Plan-and-play in the polder: exploring the lived futures of sustainable food entrepreneurship in Flevoland

Koen van der Gaast

Propositions

1. Food entrepreneurship in Flevoland is characterised by collaboration rather than competition.
   (this thesis)

2. The study of entrepreneurial processes necessitates the use of interpretive methods.
   (this thesis)

3. Short term project financing limits academic action research.

4. Applied research fits sustainability research better than scientific research.

5. The absence of future studies in high school curricula causes societal crises.

6. Public transport in Flevoland is unsuited for sustainable social scientific field work.

Propositions belonging to the thesis, entitled

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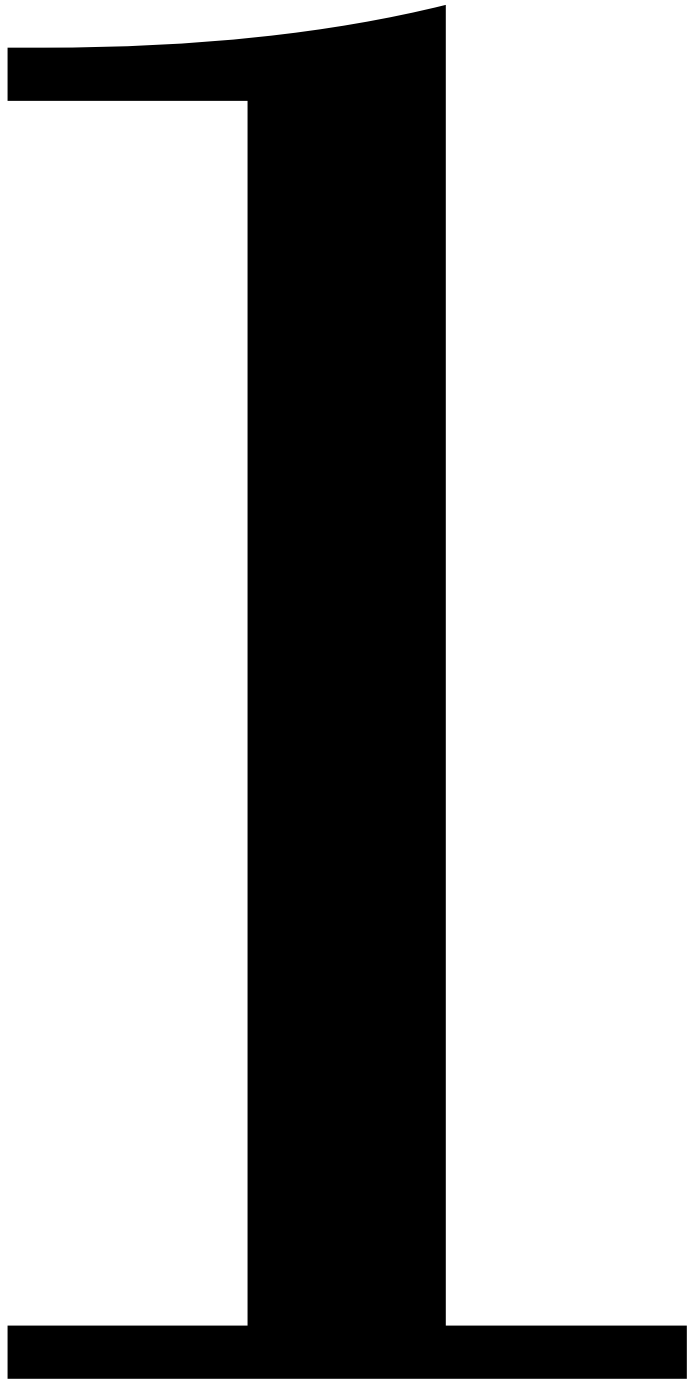

Chapter 1

General introduction

1.1 Introduction – Beyond the gap of dreams and deeds

In 1994, Donella Meadows wrote an essay called 'Envisioning A Sustainable World'. Meadows was a member of the Club of Rome, the organisation that put the relationship between environmental damage and economic activities on the map in the early seventies with their report 'Limits to Growth'. In the essay 'Envisioning A Sustainable World', Meadows shared her experiences organising workshops in which she asked her participants to imagine a desirable future of sustainable food. Not the future the participants expect to happen, or the future they deem reasonable to achieve, but the future they would aspire to most. To her astonishment, most participants refused this request.

> 'One person said, with emotion, that he couldn't stand the pain of thinking about the world he really wanted, when he was so aware of the world's present state. The gap between what he longed for and what he knew or expected was too great for him to bear' (Meadows, 1994, p. 3).

More than two decades have passed, and the food system is no closer to becoming sustainable than when Meadows wrote the essay. The current food system causes problems such as biodiversity loss, water shortages, pollution and desertification that will become more severe over time (Caron et al., 2018; Stefanovic et al., 2020). Furthermore, the scientific and societal debate on how a sustainable future of the food system should look like is getting more and more contested. From local to global, from industrial to traditional, from market-based to post-capitalist, the aspired future food system has many different faces with each their own prophets and proclaimers (de Krom & Muilwijk, 2019; De Krom et al., 2020). Yet, at the same time, there are several examples of actors and organisations that are already working towards more sustainable food futures despite all the difficulties that lie ahead (de Bakker, 2013; Hajer, 2011). For example, Dutch citizens shape the future sustainable food system in the making by partaking in a range of practices, from food production to food planning (Brons, van der Gaast, et al., 2022; Jansma & Wertheim-Heck, 2021; Veen et al., 2020).

The latter development shows the need to study the everyday process that connects imagined futures of our food system with ongoing actions in the present. In other words, there is a need to study the everyday lived futures. By studying this, the gap as described by Meadows' workshop participant, the gap between dreams and deeds, proves to be a mirage. Because both what is aspired and what is achieved is constantly shifting and changing over time. This thesis departs from the assumption that there is no single future to be reached, since different actors and organisations work towards more sustainable practices every day. And in their daily activities, actors' images of what a sustainable future food system constitutes are constantly shifting and changing.

A case in point is food entrepreneurship, and its role within the ongoing food system transformation. So far, the scientific understanding of food entrepreneurship is mostly restricted to the individual agency of entrepreneurs as economic actors that exploit the new opportunities the market for sustainable food affords. Instead, in this thesis I argue the need for a new perspective: that of sustainable food entrepreneurship. In this perspective, entrepreneurship is considered a social process of change itself that is driven by imagined futures. Imagined futures drive the daily life of entrepreneurs, which connects them to a wide range of human and non-human actors within a larger process of change. This process of change in turn shapes the future of food continually over time. In this understanding, the sustainable future of food is not a static state that can be achieved over time. It is a lived entity that is constantly evolving and changing. In sum, this thesis sets out to answer the following research question:

How are imagined futures lived out in sustainable food entrepreneurship and how does this shape the ongoing transformation of the food system?

In the following paragraphs, the empirical and scientific context of this study will be introduced which leads up to the research objective and research question and sub questions. Next, the theoretical and methodological approach of this thesis is explained followed by an outline of the thesis.

1.2 Empirical context: food system transformation and entrepreneurship in Flevoland, the Netherlands

1.2.1 Food system transformation in the Netherlands

The need for a more sustainable food system is evident. The food system increasingly has a global reach, connecting production and consumption of food through complex chains of production, processing and distributing around the world. Therefore, it affects both biophysical and human environments in various ways (Caron et al., 2018; Ericksen, 2008; Stefanovic et al., 2020). The global food system contributes to about a third of global greenhouse gas (GHG) emissions (Caron et al., 2018; Poore & Nemecek, 2018; Stefanovic et al., 2020; Vermeulen et al., 2012). The lion's share of these emissions are emitted through agricultural production (Vermeulen et al., 2012).

Moreover, the global food system is resource intensive. Crop, livestock and fishing systems alone use about 70% of total freshwater consumption and 30% of energy use (Caron et al., 2018). Furthermore, there is a wide range of environmental damages that are attributed to the food system: from biodiversity loss to water, soil and air pollution (Stefanovic et al., 2020). Specifically, food production contributes to about 32% of

terrestrial acidification and 78% of eutrophication (Poore & Nemecek, 2018). Lastly, the effects of climate change will in the future put a large strain on the capacity to produce enough food for everyone, which is already a problem since almost 11% of the global population is underfed (Vermeulen et al., 2012), and about a third of all produced food is wasted throughout the global supply chain (Scherhaufer et al., 2018).

This is an inconvenient truth, especially for a country such as the Netherlands. The current problems of the Dutch food system are the result of a successful food system transformation in the recent past where entrepreneurship played a crucial role. After the Second World War, the Dutch food system was transformed to make sure the country would never have to be hungry again. This resulted in the Netherlands transforming from a net import country to a net export country in terms of food with 60% less labour input. The instruments of this success (e.g. the upscaling and mechanisation of farms, larger and more complex economic chains) are now criticised for making the food system unsustainable (Grin, 2004). In 2017, the agri-food sector in the Netherlands contributed 7% of the Dutch BBP, two thirds of which resulted from export (Muilwijk et al., 2020). Simultaneously, food production in the Netherlands causes a range of negative externalities, from nitrogen depositions and ammonia and GHG emissions, that harm the environment.

However, many actors that play a pivotal role in the transition towards a more sustainable form of food production are limited in their abilities to do so. Food producers such as farmers for instance are often said to be locked in the current system because of the low margins they receive for their products which necessitates an continually increasing scale of production (PBL, 2018; Vink & Boezeman, 2018). These low margins in turn relate to domination of a few buyers and retail chains within the global food system, who can use their market power to demand the lowest possible price (PBL, 2012; van der Klundert & Mulder, 2017).

Furthermore, there is disagreement on how a future sustainable food system should look like. On the one hand, there are perspectives that consider the current problems a market failure that can be solved through better regulation and that seek solutions in technological innovations such as precision farming. On the other hand, there are perspectives that consider the global and capitalist food system to be inherently incompatible with a sustainable food system, favouring more locally and less industrial means of production (de Krom & Muilwijk, 2018, 2019). This scientific and policy debate on how a future food system should look like is paralleled by an increasingly contested societal and political debate on the future of Dutch agriculture. Environmental activists target farmers on their own farms. Farmers in turn increasingly turn to protest

against politics and policy, sometimes in a violent manner. Based on this alone, it almost seems as if the quest towards a more sustainable food system is stuck.

Yet, this assessment would do no justice to all those efforts and pursuits towards more sustainable food systems in Dutch society. Dutch citizens do more than just 'voting with their fork', they actively and creatively co-shape the food system in variety of ways (Brons, van der Gaast, et al., 2022). Several recent studies show they partake in the planning of their food environment (Jansma & Wertheim-Heck, 2021, 2022), engage with food production as prosumers (Veen et al., 2020) or become entrepreneurs (Dentoni et al., 2017). As some experts argue, rather than looking for blueprints of the future sustainable food system, we should study and foster attempts of the several citizens, companies and organisations that are already working towards change (de Bakker, 2013; Hajer, 2011). Therefore, it is important to look more closely to entrepreneurship that yet again plays a role in transforming the food system.

1.2.2 Entrepreneurship in Flevoland: pioneering the past, present and future of food

The province of Flevoland offers an interesting illustration of the importance of entrepreneurship in transforming the food system. Flevoland is the youngest province of the Netherlands. Its land was reclaimed from the sea in the 20th century, resulting in a 'polder' (Dutch word for reclaimed land). The polder was created for agricultural purposes, to contribute to the goal of the Dutch government to upscale its food production. In the seventies, urban areas were planned in Flevoland to accommodate the population overflow from the nearby city of Amsterdam. Cities such as Almere and Lelystad emerged. Yet, they were designed specifically to be grounded to its agricultural hinterland, containing lots of green spaces and a poly-nuclear structure that caused porous boundaries between urban and rural areas (Jansma & Wertheim-Heck, 2021, 2022).

Even though agricultural land decreased due to the emergence of urban areas, still 65% of all land is used for agriculture which is in total 6% of all Dutch agricultural land (CBS, 2018). The rural-urban linkages revolving around food gain extra salience in the current challenge to make the food system more sustainable. Even though the cities in Flevoland were designed to foster relations between citizens and food, in the 1980s and 1990s the focus of urban planners was on meeting the national housing plans rather than on crafting food policies. This changed in the last two decades, eventually resulting in an Almere Food Strategy for 2021-2025 (Brons, van der Gaast, et al., 2022). Before that, the city of Almere already showed its intentions with regard to sustainable food by signing the Milan Policy Food Pact, that stipulated a more steering role for cities in creating more sustainable food systems, as well as hosting the 2022 horticultural festival of the Floriade, with the theme 'Growing Green Cities' (Brons et al., 2020; van der Gaast et al., 2020).

