024	GUI, 5 August 2024
Plant species (cultivated): wheat, soy, sugar beet, rye, barley, potato, rapeseed, grape, blackberry, red currants, lettuce, pak choi	Plant species (cultivated): brinjal, long beans, xiaobaicai, kang kong, papaya, rambutan, chinese spinach, chili, curry plants, caixin, moringa, kailan
Plant species (wild): field poppy, greater celandine, foxglove, dandelion, dock, common stinging nettle, meadow grass, thistle	Plant species (wild): lalang, meadow grass, cow grass, bamboo, blue porterweed, red flame, pepper elder, billy goat weed, beggar's tick, chinese violet, lawn pennywort, morning glory, beach morning glory, indian snakeweed
Wildlife species (cultivated): NIL	Wildlife species (cultivated): chickens
Wildlife species (wild): bees, butterflies, garden snails, earthworms, ants (black), crows	Wildlife species (wild): butterflies, garden snails, slugs, cockroaches, beetle grubs, earthworms, ants (red and black), (stray) cats, tree sparrows, Javan mynahs, rock doves, common pigeons, crows, Asian koels, Aedes mosquitoes, tiger beetles, leaf beetle, 2 species of unidentified beetles

8.2.2 List of routine practices at GUI volunteering sessions

Field diary log #1

Date: 15 July 2024 Time: 9.00-12.00 Temperaturer: 30°C Humidity: 81%

Weather: sunny with clouds, slight breeze of about 2.5m/s

Key routines that must be done at every GUI session

- 1. Bring a water bottle and a change of clothes.
- 2. Scan the 'Volunteer Attendance' QR code in the Living Room to *log your attendance*.
- 3. Borrow garden gloves and waterproof boots from the communal racks. You must scrub these with the brush and basin in the washing corner *on your own* at the end of the session, before being returned to the same place on the communal racks. Basins are used for washing instead of using the hose directly *in order to avoid unnecessary water wastage*.
- 4. Check with farm staff member on duty (Chin Hui) for the day's instructions. *You may help with other activities*, but inform the Task IC first *for safety and accountability*.

5. Vegetable plot task logs can be found on the whiteboard in the Living Room. They should be updated after the tasks are completed *so that the next session's volunteers have updated information*.



6. Each volunteer session includes a break in the Living Room (about 10.30am) so that volunteers remain hydrated and do not over-exert themselves.

8.3 Table of interview respondents

	Description	Duration of interview
1	Staff (Project Coordinator and Co-Founder) at WeltTellerFeld	79 min
2	Staff (Project Coordinator and Co-Founder) at WeltTellerFeld	40 min
3	Staff (Education Officer) at WeltTellerFeld	63 min
4	Staff (Project Coordinator) at WeltTellerFeld	58 min
5	Staff (Facilitator) at WeltTellerFeld	42 min
A	Regular volunteer at Ground Up Initiative volunteering sessions	34 min
В	Regular volunteer at Ground Up Initiative volunteering sessions	31 min
С	Regular volunteer at Ground Up Initiative volunteering sessions	30 min
D	Regular volunteer at Ground Up Initiative volunteering sessions	34 min
Е	Staff (Farmer) at Ground Up Initiative	71 min
F	Regular volunteer at Ground Up Initiative volunteering sessions (became staff during research period)	80 min
G	Interview fragments with staff and volunteers from external researcher	NIL

8.4 Samples of participant food logs

8.4.1 WeltTellerFeld

Date and meal	Image/ Video (where possible)	How was this meal prepared and eaten?	Description
02.01.2025, breakfast/ lunch		Eaten at Café der Provinz, 1080	Waffles (vegan) with maple syrup and peach Ingredients mostly from organic farming
02.01.2025 afternoon snack		Eaten while studying at home	Walnuts and dried plums — both from my grandma's garden
02.01.2025 dinner	Richn Richn	Cooked by me and eaten in company with my partner	Cooked potatoes, carrots and lentils with a sauce made of strained tomatoes und herbs, with noodles everything from Spar
03.01.2025 breakfast	FLORA &		Bread rolls from Ankerbrot, both with vegan butter from Spar
03.01.2025 afternoon snack		Bought at "Der Mann der verwöhnt" and eaten with friends at their place	Vegan apple cake

03.01.2025 dinner	VEGORE VEGANER BUTTON OF THE PROPERTY OF THE P	Cooked by me and eaten in company with my partner	Vegan shrimps from Lidl, smoked Tofu from Spar with a green salad from my grandmas garden with oil and vinegar and sunflowerseeds-bread from lidl
04.01.2025 brunch	TOUR PER LAND	Cooked by my partner and eaten in company	Vegan sausages from Spar, canned beans in tomato sauce from the brand Heinz, vegan scramble egg omlette from lidl based on flour made of sunflowerseeds, tomatos from Italy
04.01.2025 snack			Vegan chocolate chip cookie from spar
04.01.2025, dinner	WESTER BOTTOFU BRANCH FELIX SPACE OF THE STATE OF THE STA	Cooked by me and eaten in company with my partner	Beetroot wraps from lidl with bio rice and smoked tofu from Spar, the rest of the tomatos and frozen vegetables, vegan mayonnaise and bbq sauce
05.01.2024, brunch		Cooked by me and eaten in company with my partner	Leftovers from yesterday (Beetroot wraps from lidl with bio rice and smoked tofu from spar and the rest of the tomatos, vegan mayonnaise and bbq sauce)
05.01.2024, dinner	CUSINE HAFER DAT Setrocknet. Setrocknet.		Spaghetti with oat gravy from oatly, vegan cheese from Lidl, smoked tofu and sundried tomatoes