Entrepreneurship has an important role in this aspired sustainable future, just as it has in the past. The first citizens of Flevoland were selected by the Dutch government. Since the entire province needed to be built as an agricultural powerhouse from the ground up, the Dutch government wanted only pioneers as the first inhabitants and farmers of Flevoland. This was done by a meticulous selection process, that included assessing people's agricultural prowess as well as their entrepreneurial skills, which they assessed by finding out how engaged they were in civil society (Vriend, 2014). This pioneers-mentality in entrepreneurship is visible in for instance organic food production. Flevoland stimulated this trend from the get-go. From the start, there were already organic farms as well as cooperatives to share knowledge and sales channels. However, this development was also stimulated by municipalities as well as agricultural educational facilities that provided the means to educate farmers of new generations (Dekking et al., 2020). This shows the pioneering work of entrepreneurship as manifesting in Flevoland is particularly a process that involves a wide range of actors. As a result, about 15% of all food production in Flevoland is done organically. In contrast, in the whole of the Netherlands this is 3%. In Europe, it is about 7% (CBS, 2018; Dekking et al., 2020).

The current challenge of more sustainable food system not only incites entrepreneurial efforts in the rural areas, but in the cities as well. Stimulated by the future vision of 'Growing Green Cities', new and old connections are fostered between rural and urban entrepreneurs. Entrepreneurship also plays a role in new urban areas that are designed with a specific purpose to reconnect citizens to (sustainable) food. For example, in 2016 a new neighborhood emerged in Almere called Oosterwold. This neighborhood was built on former agricultural land. Residents can buy a plot of land with one condition: using 50% of the land to produce food. The municipality aims to over time produce 10% of all food consumption in Almere in Oosterwold (Jansma & Wertheim-Heck, 2021, 2022). Yet, the municipality did not specify how, nor facilitate this. Thereby, they assumed the residents of Oosterwold would develop entrepreneurship over time to source the city with their food. In sum, food entrepreneurship has shaped Flevoland in the past, and is currently shaping the ongoing present as inspired by the imagination of a more sustainable future.

1.3 Scientific context: food, futures and entrepreneurship

The issue of food entrepreneurship in Flevoland and sustainable futures for the food system, touches upon three interlinked debates. First, 'the future' versus 'futures' in the study of the future in social science. Second, the discovery of the future versus imagination of futures in studies of entrepreneurship. Third, food entrepreneurship as a process of change or as economic agency. In this section, I will introduce these debates.

In the following theoretical framework, I will position myself and further explain how my thesis will approach this topic theoretically.

1.3.1 Future in society and social science: the future versus futures

For many centuries the future did not play a large role in society. Historians, such as Koselleck (2004) , have argued that in pre-modern times, history, present and future were all considered part of the same process where past events and experiences were expected to happen again, beyond human control. This changed in modern times when the future increasingly became a place to be controlled or charted (Koselleck, 2004; Šubrt, 2017; Wenzel et al., 2020). In the last decades, the belief of the future as something that can be planned, eroded. Especially the uncertainties as brought on by issues such as climate change showed the future cannot be mastered fully (Adam & Groves, 2011; Wenzel et al., 2020).

In studies of the future in social science, a similar trend is visible. On the one hand, there are *future studies* that consider the future as an objective state that can be measured and reached or prevented over time. On the other hand, there are *futures studies* that consider the future itself a factor that shapes social processes. The latter category has increasingly attracted the attention of social scientists in the last decades (Beckert & Suckert, 2021). At the same time, the former type is criticised for implying that the future can actually on some level be known. As Ziauddin Sardar argues, implying that the future can be known ignores our own biases and prejudices while designing tools such as scenario methods and forecasts. Therefore, he argues the use of futures in the plural instead of in the singular to emphasise diversity as a central element of studying futures (Sardar, 2010).

Similarly, the role of the future is also shifting within social science disciplines that study economic processes such as (economic) sociology. Adam and Grove criticise neoclassical economics for considering the future as a state that can be calculated, measured and turned into what we want it to be. They argue instead for considering the future in social processes as lived: 'we are already involved with the future as its creators (…) when we extend ourselves into the future through imagination and through action, we make and take futures' (Adam & Groves, 2011, p. 21). A similar argument is made by Beckert (2016) who argues that risk and uncertainty are easily conflated which has repercussions for how we understand the role of the future in economic processes. A century ago, the economist Frank Knight famously distinguished between risk and uncertainty in the economy. In situations of risk, it is possible to calculate the probability of a future event. In contrast, situations of uncertainty involve a situation where future events cannot be predicted. Such situations demands the future to be imagined (Knight, 1921).

Yet, in economic studies economic processes are mostly reduced to individual risk taking and probability calculating. However, especially in situations of crisis and social upheaval, economic actors face situations of uncertainty that requires imagination more than calculation. Therefore, Beckert argues the need to center uncertainty, and therefore imagined futures, as the core of economic processes. Through imaginaries of future situations, it is possible to orient in the coming future despite the fact that it is impossible to calculate its probabilities (Beckert, 2013, 2016; Beckert & Bronk, 2018).

1.3.2 Entrepreneurship: discovering the future versus imagining futures

The debate between future and futures is also visible in studies of entrepreneurship. Traditionally, entrepreneurship is said to be about the *discovery of the future*. In this perspective, entrepreneurship is considered to deal solely with risk. The market provides opportunities, and entrepreneurs can discover those opportunities. Entrepreneurs can study the market and in that way calculate the risk of a certain future to arise. Based on this calculation, they decide whether or not to take that risk (Fisher, 2012; Sarasvathy, 2001). In this understanding of entrepreneurship, entrepreneurship is limited to the acts of individual entrepreneurs and businesses. For example, a common understanding of entrepreneurship is the individual-opportunity nexus where entrepreneurship is positioned at the axis of two interrelating phenomena: enterprising individuals on the one hand and opportunities for profit on the other hand those enterprising individuals seek to exploit (Shane & Venkataraman, 2000).

In contrast, a different perspective is currently emerging that claims entrepreneurship involves the *imagination of futures*. This perspective emphasises the role of uncertainty. In situations of uncertainty, entrepreneurs are not able to calculate the future and therefore must rely on subjective experiences. They need to make sense of the past and present to explore possible and desirable futures (Jones & Li, 2017; Randerson et al., 2016; Selden & Fletcher, 2015). Even though futures are imagined in the minds of entrepreneurs, they manifest through the social practices these entrepreneurs engage in to make these imagined futures a reality (Thompson & Byrne, 2021; Wenzel et al., 2020). As a result, entrepreneurs, human, but also non-human actors (such as resources, materials and ideas) connect over time through imagined futures (Akemu et al., 2016; Murdock & Varnes, 2018). This perspective challenges those studies that grant the entrepreneur the status of an heroic individual (Johannisson, 2011; Nelson et al., 2018; Watson, 2013), thereby leaving out the process through which individuals manage to become successful entrepreneurs. By taking into account the role of uncertainty, entrepreneurship is extended from enterprising individuals that exploit opportunities to the process by which opportunities and entrepreneurs emerge (Kauppinen & Puhakka, 2010; Metzger & King, 2015; Nelson et al., 2018; Randerson et al., 2016).

In sum, the imagination of futures-perspective of entrepreneurship defines entrepreneurship as a process of social change itself (Calás et al., 2018; Steyaert, 2007; Steyaert & Katz, 2004; Weiskopf & Steyaert, 2009), that is not confined to the economic sector and to economic agents. In the words of Johannisson (2018, p. 391), this perspective 'moves entrepreneurship out of the economic cage and presents it as a social force'.

1.3.3 Food entrepreneurship: process of change versus economic agency

Even though the perspective of entrepreneurship as the imagination of futures is burgeoning in studies of entrepreneurship, so far it has hardly reached the domain of food. In studies of agricultural entrepreneurship, the focus is on the farm and farmer, and the skills to exploit opportunities of profit (de Wolf & Schoorlemmer, 2007; Dias et al., 2019). Studies of food entrepreneurship in turn are not restricted to that of farmers and farms, they also include others types of firms and types of food system services (e.g. delivery, brewing). Yet, such studies mostly focus on actions and motivations of economic actors (e.g. businesses or entrepreneurs) in their pursuit towards more sustainable food (Bonadonna et al., 2019; Buckley et al., 2014; Delgado, 2017; Mapelli et al., 2016; Moskwa et al., 2015).

Overall, entrepreneurship is seldom explicitly defined. When it is, entrepreneurs or businesses with a drive to make the food system more sustainable are often endowed with adjectives such as 'social', 'eco' or 'sustainable' (Drottberger et al., 2021; Jolink & Niesten, 2015; Kline et al., 2014; Larsson et al., 2016; Mayer & Knox, 2010; Paloviita, 2009). These adjectives are used to signify particular instances of entrepreneurship that go beyond the 'normal' notion of entrepreneurship. The study of Kitchen and Marsden (2009) helps to illustrate this. Several case studies are discussed of a local community that together creates new value in terms of food. Kitchen and Marsden argue this value creation itself is a wider process of change that is distinct from entrepreneurship since it does not involve individualistic risk taking. Instead, they use the term 'eco-entrepreneurship' to distinguish the wider process of change from the individualistic risk taking. Korsgaard et al. (2016) use the study of Kitchen and Marsden to illustrate their argument for a different understanding of entrepreneurship in studies of food and sustainability. They propose a perspective that considers entrepreneurship to be more than just the actions of risk taking of individuals.

At the same time, there are also studies of food system transformation that study entrepreneurial processes of change without acknowledging it as such. The Alternative Food Networks (AFN) literature is a good example. The AFN concept emerged in the early 21st century, by problematising the global capitalist nature of the current food system and posing food system relocalisation and shorter supply chains as an alternative

(Goodman, 2004; Renting et al., 2003). AFN studies were criticised in the last decade for offering a binary description of the transformation process whilst in reality the lines between what is mainstream and alternative are blurry (Tregear, 2011; Veen et al., 2012; Zwart & Wertheim-Heck, 2021). Two recent contributions to the AFN literature acknowledge this problem, and instead argue for different frameworks to better make sense of how elements of the current unsustainable food system and the aspired future food system shape one another. They argue for the use of bricolage theory, without acknowledging this as an entrepreneurial theory (Feyereisen et al., 2017; Grivins et al., 2017).

Bricolage theory is part of what Korsgaard et al. (2016) refer to as the resourcefulness perspective, an understanding of entrepreneurship that better captures its wider social and environmental dimensions. Bricolage theory considers entrepreneurship a social organising process in which entrepreneurs and non-entrepreneurs make sense of the environment and 'make do' with what they find (Baker, 2005). Feyereisen et al. (2017) used this theory to show how dairy farmers who want to oppose the inequalities of the global market, use market mechanisms to create fair prices for farmers. Without acknowledging it as such, they used an entrepreneurial lens to break the dichotomies as hitherto present in AFN studies.

In sum, the perspective of entrepreneurship as a process of social change is emerging in the literature. Yet it is not yet visible in the study of agricultural and food entrepreneurship. At the same time, entrepreneurial processes of social change are studied in the alternative food networks literature without considering it as entrepreneurship. These interlinked debates demonstrate the need for a new perspective on food entrepreneurship.

1.3.4 Towards a new perspective: sustainable food entrepreneurship

In this thesis, a new perspective will be provided on the role of entrepreneurship in the sustainability transformation of food. I will refer to this perspective as 'sustainable food entrepreneurship'. It must include both the notion that entrepreneurship is itself a process of change that cannot be reduced to the actions and motivations of entrepreneurs. Furthermore, this perspective should not assume entrepreneurship revolves around the discovery of the future, but around the imagination of futures. Sustainable food entrepreneurship, as a perspective, has merit to understand the role of food entrepreneurship in studies of the food system transformation.

First, this perspective highlights the uncertain situation of the current food system which involves the impossibility to predict the future and instead the need to imagine how the food system could and should look like. Its emphasis on imagined futures helps to see how the future is 'lived' in entrepreneurship, how it shapes and is itself shaped by daily

experiences and daily life. Therefore, it appreciates the wider role of entrepreneurship other than as economic agency. Sustainable food entrepreneurship helps to see beyond just what economic actors do and instead hones on how society itself gets reshaped through entrepreneurship.

Second, as the example of the AFN literature shows, a broader conceptualisation of what entrepreneurship is, can help navigate the politicised debate on how the food system should look like. This can be done by moving the scope from profit making individuals to the organisation process of a wide range of actors, ideas and resources. This in turn has merit for the study of food system transformations in general since it helps to look beyond normative dichotomies. This is helpful to go beyond the societal politicised debate concerning food, and instead focus on how the future of sustainable food is shaped and reshaped in daily life.

1.4 Research objective and knowledge gap

This thesis sets out to provide more insight in how sustainable futures are lived out in the everyday life of food entrepreneurship in the context of the ongoing food system transformation in Flevoland. In this way, the thesis addresses two interrelated knowledge gaps. First, there is a conceptual knowledge gap. Currently the role of food entrepreneurship in the ongoing transformation of the food system is limited to the behaviour and motivations of individual entrepreneurs and enterprises. Therefore, there is a need to conceptualise the role of entrepreneurship in the ongoing transformation of the food system as a process of change that centers imagined futures. Second, there is an empirical knowledge gap. In the public and scientific debate on how a sustainable food system should look like, the lived futures of food entrepreneurship are so far understudied. More insight into this helps to understand better what role food entrepreneurship plays in the ongoing food system transformation.

1.5 Research questions

Research question: How are imagined futures lived out in sustainable food entrepreneurship and how does this shape the ongoing transformation of the food system?

Sub questions:

1. How are imagined futures shaping up in the process of sustainable food entrepreneurship and what are the implications for the transformation of the food system? (Chapter 2 and 5)
2. How are near and distant futures engaged in practices of sustainable food entrepreneurship and what does this mean for the transformation of the food system? (Chapter 3)
3. How are futures for sustainable food discursively constructed through sustainable food entrepreneurship, and how does this affect the transformation of the food system? (Chapter 4)

1.6 Theoretical and conceptual approach

1.6.1 Lived futures and the practice-turn of entrepreneurship

The study of the lived imagined futures of sustainable food entrepreneurship is the core of this thesis. The imagination of futures is seen as a lived process that is inherently embedded in daily life and that is always in the making (Adam, 2009; Adam & Groves, 2007, 2011). The future is not seen as something that is separated from the present and something that can be reached over time. Instead, the future is firmly embedded within the daily life of the continuous present. They are, as Adam (2009, p. 2) states, 'created continuously, across the world, every second of the day'. In line with Adam and Groves (2007, p. 198), I define lived futures as follows: 'the way humans and other living entities experience their world as something in the process of being made, anticipate its changing form, and participate in its production'.

To explore the lived futures of food entrepreneurship, the theoretical family of entrepreneurship-as-practice will guide my theoretical approach. By family, I mean a set of theories that share epistemological and ontological similarities without forming one unified model of thought. These theories share a relational ontology and an interpretivist epistemology, contrasting methodological individualism and positivism that is dominant in entrepreneurship research. This means they reject the notion that entrepreneurship can be studied through the actions of individuals (firms, entrepreneurs), and instead argue it must be studied through the entanglements of human an non-human elements (Claire

et al., 2019; Gartner et al., 2016; Thompson et al., 2020). Overall, these theoretical traditions emphasise the fact that entrepreneurship is not restricted to the economic domain, it refers to the everyday hands-on practices of organising (De Clercq & Voronov, 2009; Johannisson, 2011). Lastly, they agree that imagined futures play an important role in entrepreneurship as they manifest in and through the social practices of everyday life (Thompson & Byrne, 2021; Wenzel et al., 2020).

In this introduction, a tentative definition is provided of entrepreneurship as an ongoing process where actors, materials and resources are (re)organised over time (Johannisson, 2011; Verduyn, 2015). In Chapter 2, an extensive conceptual elaboration is provided into what the process of sustainable food entrepreneurship entails and what role imagined futures play in this process.

1.6.2 Three lenses: practice, discourse and process

Three lenses as derived from the entrepreneurship-as-practice theoretical family are used to operationalise the concept of lived futures for the study of food entrepreneurship. The practice, discourse and process lens are used as infralanguages in this thesis: they are not used to capture the essence of the social world but as heuristic devices to help understand the social world a bit better (Latour, 2005; Nicolini & Monteiro, 2017). The use of three lenses is brought on by the nature of the issue under analysis in this thesis. Both entrepreneurship, as well as the futures it lives out, are social phenomena that are spread out in space and time and manifest in multiple ways at once (Hjorth et al., 2015). Therefore, exploring them requires specific configurations of theory and method. Practice, discourse and process all help to reveal different dimensions of the lived future of food entrepreneurship. In chapters 2, 3, 4 and 5, the background and specific use of this lenses are explained more in depth. In this section, I introduce them briefly to highlight what different elements of the lived futures of food entrepreneurship they highlight.

The *practice lens* hones in on the actual 'doings and sayings' of entrepreneurship, which is not the same as 'what entrepreneurs do' (Gartner et al., 2016; Nicolini, 2017). From a practice lens, entrepreneurship consists of bundles of entrepreneurial practices (e.g. selling, producing, transporting) that are nested in other practices of everyday life. By looking at entrepreneurship through this scope, it is possible to see the entanglements between them and how these entanglements are prone to change and stability (Claire et al., 2019; Nicolini, 2010; Shove et al., 2012). Imagined futures play a large role in this. In the ongoing transformation of the food system, entrepreneurship involves imagining both near and distant futures. On the one hand, there is the need to anticipate immediate changes by imagining what could happen in the near future. On the other hand, there are the realities of the distant future that need to be taken into account. A practice lens sheds more light on the change and stability of practices, and helps exploring how they

are shaped by images of near and distant futures (Mandich, 2019; Welch, 2017; Welch et al., 2020). In Chapter 3, the practice lens is used in a study of how near and distant futures are engaged in changing practices of food entrepreneurship in the context of the disruption as caused by the covid-19 outbreak.

The *discourse lens* centers the dialectic relationship between practices and discourse. With discourse, I mean a socially shared frame of meaning that governs the understanding of reality and that produces and is produced by social practices (De Cock et al., 2016). Food entrepreneurship requires making sense of the constantly shifting environment, and of the future of food as it unfolds over time. Simultaneously, by making sense of the environment, i.e. the specific space and time in which it is located, entrepreneurship itself also creates new meaning that in turn affects their environment. In this way, food entrepreneurship itself projects a certain image of the future (Dunmire, 2011; Kaal, 2021). In Chapter 4, this lens will be used as part of a discourse analysis of websites of food enterprises in Flevoland that will explore how the future of food is discursively constructed through food entrepreneurship.

The *process lens* is used to conceptually capture entrepreneurship as a process of change, and to explore how imagined futures are shaping up in this process. The process lens assumes entrepreneurship is an ongoing journey without a clear end-point (Selden & Fletcher, 2015; Steyaert, 2007). The entrepreneurial process does not stop when a business is founded or a product is introduced on the market, entrepreneurship is always transforming since firms can grow or decline, products and technology can become outdated (Hjorth et al., 2015). This stretching of the temporal boundaries helps to shed light on the broader understanding of food entrepreneurship as a process of change that includes a wide range of human and non-human actors. Furthermore, its wider temporal horizon helps to explore to what extent imagined futures are realised over time in the ongoing present. The process lens will be used to craft a conceptual framework of the process of sustainable food entrepreneurship and the role of imagined futures in Chapter 2. It will also be used in Chapter 5 to explore a specific entrepreneurial process in order to understand to how imagined futures are enacted in the present.

In sum, the practice lens unlocks future engagement in entrepreneurial practices, the discourse lens reveals the discursive construction of the future through entrepreneurship, and the process lens uncovers processes of entrepreneurship itself and the extent to which imagined futures can be realised over time. The three lenses are used in different sites of studies because they highlight different aspects of how futures are lived out in sustainable food entrepreneurship. Yet, practice, discourse and process are ontologically interconnected. Practice and discourse are mutually constitutive, both enable and constrain one another (Fairclough, 2005; Nicolini, 2013). Process in turn incorporates

both practice and discourse. Entrepreneurial processes unfold in time and space ongoingly and consist of entrepreneurial practices and discourses of which some are more persistent than others but in the end all are changing constantly (Langley et al., 2013).

Therefore, the use of a particular lens in a particular site of study does not preclude the other concepts in this particular study. To illustrate, the use of a practice lens does not mean discourse and process are absent in this particularly site of study, it just helps to explore one particular aspect of lived futures of sustainable food entrepreneurship. Moreover, because these lenses are complementary and ontologically related, they help one another. Together they provide an overall characterisation of how futures are lived out in sustainable food entrepreneurship that is built up out of findings as derived from all three lenses. In Chapter 6, this characterisation will be provided as well as a reflection on the extent to which these lenses have helped one another.

1.6.3 Conceptual understanding of food system transformation and sustainability

In this thesis, I explore the lived futures of food entrepreneurship in the context of the food system transformation towards sustainability. Therefore, it is important to explain what I mean by both food system transformation as well as sustainability. As Caron et al. (2018, p. 2) explains, food systems encompass 'all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outcomes of these activities.' A food system approach implies a farm-to-fork approach, incorporating all activities from production to consumption as well as the outcome of these activities for wide biogeophysical and human environments and how these shape one another (Ericksen, 2008; Stefanovic et al., 2020). Yet, in the context of this study, which is that of food entrepreneurship in Flevoland, not every element of the food system and its transformation will receive the same attention.

First, in studying food entrepreneurship, the production, processing and distribution of food will be more profoundly discussed than that of, for instance, the preparation and consumption of food. Second, within Flevoland a large part of the food system transformation entails the food system relocalisation as manifesting in city and regions increasingly looking to foster new connections around food (Blay-Palmer et al., 2018; van der Gaast et al., 2020). This means, for instance, that the attempts to create shorter supply chains of small scale entrepreneurs receives more attention than the changes of large retailers in their logistical operations. Third, in studying the lived futures of entrepreneurship, our study is less concerned with the operational side of running a business or a farm, and more with how the future is lived out in entrepreneurial processes.

Entrepreneurs, such as farmers but also brewers or bakers, are relevant in the extent to which they are part of a larger process of organising.

In terms of sustainability, this thesis adheres to the proceduralist understanding of sustainability that considers its meaning context dependent and prone to change over time. This contrasts with the universal understanding of sustainability that defines it in a singular way (Miller, 2012). Previous studies of food system transformation that conceptualise sustainability emphasise its processual and ongoing nature. What is, and what isn't, a sustainable food system cannot be defined because sustainability is a process and not a fixed outcome (Childers et al., 2014; Hinrichs, 2010; Kirschenmann, 2008; Moschitz et al., 2018). First, because its meaning is constantly (re)negotiated in different contexts (Hinrichs, 2010; Moschitz et al., 2018). Second, because the world is constantly changing, the goals and prescriptions associated with sustainability, must also change accordingly (Childers et al., 2014; Kirschenmann, 2008). Such an understanding fits the aim of this thesis: to explore the lived futures of food entrepreneurship and consider this as a process of change that is unfolding over time. This thesis will not provide insight in what constitutes as sustainable in food entrepreneurship. Instead, it will explore the ongoing process into how food entrepreneurship itself seeks out how to become and remain sustainable over time. In sum, similar to our understanding of futures as lived, sustainability is seen as a lived concept as well.

1.7 Research approach and methods

The methods and approach of this thesis are informed by the entrepreneurship-as-practices understanding of entrepreneurship. As said before, entrepreneurship continuously unfolds in time and space and therefore exists in multiple places in society at once (Hjorth et al., 2015). This demands a versatile research approach that is adapted to fit the specific issue at hand (Claire et al., 2019; Gherardi, 2012). In my approach, I follow the suggestion of Nicolini (2017) to study entrepreneurship through a theory-method package. Furthermore, even though my study is not an ethnographic study, I am inspired by the multi-sited ethnography approach (Marcus, 1995) that prescribes interdisciplinary methods to capture social phenomena at multiple sites. This means I combine a specific theoretical lens and method to configure a theory-method package that can capture lived futures of entrepreneurship on specific sites of study. In Table 1.1, an overview is presented of our methodological approach for each chapter as fitted to a specific lens, site of study and research aim. Each aim requires a specific lens that analyses a specific unit of analysis (process, practice, discourse). This unit of analysis is studied in a particular site, through specific methods.