06.01.2024, breakfast		I	Vegan Protein shake
00.01.2024, 01eaktast	BEERE III		vegan Flotein Shake
06.01.2024, lunch		Cooked by me and eaten on my home office desk	Yesterday's leftovers (Spaghetti with oat gravy from oatly, vegan cheese from lidl, smoked tofu and sundried tomatoes)
06.01.2024, dinner	VEGNER BIO-TOFU GENUCLES AND	Cooked by me and eaten in company with my partner	Curry with frozen vegetables from Marchland (lower Austria), smoked tofu, canned chickpeas, coconut cream und curry powder
07.01.2024, brunch		Cooked by me and eaten on my home office desk	Porridge with oats, oat milk, dates, frozen berries, nut butter
07.01.2024, dinner		Ordered and eaten with friends at Takumi ramen	Vegan ramen at takumi ramen
08.01.2024, lunch			Leftover curry
08.01.2024, brunch			
08.01.2024, dinner		Cooked by me and eaten at home by myself	Oven baked Carrots &potatos with smoked tofu and hummus
09.01.2024		Eaten at university	Bread with hummus, carrots, tofu and salad inside plus sweet apple cinnamon pastry from Ströck

09.01.2024	Eaten on the go	A bowl with rice, mango, edamame,
		sweet potato, tomatos, corn and peanut
		sauce

8.4.2 GUI

Date and meal	Image/ Video (where possible)	How was this meal prepared and eaten?	Description
Wednesday, 2nd October Lunch			Fish soup Fish (fished from fish pond by my father) Radish Tofu Stir fried Vegetables: Spinach, local lettuce (wo sun) Panfried fish (fished from fish pond) Eaten with rice All purchased from local market (cai shi chang) except fish
Wednesday, 2nd October Dinner		Home-cooked by grandpa	Stir fried Vegetables: Local lettuce (wo sun), potato Fried frog Eaten with rice All purchase from local market
Thursday, 3rd October Lunch		Home-cooked by grandpa	Stir fried vegetables: Bean curd (dou gan) with mushrooms, greens (su zhou qing), lotus (ou zha), pumpkin, minced lotus roots (ou zha), native plant (ling guo mi) All purchased from local market

Thursday, 3rd October Dinner		Cooked by parents.	Fish soup hotpot: Fish (fished from fish pond by my father) Radish Tofu Chinese Cabbage Fish ball (homemade with fish from fish pond) Stir-fried: Long beans, bean curd (dou gan) All purchased from local market except fish
Friday, 4th October Dinner		Home cooked	Homemade pesto on toast: Pesto: Basil, cashew, garlic, lemon juice, All bought from local supermarket Homemade Soy milk with soybeans (carried from China)
Saturday, 5th October Lunch		Home-cooked	Steamed: Spinach Enoki mushroom Saba fish Boiled Brown rice mee hoon Sprinkled with olive oil
Saturday, 5th October Dinner	Photo removed due to presence of identifying features of participants	Prepared in restaurant	MaLaTang: black fungus, seaweed, beancurd, tofu, mushrooms

Sunday, 6th October Lunch		Steamed: Fish, broccoli and beans Cooked soba noodles Sprinkled with olive oil All bought from local supermarket
Sunday, 6th October Dinner		Steamed: Saba Fish, mushrooms, seaweed, kailan and onions Sprinkled with olive oil All bought from local supermarket
Monday, 7th October Lunch	Prepared by local hawker centre near my house	Fish soup with a few strands of vegetables and chili sauce
Monday, 7th October Dinner	Cooked by myself	Raw Cucumber and carrots Steamed: chicken Cooked soba noodles All bought from local supermarket

Tuesday, 8th October Lunch	Prepraed in a Korean Restaurant	Bibimbap Bean paste soup Rice Side dishes:kimchi, picked cucumber, egg and fish cake
Tuesday, 8th October Dinner	Cooked by myself	Raw Capcicum Cucumber baked carrot Baked tofu Orange yogurt dressing All bought from local supermarket

8.5 Interview guide

PARTICIPANT INFORMATION SHEET

The following information outlines the purpose of this study and outlines the nature of your involvement, should you consent to participation.

FAQ

1. What is this study?

This study is being conducted as part of a Master's Thesis at the University of Vienna, from June 2024 to September 2025. It seeks to understand the relationships with food formed through participation in community urban farming (CFs).