Table 1.1: Overview of aims, site of study, lens and methods for each chapter of this thesis

	Chapter 2	Chapter 3	Chapter 4	Chapter 5
Research aim	Conceptualising the process of sustainable food entrepreneurship that includes the imagination of futures	Exploring engagement with near and distant imagined futures in practices of sustainable food entrepreneurship	Exploring the discursive construction of food futures through sustainable food entrepreneurship	Exploring the extent to which imagined futures are realised in a specific process of sustainable food entrepreneurship
Site	Scientific and practical expertise on food entrepreneurship in Flevoland	Practices of food entrepreneurship in Flevoland during disruption of covid-19	Websites of food enterprises in Flevoland	Process of emerging food entrepreneurship in Almere Oosterwold
Lens	Process	Practice	Discourse	Process
Methods	Literature review and expert interviews	Interviews and survey	Discourse analysis	Futuring

In Chapters 2 and 5, I use a process lens to further the understanding into how imagined futures are shaping up in processes of sustainable food entrepreneurship. In Chapter 2, this question is answered in a conceptual sense to explore what sustainable food entrepreneurship in Flevoland entails, what it includes and how it works. For this, I use scientific and practical expertise into what food entrepreneurship in Flevoland is and looks like. This expertise is obtained through literature reviews and expert interviews with experts of food entrepreneurship in Flevoland. In Chapter 5, I explore a particular entrepreneurial process in depth to understand more about how futures are imagined and how these imagined futures can be enacted in the present. The entrepreneurial process in question is the emerging entrepreneurship in the neighborhood Almere Oosterwold, where the residents are in a transition from urban agriculture towards sustainable food entrepreneurship. I use an action research methodology called futuring (Hajer & Pelzer, 2018; Oomen et al., 2021) to elicit the imagined futures of residents and to explore how they can be organised in the present.

In Chapters 3 and 4, other dimensions of the lived futures of food entrepreneurship are explored. In Chapter 3, I study entrepreneurial practices during the covid-19 disruption. I specifically explore the change and stability of practice and the extent to which engagement with imagined near and distant futures affect this. Qualitative and quantitative methods (interviews and survey) are used to explore future engagement and change in practices in two periods in time. In Chapter 4, I study the discursive construction of the future of food. I use the space-time approach and critical discourse analysis (Kaal, 2015, 2017, 2021), to capture how a specific understanding of space and time in entrepreneurial discourse charts specific projections for the future of food. Websites of food enterprises were the texts under scrutiny of this critical discourse analysis.

1.8 Outline of this thesis

This introduction (Chapter 1) has provided the scientific and societal background to this study. After this introduction, four empirical chapters (Chapters 2, 3, 4 and 5) are presented. Chapter 2 presents and explains a conceptual framework of sustainable food entrepreneurship which centers the role of imagined futures. Chapter 3 contains an analysis of engagement with near and distant future in changing practices of sustainable food entrepreneurship in Flevoland. Chapter 4 presents an exploration of the discursive construction of the future of food by sustainable food entrepreneurship. Chapter 5 shows a specific entrepreneurial process in Almere Oosterwold, by exploring how imagined futures of residents that work towards urban agriculture are shaping up in the ongoing present. This thesis will finish with a conclusion (Chapter 6) that reflects on and reiterates the overall findings as well as presenting policy implications and recommendations.

Chapter 2

Food systems in transition: conceptualising sustainable food entrepreneurship

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Abstract

This paper presents the sustainable food entrepreneurship framework (SFEF). It aims to further the understanding of the role of entrepreneurship in the sustainability transition of the food system, especially in the context of food system re-localisation. The framework conceptualises sustainable food entrepreneurship as a cyclical ongoing process of change. We argue this enables transcending the behaviour of entrepreneurs and their enterprises and map the ongoing development they fit into. The framework is based on literature reviews and expert interviews in the Dutch city-region of Almere–Flevoland. Theoretically, it expands on effectuation and bricolage theory, i.e. the 'resourcefulness perspective', that centers the socio-material context in the entrepreneurial process. The framework assumes the uncertainty of sustainability incites a cyclical process of change and implores entrepreneurs to reflect on the past before imagining the future. These imagined futures must be fitted to the socio-material context before emerging as artefacts (e.g. products, services or firms), which incites new uncertainties and a new cycle of change. Our framework has implications for policy and science. Its temporal dimension, that accentuates the continuous change entrepreneurship spurs, incites a reevaluation of terms such as 'success' and 'failure'. Moreover, it stresses the importance of intermediary actors in facilitating entrepreneurship.

2.1 Introduction

The sustainability of the global food system is an urgent issue since around 26% of anthropogenic GHG emissions is caused by global food supply chains (Poore & Nemecek, 2018). In the transition of the global food system towards environmental sustainability, entrepreneurship plays an important role. On the one hand, entrepreneurship is part and parcel of the current global food system and its inherent non-sustainable practices. On the other hand, entrepreneurship is increasingly driving countervailing initiatives, such as stimulating diverse and local economies, to alleviate the negative side effects of the globalised food system (Mars & Schau, 2017; Marsden & Smith, 2005). This latter development fits the global trend of food system re-localisation in which cities take a leading role, driving city-region food systems (Blay-Palmer et al., 2018). Given the importance of shifting towards a more sustainable food system and since food system re-localisation and (local) entrepreneurship are crucial features of that, there is a need for a better understanding of what constitutes 'sustainable food entrepreneurship'.

Although the role of entrepreneurship in making the food system more sustainable is studied extensively, most studies don't specify the precise meaning of the used terminology 'entrepreneur' and 'entrepreneurship' (Barth et al., 2017; Delgado, 2017; Follmann & Viehoff, 2015; Garavaglia, 2017; Gillebo & Hugo, 2006; Hayden et al., 2014; McKee, 2018; Montanari & Staniscia, 2009; Moskwa et al., 2015; Sjölander-Lindqvist & Cinque, 2014). Some studies distinguish different types of entrepreneurship based on goals, actions and motivations of entrepreneurs, utilising adjectives such as 'social', 'eco' and 'sustainable' (Drottberger et al., 2021; Jolink & Niesten, 2015; Kline et al., 2014; Larsson et al., 2016; Mayer & Knox, 2010; Paloviita, 2009). This suggests entrepreneurship can be understood, either implicitly or explicitly, as the behaviour of entrepreneurs and enterprises.

An alternative perspective, that might fit the issue of sustainable food entrepreneurship better, is known as the resourcefulness perspective (RP), encompassing effectuation theory and bricolage (Korsgaard et al., 2016). While originally conceived as theories for entrepreneurial behaviour (Fisher, 2012), they are increasingly used to study entrepreneurship as a process (Jones & Li, 2017; Selden & Fletcher, 2015). This fits in a larger development of considering entrepreneurship, especially with regard to sustainability, as a process of change in itself (Poldner, 2020; Steyaert & Hjorth, 2006). Effectuation theory distinguishes effectuation from causation, where entrepreneurs assemble the required resources to reach a predefined goal (Corner & Ho, 2010). Effectuation occurs when entrepreneurs assess available resources such as personal traits, knowledge, physical materials and networks before setting goals (Sarasvathy, 2001). Bricolage is similar to effectuation in the sense that entrepreneurs use available resources.

Unlike effectuation, bricolage does not assume that the resources entrepreneurs have at their disposal are fixed and given (Baker, 2005), but that resources are (re)shaped to fit a specific goal (Baker et al., 2003).

In conceptually unpacking what entrepreneurship is in the context of sustainability transitions and food system re-localisation this paper builds on these theories. We argue that the 'resourcefulness perspective' is interesting because it shifts the focus from entrepreneurs to resources which makes this perspective 'environmentally, as well as socially, sensitive' (Korsgaard et al., 2016, p. 181). The RP has evolved over time, from implying the use of resources by entrepreneurs is always purposeful and deliberate (Nelson et al., 2018) to state that not only entrepreneurs but material objects can be decisive in entrepreneurship as well (Akemu et al., 2016; Murdock & Varnes, 2018). This latter notion is particularly relevant in the agri-food domain, where entrepreneurship and the (material) environment in which it takes place are hard to separate. This can be witnessed by studies of entrepreneurship and food. Most of these studies center small enterprises, which depend on the community they are imbedded in for their limited resources (Barth et al., 2017; Bolzani et al., 2015; Buckley et al., 2014; Vlasov et al., 2018).

In this paper, we present a conceptual framework, the Sustainable Food Entrepreneurship Framework (SFEF), with the aim to advance the understanding of the role of entrepreneurship in the sustainability transition of the food system. Such a framework is not only useful for scholars that want to explore the role of entrepreneurship in this transition. It also provides the means for reflexivity, for entrepreneurs and policymakers that deal with entrepreneurship, on current practices. In constructing the framework, we not only explore entrepreneurship on a conceptual level, but tie this to a practical understanding as well. We conducted a literature review on the RP and a literature review on sustainability, food and entrepreneurship (SFE) literature. Where the SFE literature provides in-depth studies of entrepreneurs and their actions, the RP literature offers a theoretical perspective that helps to tie entrepreneurial behaviour to entrepreneurial process (Beckett, 2016; Servantie & Rispal, 2018).

Expert interviews were added to the literature reviews to make the framework grounded in 'real life'. We interviewed experts on sustainable food entrepreneurship in the city-region of Almere, in the province of Flevoland in the Netherlands to provide a 'real-world' context for deepening our understandings of sustainable food entrepreneurship. Together, these reviews and interviews enable locating and recognising the process of entrepreneurship, that transcend the actors (entrepreneurs) and organisations (enterprises). This allows zooming out of the behaviour of entrepreneurs and their enterprises and to map the ongoing development they fit into. In the next section, we elaborate our methodological approach. In the findings, we introduce and explain the conceptual framework based on

literature and the aforementioned expert interviews. We end the paper with a discussion in which we explore the implications of the framework for science and policy.

2.2 Materials and methods

In the introduction, we explained why we deem RP literature valuable to conceptualise sustainable food entrepreneurship. However, since this literature discusses a great variety of entrepreneurial contexts, some of which might contrast to that of sustainability and food, we don't base our framework solely on this perspective. Therefore, two literature reviews were conducted which enables matching the concepts of the RP literature to the domain of food and its sustainability objectives as present in the SFE literature. Furthermore, expert interviews were conducted to ground the framework in the practicalities of 'real life' sustainable food entrepreneurship, and food system re-localisation in particular. This three-pronged approach allows triangulation of conceptual literature, empirical literature and real-life practical experience (see Table 2.1). This approach serves a double purpose. First, data collection preceded the construction of the framework, which enabled an iterative journey of going back and forth between the different data sources. Second, the insights in sustainable food entrepreneurship, as provided by both the experts and the SFE literature, helped to present the rather abstract concepts in this paper in a tangible way. The data were collected between June and December 2019, with an update of the SFE literature in July 2021. Below we describe the data collection in more detail.

Table 2.1 Data collection that preceded the SFE framework

	RP literature (I)	*SFE literature (II)*	*Expert interviews (III)*
Method	Narrative literature review of the resourcefulness perspective (RP) literature	Narrative literature review of the literature on sustainable food entrepreneurship (SFE)	Semi-structured interviews with experts on entrepreneurship in sustainable food in Almere, Flevoland
Data collection	*Search criteria* (Boolean operators in Scopus): "causation" AND "entrepreneur*", "bricolage" AND "entrepreneur*", "effectuation" AND "entrepreneur*"	*Search criteria* (Boolean operators in Scopus): "sustain*" AND "food" AND "entrepreneur*"	*Sampling strategy:* Network sampling
Size	58 selected articles	44 selected articles	10 selected experts

2.2.1 Literature reviews (I and II)

A narrative review was preferred over a systematic one. This allowed hand-picking the required articles, instead of subjecting it to a standardised selection that is associated with systematic literature reviews, to make sure the selected articles demonstrated conceptual and empirical depth. For the RP literature review, the initial search delivered 350 articles. The search result was refined by selecting those articles that furthered the RP conceptually, as well as those that provided detailed empirical examples of entrepreneurship through the lens of the RP. This brought the search back to 58 articles that were subjected to our analysis. For the SFE literature review, the initial search resulted in 353 articles. We selected articles with empirical material that was collected in a Global North context. This is because we wanted the contextual analysis to fit as closely as possible to the chosen research site for the interviews: Almere, Flevoland in The Netherlands. This brought the result back to 31 articles. In July 2021, we updated the literature review of the SFE literature by selecting 13 more articles to include recent developments in the food field, resulting in 44 articles. In total, we reviewed 102 articles.

2.2.2 Expert interviews and the setting of Almere, Flevoland (III)

We conducted 10 interviews with experts on entrepreneurship in the context of sustainability and food in Almere, Flevoland (see Table 2.2). Flevoland and Almere pose an interesting real-world context because both are closely linked to entrepreneurship and sustainable (agri-)food. The province of Flevoland emerged around 80 years ago when the Dutch government reclaimed land for agriculture. Flevoland and entrepreneurship are linked from the start. The Dutch government used strict criteria to select who were allowed to inhabit and farm the new land. Not just agricultural prowess, but also entrepreneurial qualities were required (Vriend, 2014). The city of Almere was built in a later stage to accommodate the population growth of the nearby city of Amsterdam. Recently, the municipality of Almere started to position itself as a sustainable food city(Jansma & Wertheim-Heck, 2021). Sustainable food is high on the urban agenda, illustrated by the target of producing 20% of urban food consumption by 2030 (Jansma et al., 2016). This also led to the emergence of sustainable entrepreneurship in the agri-food sector in this city as well. In this paper, we assume Almere and Flevoland to form one city-region food system (Blay-Palmer et al., 2018; van der Gaast et al., 2020) that poses an interesting site of sustainable food entrepreneurship in the context of food system re-localisation.

We selected 10 experts on entrepreneurship based on the criteria that they were professionally engaged with entrepreneurship in the agri-food context of Almere, Flevoland without being an entrepreneur themselves. The experts were recruited through the network of the authors of this paper, two of which are embedded in both applied and academic networks revolving around food and sustainability in and around Almere, Flevoland. Experts were chosen because they have an overview over multiple cases and

general patterns and dynamics. The scope of experts is larger than entrepreneurs, since entrepreneurs know one case and experts multiple. For the specific task of creating a conceptual framework of entrepreneurship, this makes experts suitable. In semi-structured interviews of ~1 h, experts were first asked to reflect in general on how they would characterise entrepreneurship in sustainability and food. Subsequently, they were probed with more specific questions (e.g. can you give any specific examples; what resources, networks open up; what obstacles and opportunities do entrepreneurs face?). The questions were deliberately posed as open as possible because they were not meant to specifically test or develop theory, but to place the literature into a (real-life) context. This is also why no coding schemes were used. The findings were analysed interpretively by connecting recurring patterns in interview findings to that of the literature.

Table 2.2 Selected experts and their expertise

Expert	Position	Expertise
#1	Consultant	Specialised in agri-food sector, clients in Almere
#2	Employee investment agency	Facilitates (food) entrepreneurship in Flevoland and Almere
#3	Civil servant municipality Almere	Works with food entrepreneurs in Almere
#4	Researcher	Researcher in an applied agricultural context in Flevoland
#5	Researcher	Researcher in an applied agricultural context in Flevoland
#6	Researcher	Researcher in an applied agricultural context in Flevoland
#7	Politician and governor	Economic affairs, including agri-food in Flevoland
#8	Action-researcher	Facilitator and researcher of food entrepreneurs in Almere and Flevoland
#9	Civil servant municipality Almere	Works with food entrepreneurs in Almere
#10	Account manager Rabobank	Specialised in agri-food sector, clients in Almere and Flevoland

2.3 The sustainable food entrepreneurship framework (SFEF)

In this section, we present the sustainable food entrepreneurship framework (SFEF). We use the RP literature to explain the concepts, and the SFE literature and expert interviews to illustrate how the framework works in the context of food and sustainability and specifically in the context of food system re-localisation. In the section 2.3.1, we will briefly introduce our concepts. In the remainder of this section, we will explain the framework by connecting these concepts to the issue of food and sustainability. This helps to understand how the framework works, and at the same time illustrate how this framework can further the understanding of the role of entrepreneurship in the ongoing transformation of the food system.

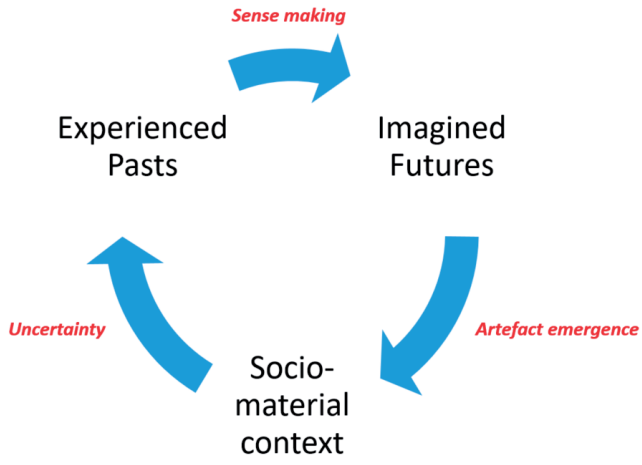


Figure 2.1 Visual schematic of the Sustainable Food Entrepreneurship Framework (SFEF)

2.3.1 Introducing the concepts of the framework

The concept of uncertainty signifies both the start and end of the ongoing process of change that is entrepreneurship and therefore also takes up a central place in the SFEF (see Figure 2.1). In the RP literature, the concept of uncertainty is important because it denotes the different types of entrepreneurial processes that can emerge. Following the work of economist Frank Knight on uncertainty, we explain it as a situation where it is neither possible to predict the outcomes nor the probabilities ex ante (Knight, 1921; Welter et al., 2016). Furthermore, in this paper, we understand uncertainty as a subjective experience that depends on the context in which entrepreneurship occurs and whether entrepreneurs consider themselves in control of this environment (Engel et al., 2017; Liu et al., 2019).

According to Sarasvathy (2001), this perceived control determines the extent to which entrepreneurs belief the future can be predicted. Those that consider the future as predictable, act differently than those that consider the future as unpredictable. Several studies show that when entrepreneurs perceive high control over their environment and therefore little uncertainty, causation is more likely to happen (Jiang & Tornikoski, 2019; Metzger & King, 2015; Parida et al., 2016). Causation means entrepreneurs plan a specific future and assemble resources to make this future happen. For instance, by using extensive market information to predict the wants and needs of the future and plan a route towards this future (Lepistö et al., 2019). In contrast, the more uncertainty that is perceived in a certain context, the harder it is to trust on verifiable evidence to predict the future (Nelson et al., 2018; Randerson et al., 2016). Therefore, entrepreneurs become

more reliant on interpreting the cues of their environment to explore the future, in other words they rely more on sense-making (Jones & Li, 2017).

Sense-making is derived from the work of organisational scholar Karl Weick (1979), and refers to a form of self-reflection where entrepreneurial actions are the result of looking back at what is experienced in the past and imagining what should be happening in the future (Selden & Fletcher, 2015). High uncertainty, for instance, about how a future food system should or could look like, triggers sense-making. Instead of planning for the future, the future is imagined by learning from past experiences. The experienced pasts refer to the lived experience and circumstances of entrepreneurs (Harmeling, 2011; Onishi et al., 2018; Watson, 2013) that function as a 'living heritage which opens up more applications or a portfolio of options' (Andersen, 2008, p. 58).Furthermore, the experienced past consists of shared experiences that are embodied in fragments of culture such as images, objects (Valliere & Gegenhuber, 2014) and language (Lieber, 2015). Providing a new perspective that draws on shared cultural understandings is the hallmark of successful entrepreneurship (Nelson et al., 2018). In short, sense-making denotes the process that turns imagination into products and services (Guo et al., 2016) and transforms the uncertain situation into a creative empty space (Kauppinen & Puhakka, 2010).

Artefact emergence helps to understand how mental representations as brought forth by sense-making materialise. In the RP literature, the perspective of economist Herbert Simon is followed by defining an artefact as an 'interface' (Simon, 1997, p. 6) or 'meeting point' (Sarasvathy et al., 2008, p. 333) between the ideas of entrepreneurs and the socio-material context in which these ideas are supposed to materialise. Artefacts can be products, services or firms, but theoretically also any other conceivable organisational form or physical/virtual tool. They function as 'elaborate fictions of proposed possible future states of existence' (Steyaert, 2007, p. 460). Through artefacts, entrepreneurs can start 'playing pretend' (Baker et al., 2003, p. 263) that the future they imagine is true (Randerson, 2016; Selden & Fletcher, 2015) and help persuade others to experience the hypothetical world they have created (Halme et al., 2012). Furthermore, artefacts allow exploring how imagined futures are received in a specific environment (Sarasvathy, 2001). By founding a firm or introducing a product, the underlying idea is tested in a certain socio-material context and the resulting feedback can be used to refine it (Björklund & Krueger, 2016; Guo et al., 2016), or results in the fact that an artefact dissolves or is retried in another context (Stritar & Drnovšek, 2016).

However, that does not imply the imagination of entrepreneurs automatically leads to artefact emergence. As Sherman et al. (2018) note, entrepreneurship starts with a mental representation of the future, but only evolves through the interaction with and

by building on the experiences of others. We follow Selden and Fletcher (2015) in considering artefacts to be emergent, which means that artefacts are a new or unexpected level of social order that results from an interaction between several different elements (e.g. entrepreneurs, ideas, materials) but cannot be reduced to any of them individually. The notion of emergence helps to nuance the agency, i.e. the 'intention and purposeful enactment' (Akemu et al., 2016, p. 847) of entrepreneurs in the entrepreneurial process. Agency in entrepreneurship is distributed (Akemu et al., 2016; Corner & Ho, 2010; Garud & Karnøe, 2003), which means that all human actors that engage in adventurous or creative exchange have agency in entrepreneurship (Watson, 2013). Moreover, also non-human entities, such as material objects and ideas, that are said to be equally capable of forming connections and thus triggering artefact emergence (Lieber, 2015; Murdock & Varnes, 2018).

The notion of emergence denotes the double role of the socio-material context, i.e. the 'where and when' (Welter, 2011, p. 167) of entrepreneurship. Not only does this concept denote the temporal and spatial 'site' where imagined futures emerge as artefacts, endure or dissolve over time. It plays a crucial role in creating these artefacts themselves. Whilst artefact emergence is incited by uncertainty, it also creates its own uncertainty (Jiang & Tornikoski, 2019). Whether in the form of imagined futures that fail to emerge, or dissolve over time, all artefacts are part of the experienced past and thus inspire (new) imagined futures. They are made and remade over time, which connects and disconnects (new) people, resources and ideas over time (Harmeling, 2011) in a process that is hard to predict on forehand. This is why entrepreneurship can be considered an ongoing process that does not end with the founding of a firm or the creation of a product but that keeps evolving over time (Steyaert, 2007), and why (see Figure 2.1) the SFEF framework is organised as a 'cycle of interactions' (Randerson, 2016, p. 3). Artefacts are not endpoints of entrepreneurship. They are transition points in an ongoing process of change (Jones & Li, 2017; Selden & Fletcher, 2015).

2.3.2 From socio-material context to experienced pasts: food as a cultural product

The SFE literature helps to see why and how uncertainty triggers a (re)invention of the experienced pasts in the food sector. In many rural regions in Europe, agriculture is providing less income and employment than it used to. Therefore, rural communities increasingly use notions such as authenticity and culture to frame their food products (Coroș et al., 2021). By linking food to cultural heritage, they create new value propositions concerning sustainability as well (Niedbala et al., 2020). Urban areas display a similar tendency to link authenticity to modern food products (Broad, 2020). Furthermore, increasingly municipalities devise food policies to stimulate sustainable food. The food narratives that emerge there through entrepreneurship are shaped by

the specific socio-economic issues at play in these cities (Giambartolomei et al., 2021). In the interviews with experts, it was explained how in cities such as Almere, food entrepreneurship emerges from actors from outside the sector as well. They enter the food field out of idealism with regard to the food system and climate change, and they bring along their past experiences and skills outside the food field (e.g. with marketing and sales in other sectors) to position their sustainable food products and services.