2. Why have I been invited to participate?

You have been invited to take part in this study after being identified as someone who participates regularly in a CF. Should you consent to being interviewed, you will be an anonymous participant in this study.

3. Do I have to take part?

Participation is completely voluntary and consent can be withdrawn prior to 1 April 2025, 2359. There will be no consequences should you refuse or withdraw consent, and you may seek clarification from the researcher prior to consenting. No justification is required for refusal or withdrawal, and your decision will be fully respected.

4. What will happen after I give consent for participation?

You will be asked to keep a food log for 7 days before the interview date (see sample attached). During the interview, you will be asked a series of questions, some of which can be answered with reference to your food log. Your answers will be recorded and transcribed for data collection purposes.

You may seek clarification at any point during the interview process and may refuse to answer questions if you are not comfortable with providing the relevant information. The recordings and transcripts will be stored on my personal laptop, and will only be accessible by me. When used in the written product of the study, all responses will be kept anonymous.

You need not consent to answering any questions that make you feel uncomfortable.

5. Is there any compensation for taking part in this study?

No.

6. Who controls the data derived from my participation?

The University of Vienna is the data controller with respect to your personal data, and will have the final say in how your data is used in this study. The University will process your data for the purpose of the above research. Research is a task performed in the public interest. Further information on your data protection and rights can be found at https://dsba.univie.ac.at/en/data-protection-declaration/ (University of Vienna).

Sample food log

² You can fill in this template here, or make your own customised food log (e.g. a hard copy list accompanying a series of images/videos).

Image/video	Date and meal	How was this meal prepared and eaten?	Description
[insert image/video here]	21 September, lunch	Cooked by myself, eaten at work with my colleagues	Cabbage bought from the community farm I volunteer at, made into soup with chicken bought from XXX market and eaten with rice from XXX supermarket. A takeaway dessert from XXX shop was also eaten.
[insert image/video here]	21 September, dinner	Cooked by other volunteers and eaten together	Pasta from XXX supermarket, eaten with sauce made with vegetables from another community farm called XXX.

 $^{^{1}}$ Feel free to use different languages/local terms in your descriptions. The descriptions should be based on what feels the most normal to you.

Sample interview questions

This interview guide includes some sample questions to give you a better idea of what we will discuss during the interview. While the interview will focus on these topics, it will also not be restricted to these questions. Instead, you are encouraged to speak freely about what you think is most relevant to your experiences.

Introduction

- 1. Could you tell me how you are involved in the CF?
- 2. How did you get involved in the CF?

Section A: Food narratives

- 1. Why do you participate in this CF?
- 2. Have these reasons changed from the start of your participation to the present? If so, how?
- 3. Tell me more about your food values (beliefs or principles that are important when you are involved in food-related activities like farming, grocery shopping, cooking, eating, waste disposal, etc.).
- 4. Tell me more about the CF's food values, especially those that are different or less prominent in your own values.
- 5. Has participating in this CF shaped your personal food values? If so, how?

Section B: Food practices in CFs

- 1. What food-related activities do you participate in as part of your work in this CF?
- 2. How do these CF activities impact your personal relationship with food?
- 3. Why do you think these CF activities impact your personal relationship with food?
- 4. In your CF, do your personal food values/practices impact the farm's activities or practices? To what extent is this impact?
- 5. How does participating in the CF make you feel?

Section C: Food practices in everyday life

1. What food-related activities are part of your everyday life? Describe your everyday habits. (e.g. growing vegetables, grocery shopping, cooking, eating out, food waste disposal).

- 2. To what extent has your participation in CF influenced your everyday practices?
 - a. How has participation in CF influenced the way you think/feel about your everyday food practices?
 - b. How has participation in CF practically influenced your everyday food practices? (e.g. skills, knowledge)
- 3. To what extent do your everyday food practices align with your food values?
 - a. What are some challenges that you face in aligning your food values and practices?
 - b. To what extent has your participation in CF helped you with these challenges?
 - c. What other ways has your participation in CF helped you align your food values and practices?

Thank you once again for your help with this study. If you have any further questions, you may contact the researcher, Alyssa Kee (a12339206@unet.univie.ac.at).

CONSENT FORM

I acknowledge that participation in this study is voluntary, and that all personal details (e.g. full name, contact details) will be kept completely confidential.	YES/NO
I have read and understood the information found in the Participant Information Sheet. I have been able to ask and receive satisfactory answers to any questions I might have regarding the study.	YES/NO
I consent voluntarily to participation in this study, and understand that consent can be withdrawn by 1 April 2025, 2359, without having to provide justification.	YES/NO
I consent to the interview being video recorded and transcribed.	YES/NO
I understand that the information provided will be used and quoted for the researcher's undergraduate dissertation and may be used in future research.	YES/NO

Please retain a copy of your complete	ed consent form
Signature of participant:	
Name:	
Date (DD/MM/YYYY):	