The experienced pasts of food are derived from the socio-material context. Food can have different cultural meanings at the same time: as a product (Montanari & Staniscia, 2009), the process through which food is produced (Amanor-Boadu et al., 2009) or the experience of collecting your own food (Hjalager & Johansen, 2013). The specific biophysical environment impacts how meaning surrounding food develops (Niedbala et al., 2020; Vlasov et al., 2018). Taste development, for example, relate to the natural resources that are present in a certain place or region (Bonadonna et al., 2019). But such a relation between physical environment and food meaning is not fixed, they can become a mix of local and imported ingredients, tastes and preferences over time (Sjölander-Lindqvist et al., 2020). Pfeilstetter (2015) gives the example of the Mediterranean Diet, local heritage that was made profitable by making it into a product on a global scale. In sum, the socio-material context poses the uncertainty that drives interpreting the experienced pasts, at the same time, it enables creating cultural understandings of food to cope with this uncertainty.

2.3.3 From experienced pasts to imagined futures: organisation and cooperation

Turning experienced pasts of food into imagined sustainable food futures requires making the future tangible in the present. This requires new artefacts such as new products or services or even extra businesses to make the experienced pasts of food into a future imagery of food that can be experienced by others. The SFE literature shows several examples of creative deployment of scarce labour and resources to experiment with new forms of value production (McKee, 2018), such as adopting schemes for farm animals (Montanari & Staniscia, 2009), dinner box schemes (Larsson, 2012) and food demonstrations (Gillebo & Hugo, 2006). Often this is done by food producers that have to develop all the extra activities, such as processing, distribution, packaging and marketing, next to the actual producing (Delgado, 2017; Gillebo & Hugo, 2006). This results in several logistical problems and deviates resources and efforts from the production itself (McKee, 2018). Some entrepreneurs try to cope with this by starting a new firm to separate the more idealistic sustainability-oriented activities from the activities that generate the necessary financial revenues (Follmann & Viehoff, 2015; Mars & Schau, 2017; Montanari & Staniscia, 2009). However, often the financial objectives come to dominate over the purpose to create new forms of (sustainable) value (Kline et al., 2014).

The experts discern similar problems. Several experts mention the problem of time constraints for especially food producers that need to engage with sustainable entrepreneurship. Many food producers have to improvise an extra source of income first, before they can make the transition towards sustainability. Changing business models or production methods is costly. The switch to organic for instance takes two years in which a food producer has less income. Furthermore, they have long-term obligations in terms of contracts, mortgages, equipment and depreciation thereof. With an additional stream of income, they can obtain the financial buffer needed to make the transition. However, when one person is responsible for food production as well as the customer support and external communication of new sustainable initiatives, some sloppiness is bound to slip in which also obstructs opportunities for these companies to professionalise their improvisational measures. According to the experts, this can result in using the extra financial means to survive instead of making a change towards sustainability. Despite the constraints in terms of time and money, the experts don't believe it is impossible to make it work as the following quote illustrates:

> When you have 120 cows, two robots and you have to do everything yourself, it is hard to maintain contacts outside of your firm and gain new entrepreneurial ideas. But there are still firms under these circumstances that rearrange their priorities and reorganise their job in such a way they are able to meet new people. So, is time a constraint or is the way the firm is organised the constraint? I'm tempted to believe the latter. (Expert #6, own translation)

The experts do stress that those entrepreneurs that are themselves incapable, either through time or financial constraints, to work towards ideas for sustainable food need to collaborate with others. This resonates with findings from the SFE literature that stresses the importance of collective organisations to organise the short supply chain (Hedberg & Lounsbury, 2021; Soderstrom & Heinze, 2021). The following quotes of one expert illustrate the options for imagining sustainability:

> The claim to sustainability must be reworked into the business model. And the story is this claim. If you don't have a story you need a collective, a cooperative or a supply chain to make the story for you. If you want to do it yourself, you have to think about the margins you will make of this story. (Expert #7, own translation)

In other words: entrepreneurs make a claim to sustainability in their businesses. But some entrepreneurs, especially food producers, are consumed by their day-to-day activities. Therefore, they are less prone to experience new ideas concerning sustainability and thus will have to join forces with entrepreneurs to organise this. The resulting collaborative

effort then is used to create a shared sustainability vision. This means imagined futures don't just materialise as (new) firms, products and services. They can also materialise as artefacts that emerge out of the collaboration of multiple firms. Two often mentioned examples in both the SFE literature and interviews are cooperatives and licensing schemes. Cooperatives help to induce specialisation and division of labour. Some members can focus more on producing, others on marketing. They can all produce separate products so they don't have to compete (Jokinen et al., 2008). Certification and licensing schemes are crucial if claims about a food product must be made (Montanari & Staniscia, 2009). For instance about a cultural trait of food (Pfeilstetter, 2015), or for organic food certification (Jolink & Niesten, 2015; Paloviita, 2009). Because such artefacts have formalised obligations (Larsson et al., 2016), the commitment of its members is ensured (Jolink & Niesten, 2015; Mapelli et al., 2016).

However, creating a single imagined future of sustainable food out of multiple entrepreneurs in the form of one artefact also creates tensions. Formal obligations also cause problems in some cases such as diminished profits (McKee, 2018) and exclusion and marginalisation when entrance requirements are too restrictive (Mars & Schau, 2017; Sjölander-Lindqvist & Cinque, 2014). According to the experts, in some cases, these commitments can be so constraining that entrepreneurs don't feel like entrepreneurs anymore because they cannot make their own decisions:

> Farmers are increasingly constrained in their entrepreneurship. For example, many dairy farmers outsource their marketing to the cooperative they are a member of, which means they are primarily food producers and sales is no longer part of their job description. (Expert #5, own translation)

In sum, sustainable food entrepreneurship demands organising to turn experienced pasts into imagined futures. Either new products, services or firms, or through cooperative organisations. In creating these artefacts, there is a tension. By creating new products, services or firms, it is the tension between profitability on the short term and developing the imagined sustainable future on the longer term. By participating in cooperative organisations, there is a tension between the benefits of creating a shared imagined future of sustainable food, and the restrictions to entrepreneurial freedom to make it come to life. As the following section will explain, it is the fit of the artefact to the socio-material context, that will determine whether an artefact will emerge and endure.

2.3.4 From imagined futures to socio-material context: matching meaning and materials

The role of the socio-material context requires nuancing the agency of 'the entrepreneur' because it is distributed over human and non-human entities. Several authors in the SFE

literature claim embedding within the community is important in food entrepreneurship (Barth et al., 2017; Buckley et al., 2014; Vlasov et al., 2018). It helps to share knowledge and engage in networks (Bublitz et al., 2019) and trust and reputation within a socio-material context can be helpful in leveraging resources (Batat, 2021). Furthermore, when there is already a regional entrepreneurial culture that favours sustainability, it is more likely to spur more sustainable initiatives (Enthoven & Brouwer, 2020). Moreover, the impact of stakeholders such as government and entrepreneurial actors on entrepreneurship are in practice hard to disentangle since they rely on similar networks and often cooperate on different levels to create sustainable food systems (Baldy & Kruse, 2019; Desa & Jia, 2020). Both the SFE literature and the expert interviews place emphasis on the role of non-entrepreneurial actors in a facilitating role, that connect different interests (Hedberg & Lounsbury, 2021) and 'make things happen' (Giambartolomei et al., 2021, p. 2).

One of the experts discussed the need to have more actors that connect entrepreneurship, government and science without having a stake in any of them themselves to better connect these actors and agencies. Furthermore, a wide range of facilitating funds, foundations, grants, government agencies and intercompany and intergovernmental networks were discussed in the interviews. One of the experts that initiated several foundations and networks to facilitate sustainable food entrepreneurship explains their role as follows:

> They create a layer around the company, followers you can mobilise to support your activities and that fight for you when you can't make it on your own. (Expert #8, own translation)

In other words, the socio-material context is not a rigid structure that either favours or opposes imagined futures of sustainable food, it is itself an actor that can be shaped and shapes itself how these imagined futures can develop into artefacts.

Still, the imagined future of sustainable food must be attuned to the material specifics of the socio-material context as well to be able to emerge as an artefact. Non-human entities such as material objects and resources are part of the same lived experience as human entities; they can mean different things in different contexts to different people (Steyaert, 2007). Such 'meaning' can attract or repel human entities, which can either hinder or accelerate the emergence of artefacts. This also explains why emergence implies unexpectedness; the way in which different resources come together is ultimately hard to predict on the forehand (Lennerfors & Rehn, 2014). The RP literature provides several examples of this. Murdock and Varnes (2018) discuss a Danish musician that brought an old fashioned schoolbag with him on tour in another country. He received a lot of compliments about this bag, which inspired him to become an entrepreneur and start

the brand Made in Denmark. Akemu et al. (2016) show that the idea of Fairphone, a sustainable smartphone, was developed as part of an advocacy campaign by a Dutch NGO. It was never meant to materialise as a product. Nevertheless, the image of the fictional Fairphone attracted so much positive attention that it inspired the former NGO-employees to develop one for real. One could argue that these objects – a phone and a schoolbag – turned actors, such as musicians and NGO-employees, into entrepreneurs instead of the other way around.

Yet, the material and social conditions of a certain context do not determine when and how an artefact emerges. It is an interplay between all these factors, human and not human. For example, Parris and McInnis-Bowers (2014) show how (different) contexts shape the materialisation of imagined futures. They discuss a case where recycled soap was considered unattractive and therefore unfeasible in hotels in the Global North. When recycled soap was introduced in a Global South development project, it became a crucial ingredient to a hygiene kit. In other words, the specific fit of the social and material determines if and how imagined futures emerge as artefacts within a socio-material context.

One of the experts (#2) provided an interesting example of a sustainable meat product that did not manage to materialise despite all the best efforts to collectively organise it. Expert #2 was involved in trying to make male goat meat marketable by launching it as a product, 'Bokjesvlees' [male goat meat]. For the production of goat cheese and milk, the male goat is only needed for reproduction. Goat farmers now exterminate them, which costs four euro's per goat. There was a public campaign to raise awareness. Rural goat farmers tried to sell their meat to urban restaurants collectively. So far, however, with little success. Retailers can't offer a competitive price because restaurant butchers only want to buy when there is demand. They tried to make the product attractive by processing it into sausages, hams and meals. However, this made the product even more expensive. Expert #2 attributed these problems to the cultural meaning of goats in the Netherlands. Eating goat meat is associated in the Netherlands with the lower classes and goats are popular animals in petting zoos. Therefore, the struggles of 'Bokjesvlees' might be the result of a mismatch of the meaning and material properties of male goat meat as present in the socio-material context, and the imagined sustainable future of 'Bokjesvlees' as a product. The persistent negative cultural properties, as inscribed in goat meat, could not be alleviated by transforming the material properties of male goat meat without losing profitability.

2.3.5 From socio-material context to new uncertainties: ongoing cycles of change

Artefact emergence is not the end-point of entrepreneurship. Entrepreneurship involves ongoing cycles of change because artefact emergence poses new uncertainties. An emphasis on sustainable food entrepreneurship as an ongoing cycle of change helps to see that failing in the present can spur a new fruitful development in the future. Even the 'Bokjesvlees' product manage to inspire a cooperative (Big Goat Meat) to sell the carcasses of male goats separately to whole-sellers. Furthermore, efforts are still being made in trying to reinvent the concept of male goat meat. For instance, through meals for restaurants that are relatively less costly to make, such as fries with goat stew, burger, curry and rendang, and that can be easily frosted which increases its on-demand availability.

Another good example of why it is important to consider entrepreneurship as ongoing and cyclical is the relationship between small scale, often locally operating food producers and large-scale entrepreneurs with global reach. The SFE literature shows this relationship is imbalanced. Local contexts are often the experimenting site for new food concepts of large retailers. As van den Heiligenberg et al. (2017) show, in the experimentation phase of sustainability, food inventions are tested in a local or regional context to see if they will be adopted by enough users. At the same time, it is also the breeding ground for these new concepts. Multinationals like McDonalds label food as local and turn it into 'discursive currency' (Sjölander-Lindqvist & Cinque, 2014, p. 147). 'Local' does not necessarily refer to where the food originates. A restaurant can call itself local and claim its positive meaning whilst sourcing all its food from a non-sustainable global supplier (Mars & Schau, 2017). In other words, 'local' food can be used as a means of persuasion and a rhetorical device (Metzger & King, 2015) to make a global vision of sustainability attractive on a local level (Bonadonna et al., 2019). There is a 'market-like competition for [..] symbolic resources' (Pfeilstetter, 2015, p. 219) in the food sector. Labels such as 'local' (Amanor-Boadu et al., 2009; Montanari & Staniscia, 2009) and 'organic' have been turned into commodities by large retailers. As a result, especially small-scale farms lose their unique selling point as 'local' and 'organic'. Larsson et al. (2016) provide a telling example of a small organic cooperative that does not advertise with their organic certification anymore because large retailers can offer the same.

Furthermore, most small farmers cannot compete with the cheap prices of global retailers (Hedberg & Lounsbury, 2021). Complicating matters further: small-scale farmers are often dependent on these large retailers. Sourcing organic produce to large retailers is increasingly difficult for small producers because retailers can afford to keep lowering their prices or decide to stop buying their products altogether (Kuokkanen et al., 2019; Larsson et al., 2016; Paloviita, 2009). Furthermore, small-scale farmers often try to oppose the global industrialised system by doing things differently but feel marginalised because the

system favours the larger firms (Drottberger et al., 2021). They need even more of their limited time to create new meanings of food whilst continuing to risk having larger, more globally oriented firms snatch up their successful innovations again (McKee, 2018). This means the inherent uncertainty of the food system entices small food producers to continuously reinvent their past experiences in a specific socio-material context. This allows them to pose a valid differential proposition from the mainstream producers to be of value to retailers and be taken-up in the retail assortment.

At the same time, the SFE literature shows insight in how this imbalanced relationship could be improved. Interestingly, artefact emergence plays an important role in this, especially artefacts where multiple entrepreneurs with competing interest cooperate. Hedberg and Lounsbury (2021) and Soderstrom and Heinze (2021) discuss the possibilities of Food Labs: collective organisations where small producers and large retailers try to abridge differences and work together. Through these collectives, new supply chain connections can be created alongside the infrastructure to make it happen. The experts mention the existence of similar organisations within the context of Almere, Flevoland that aim to bring different stakeholders in the agri-food business together.

This does not change the food system and its inequalities immediately and these collectives might not persevere over time. Nevertheless, they do incite new cycles of change and entrepreneurship. By construing them as emergent artefacts, they can be understood as transition points. In the critical moments they are established, human and non-human entities are (re)configured and thus change occurs. The experiences that artefact emergence brings in turn form new uncertainties and thus incites a new cycle of change. In sum, understanding the role of entrepreneurship in the sustainability transformation of food requires looking beyond the artefacts as the end-state of entrepreneurship, and instead as transition points of an ongoing journey. A sustainable food system is not created overnight, nor are the products, services and firms that at the present aiming for a more sustainable food system necessarily exemplary for the food firms, products and services of the future. Artefacts come up and dissolve again over time, with each iteration shaping entrepreneurship, and the transformation of the food system, further.

2.4 Discussion

2.4.1 Scope and limitations of the framework

This paper has introduced and explained the SFEF to facilitate more understanding in the role entrepreneurship plays in the sustainability transition of the global food system, specifically in the case of food system re-localisation. The SFEF is 'a' (and not 'the') framework of sustainable food entrepreneurship. Even though in this paper, reference is

made to certain qualifications such as 'local' and 'organic' in reference to sustainability, we do not aim to evaluate or assess the various types of food entrepreneurship in terms of sustainability with the help of this framework. The framework delivers a processual understanding rather than a normative evaluation. It does not provide answers to the question whether or not a specific manifestation of entrepreneurship is more or less sustainable. This also fits in current debates in the literature. Whether 'local' and 'organic' are sustainable depends on the vantage point (e.g. water quality, biodiversity, GHG emissions) taken (Brunori et al., 2016), and 'sustainable food' is often considered to have different meanings in different contexts (Childers et al., 2014; Hinrichs, 2010; Kirschenmann, 2008; Moschitz et al., 2018). Instead, the value of this framework lies in the possibility to understand sustainable food entrepreneurship as a cyclical process where the meaning of sustainability is constantly (re)negotiated. By conceptualising sustainable food entrepreneurship as an ongoing cyclical process of change, it is possible to go beyond the temporary snapshot of a firm, product or service and capture the larger process of change of which it is a part. This allows zooming out of the behaviour of entrepreneurs and their enterprises and map the ongoing development they fit into.

2.4.2 Implications of the framework

Given our scope and limitations, what did our framework offer in terms of more understanding into the role of entrepreneurship in sustainability transformations of food? First, our framework foregrounds the temporal dimension of entrepreneurship. It depicts entrepreneurship as a force of creative organising that continuously connects the past to the future. The past is the scaffolding of the future because it helps to cope with the uncertainty that is inherent in the current sustainability transformation of the food system. The past helps to create what comes next based on what is already known. This also explains why food culture is so closely connected to sustainable food. This scaffolding strongly relies on (re)organisation; ideas, materials and people are reconfigured into organisational phenomena such as goods, services, firms, but also in cooperatives and license schemes that draw on cooperation. Through entrepreneurship, the past is tied to future, and in the process creativity is connected to organisation as well as the human to the non-human. The temporal dimension of the framework also sheds new light on the importance of uncertainties. In our framework, entrepreneurship results from and causes uncertainties and new cycles of change over time. By considering (new) products, firms and services not as endpoints of entrepreneurship, but as transition points in an ongoing journey, these 'uncertainties' are not necessarily negative. Moreover, within the scope of food system transformations, they have great value because they fuel continuous change.

Second, our framework foregrounds the socio-material context and therefore sheds light on the other actors and factors, both human and non-human, that contribute to artefact emergence. Section 2.3.4 discusses the importance of the fit of the material to the social,

as well as the facilitative roles of intermediary actors in facilitating artefact emergence. Interestingly, this emphasis on the socio-material context also helps to hone on the role of 'the entrepreneur' itself. None of the interviewed experts considered themselves, when asked, to be entrepreneurs even though some of them played a large role in the emergence of artefacts. Their explanation for this was because they received a salary for their actions whether or not their efforts would result in artefact emergence. In their words, they did not assert any risk for their endeavours. As in section 2.3.1 is explained, this paper adopts a Knightian understanding of uncertainty, i.e. it considers situations where the future cannot be predicted or calculated to be situations of uncertainty. Therefore, we argue that 'asserting risk' can also be construed as bearing the costs of uncertainty (Dimov, 2018). Entrepreneurs spend resources (e.g. time, money) without knowing the outcome and bearing the costs when their imagined future did not emerge as an artefact. In other words, even though the emergence of artefacts is impossible to reduce to the efforts of an individual entrepreneur, there are always one (or more) actors that have to act (e.g. dedicate time and money) without knowing the outcome ahead and that have to bear the cost if it does not work out as planned.

This also helps to better understand the position of farmer-entrepreneurs within sustainable food entrepreneurship. Our paper discusses their difficult position, which is also well established in the literature on the sustainability transformation of food which shows that farming is becoming increasingly very complex and consists of a plethora of tasks and responsibilities (Triste et al., 2020) whilst facing several obstacles such as debts and sunken investments (Runhaar, 2021). As our paper shows, farmers often have little time or money left to actively engage in sustainable food entrepreneurship, e.g. to actively imagine a sustainable future and organise this into (new) artefacts. Still, they bear the uncertainty of their enterprise even if they primarily focus on food production. Therefore, a farmer can be considered an entrepreneur even when he is not actively engaging in entrepreneurship.

Third, our framework offers the means to embed entrepreneurship better within (other) studies and disciplines of food and sustainability. For example, it helps to position the role of entrepreneurship in the alternative food networks literature. This literature is moving away from normative dichotomies such as mainstream-alternative and local-global (Tregear, 2011; Veen et al., 2012) and increasingly show how 'local' and 'alternative' food producers often rely on 'global' and 'mainstream' markets for a competitive price (Feyereisen et al., 2017; Preiss et al., 2017). Our framework stimulates this development by showing how these former dichotomies are part of the same ongoing process of change. Our approach helps to see that entrepreneurship entangles the future and the past, the human and the non-human and therefore cannot be confined to the ideology or motivation of entrepreneurs. Furthermore, Desa and Jia (2020) argue that alternative

food networks require multi-disciplinary dialogues, to avoid being seen as 'anti-business'. Our main concepts (uncertainty, sense-making, artefact emergence) originate in different scholarly traditions (e.g. economics, organisational studies) and have evolved into the RP over time under influence of disciplines such as sociology and business studies. By connecting them to the specific field of studies of food and sustainability, we hope to further this multi-disciplinary dialogue. Not by replacing other literatures or concepts, but by adding to them.

To illustrate how this could work, it can be instructive to compare our usage of the concept 'emergent artefacts', and the term 'institutions' as used in recent contributions to the literature on food system transformations. Skog and Bjørkhaug (2020) make the distinction between formal institutions as local and national government and policy, and informal institutions as social structures such as family and local society. Runhaar (2021) speaks of the need for building institutions to stimulate sustainability transformation and mentions examples such as subsidies and foundations to lobby and disseminate knowledge. He also claims institutions have a cultural role; to help find a common meaning of what constitutes as sustainable.

Mangnus and Schoonhoven-Speijer (2020) consider organisational phenomena such as food cooperatives as institutions. Furthermore, they explain institutions such as food cooperatives are not fixed but ongoing, and evolving and embedded as they borrow from other social arrangements as present in society. Especially the understanding of Mangnus and Schoonhoven-Speijer (2020), that consider institutions as dynamic entities themselves, closely resembles our usage of the term 'emergent artefacts', but also in general our understanding of entrepreneurship as a cyclical process of change. This shows that our framework could be combined with concepts such as 'institutions' in future research. For example, by assessing institutions through the scope of artefact emergence, and to distinguish different organisational forms of the basis of their temporal endurance. This can help to qualify different transition points and their role within the ongoing sustainability transformation of food. Furthermore, such studies can further explore the tensions as discussed in section 2.3.3 between organising new products services and firms on your own, or seeking collaboration with others.

2.4.3 Policy implications

Our framework has implications for policymakers and other societal actors that aim to further sustainable food entrepreneurship. First, the role of the socio-material context is important to consider for government agencies that aim to promote sustainable food entrepreneurship. Especially municipalities that aim to foster sustainable food policies must bear in mind the specific conditions, both material and cultural, that shape the type of sustainable food entrepreneurship that can emerge. Furthermore, they should

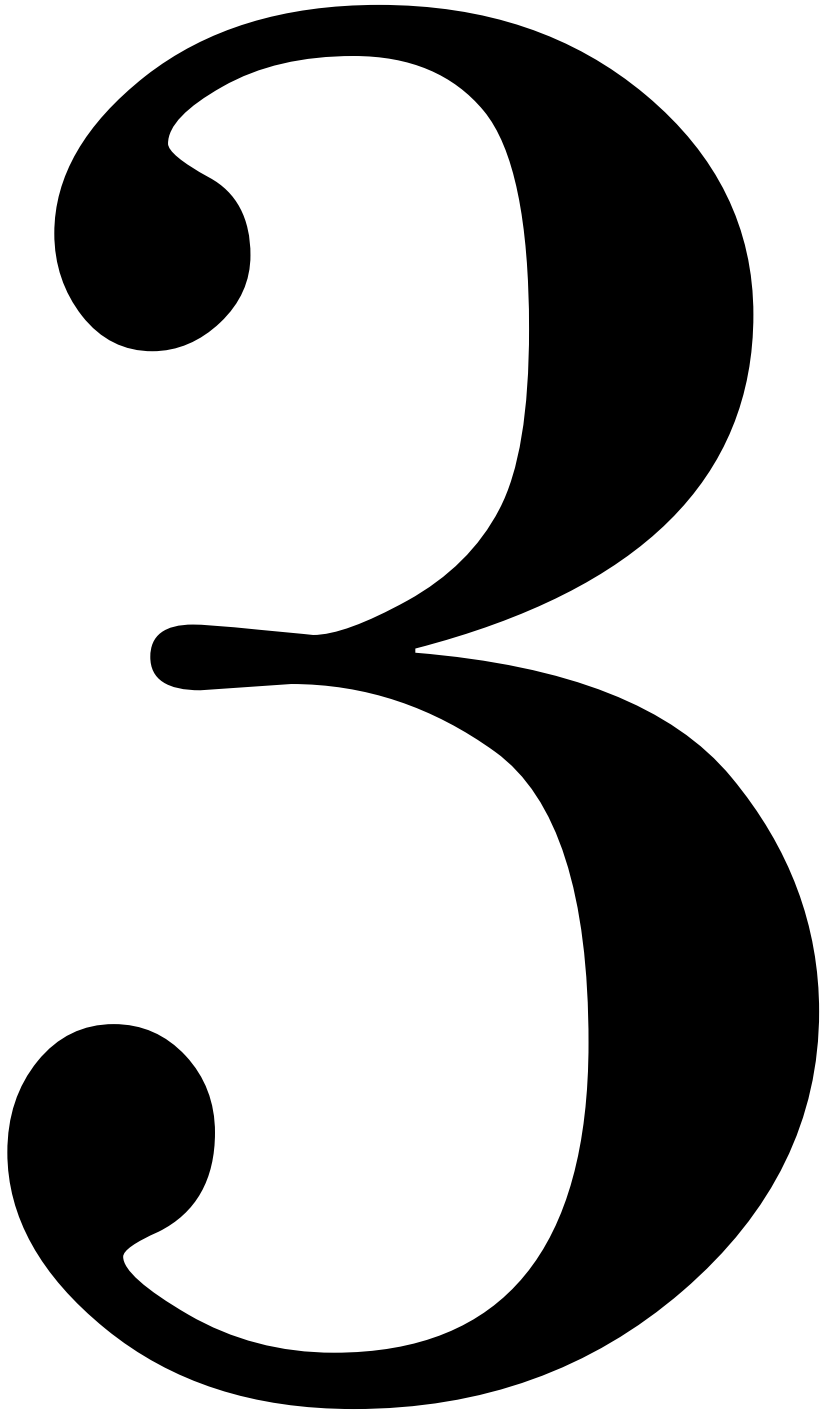
take notice that intermediary actors, that neither profit from, nor bear the costs of uncertainty for entrepreneurship, can be crucial in artefact emergence. This also relates to the astute observation of Baldy and Kruse (2019) of prejudices about different societal actors about their role in the food system transformation; civil society actors often believe food entrepreneurs only act out of profit whereas entrepreneurs believe civil society actors are anti-growth per definition. Our framework helps to see that such prejudices are unfounded, since civil society actors, food entrepreneurs as well as government actors often engage in the same processes of entrepreneurship. Therefore, it is important to stimulate more agencies and actors that play a facilitative role in sustainable food entrepreneurship.

Second, the temporal dimension of our framework incites a reevaluation of using qualifications such as 'success' and 'failure' in sustainable food entrepreneurship. Our framework depicts entrepreneurship as an ongoing cycle of reinterpreting and reconstructing the past into the future, therefore products goods and services must be understood as permanently under construction. Furthermore, the framework provides the insight that within sustainable food entrepreneurship, short-term 'success' or 'failure' is less important than the stimulation of a constant flow of ideas and resources throughout the sector. The latter enables the creation of more connections between entrepreneurs and other actors in the field of sustainability and food, also for those entrepreneurs for which it is harder to bear uncertainty. Therefore, it is important to facilitate the ongoing development, even when imminent success is not to be expected. This insight is important for a wide range of actors, from government agencies to banks, that aim to accelerate sustainable food entrepreneurship by promoting promising developments in the field. These actors are increasingly finding each other on their paths, especially considering the increasing importance of urban policymaking to promote sustainable food (Baldy & Kruse, 2019; Giambartolomei et al., 2021). Our framework shows it is important to not just focus on upscaling recent 'successes', but also to try to learn from the 'failures' of the past. In other words, don't just try to pick the winners but learn as much as possible from the entrepreneurial process that is unfolding.

2.5 Conclusion

This paper introduces a conceptual framework, the SFEF, to further the understanding of the role of entrepreneurship in sustainability transitions in the agri-food domain, and in particular in the context of food system re-localisation. The framework was constructed based on literature reviews (encompassing literature on the RP and on sustainable food entrepreneurship (SFE)), and expert interviews in Almere, Flevoland (a real-life site of food entrepreneurship). Sustainable food entrepreneurship is conceptualised as an ongoing

cyclical process of change. The uncertainty associated with sustainability incites a process of sense-making where entrepreneurs imagine a sustainable future whilst inscribing their images with notions of past experiences. The fit of these imagined futures and the socio-material context determines which of them emerge as artefacts (e.g. products, services and firms). Artefact emergence in turn incites a new cycle of uncertainty. This SFEF helps to look beyond the behaviour of entrepreneurs, and to look at the larger process of change. Moreover, it puts the socio-material context at the center stage of sustainable food entrepreneurship and shows that the fit of the imagined futures to this socio-material context determines if and how entrepreneurship emerges. We aim to advance the understanding of sustainable food entrepreneurship with this framework, that can be fruitful for both academics as well as for policymakers in the agri-food domain. Our paper concluded with implications for policymakers, to bear in mind the actors and factors other than entrepreneurs that facilitate entrepreneurship, as well as the relative value of terms such as 'success' and 'failure' within an ongoing cycle of change.



Chapter 3

Sustainability in times of disruption: engaging with near and distant futures in practices of food entrepreneurship

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Abstract

The sustainability transformation of the food system involves imagining a sustainable future whilst functioning within the current unsustainable food system. Some argue there is a difference between the goal-oriented and comfort seeking form in which the near future is engaged, and the reflexive, imaginary way in which the distant future is engaged. This begs the question, how is engagement with near and distant futures balanced, and what does this mean for the overall sustainability transformation of the food system? We studied future engagement in practices of food entrepreneurship in the Dutch province of Flevoland during the disruption caused by the covid-19-induced lockdowns. This disruption posed a challenge and an opportunity to study near and distant future engagement in depth. Through an online survey and offline semi-structured interviewing, we questioned practitioners of sustainable food entrepreneurship during the first and second lockdown, respectively. The findings show near future engagement is mostly associated with immediate change in practices enforced by the covid-19 lockdown, whereas distant future engagement primarily was visible in continuous change in practices as associated with sustainability. However, this does not mean near and distant future were perfectly balanced. Therefore, we argue pre-existing trends with regard to sustainability can be accelerated or obstructed when they meet the immediate effects of disruption. Our paper concludes by stating the need for more research to the interaction of near and distant futures in different contexts and circumstances.

3.1 Introduction

Sustainability transformations of the food system pose a conundrum. On the one hand, they require aspiring to sustainable food systems in a distant future. On the other hand, these distant futures are not realised overnight. Those actors that are best situated to change the food system and make distant imaginaries come to fruition, also have to operate within the current food system which demands dealing with the near future. This begs the question, how is engagement with near and distant futures balanced, and what does this mean for sustainability transformations of the food system? In this paper, we aim to answer this question by studying future engagement in practices of food entrepreneurship. Particularly, during the disruption as caused by the covid-19-induced lockdowns in the Dutch region of Flevoland. Food entrepreneurship requires bearing the costs of uncertainty (Dimov, 2018): it involves aspiring to a more sustainable distant future whilst at the same time dealing with various uncertainties of the current food system. Flevoland is particularly relevant to study food entrepreneurship due to its history of food entrepreneurship and agricultural production (Vriend, 2014). Furthermore, its capital Almere positions itself as a growing green city, and actively stimulates sustainable food entrepreneurship (van der Gaast et al., 2020).

We have a practice-based understanding of entrepreneurship. This means we consider entrepreneurial practices of food (e.g. producing, processing but also selling and managing) as the unit of analysis instead of individual entrepreneurs (Gross & Geiger, 2017; Thompson et al., 2020). Entrepreneurial practices only endure when they are reproduced over time (Nicolini, 2017), and are therefore always evolving and continuously changing over time (Claire et al., 2019). Furthermore, social disruptions can cause immediate and enforced changes in practices because adaptation is required to the 'new normal'. By studying practices during a disruption, we can explore how future engagement feeds into the immediate changes and continuous changes in practices. To capture future engagement for the near and distant future, we conceptually build on 'modes of future engagement' (Mandich, 2019; Welch et al., 2020) and 'material temporality' (Hernes et al., 2020). These concepts appreciate the imaginative properties of future engagement in envisioning a distant sustainable future, as well as the more anticipatory way to deal with the near future through the maintenance of daily operations in the current food system. At the same time, both appreciate the boundedness of future imaginations within situated practices.

The disruption as caused by the covid-19 outbreak shaped our methodology as well. The covid-19 pandemic incited two (partial) lockdowns in the Netherlands that caused a major social and economic disruption. The first started in March 2020 and ended in June 2020. The second started in October 2020 and ended in April 2021. As a disruption, it

posed both a constraint and an opportunity for our research. It offered an opportunity to explore the role of future engagement in changing practices during disruption in a more in-depth manner. At the same time, it also limited access to research participants. Therefore, we conducted a survey after the first lockdown as a means of safe structured interviewing. Through this survey, we gained a snapshot of general expectations of the future in terms of economic and sustainability prospects, as well as immediate changes due to the disruption. Following, we conducted interviews during the second lockdown to gain more in-depth understanding to how future engagement hangs together with (changing) practices in times of disruption.

In the next section, we explain our conceptualisation of near and distant future engagement and our practice lens to disruption and change. This is followed by an explanation of the methods in which we further explain how the disruption of covid-19 shapes our research design. Following, we discuss our findings in which we first discuss the changes that have occurred in practices, after which we analyse near and distant future engagement as an element of this change. Lastly, in our discussion, we will reflect on how near and distant future engagement are balanced in practices of food entrepreneurship and what this means for sustainability transformations of food.

3.2 Theoretical framework

In this section, we will first explain why we study future engagement within a practice ontology during a disruption. Second, we will introduce the theoretical foundations of future engagement on which we will built in this paper. Lastly, we will conceptualise engagement with near and distant futures to set up the method and analysis of this study.

3.2.1 Practice ontology and disruption

In this paper, we employ the practice lens as an infra language, i.e. as an heuristic device to generate understandings (Nicolini & Monteiro, 2017). The practice lens (or practice ontology) implies that practices are the unit of analysis instead of individuals (e.g. entrepreneurs or enterprises) (Claire et al., 2019; Gartner et al., 2016; Thompson et al., 2020). Entrepreneurial practices are not separated from but firmly grounded in wider everyday activities (De Clercq & Voronov, 2009; Johannisson, 2011), they are sets of sequentially ordered activities that are enacted or performed by various actors (Claire et al., 2019; Thompson et al., 2020). Furthermore, practices are bundled together to form larger constellations (Nicolini, 2010; Schatzki, 2011; Shove et al., 2012). A food enterprise for instance can emerge through the bundle of food production practices (e.g. weeding and harvesting) and administrative practices (e.g. finances and paperwork for certification). Practices are future oriented (Shove et al., 2012) and organised around

certain ends and objects (Nicolini & Monteiro, 2017). For example, the performance of food production practices includes material components (e.g. harvesting machines) and is oriented towards certain goals (e.g. the quality of the product, being profitable).

This notion of 'ends' instills a sense of teleology or goal in its future orientation (Mische, 2009). However, the orientation towards certain ends does not mean that a deviation of goals is impossible (Nicolini & Monteiro, 2017). Practices are no fixed structures (Nicolini, 2017; Welch, 2017; Welch et al., 2020). As Nicolini (2017, p. 21) explains: 'practices only exist to the extent that they are reproduced'. Practices change and continuously evolve because the actors that perform them adapt to ever changing circumstances, therefore they contain 'the seeds of constant change' (Warde, 2005, p. 141). Moreover, disruption and social upheaval can cause immediate enforced de- and re-routinisation of practices (Brons et al., 2020; Spaargaren & Oosterveer, 2010). A discontinuity of social life requires adaptation to the 'new normal', which in turn incites changes in performances that could over time result in a reconfiguration of practices. In this paper, we will examine change in performances during a specific disruption, and study the future engagement that accompanies these changes.

3.2.2 Future engagement

The study of the future in social science is gaining momentum (Beckert & Suckert, 2021), which relates to the increasing importance of climate change and the uncertain future it poses (Oomen et al., 2021). This scholarship of the future provided a crucial addition to our practice lens. Practice theory assumes future engagement to be part of the 'teleoaffective structure' (Schatzki, 2002, p. 80) which incorporates normativity (what 'ought' to be done) and affectivity (emotions and feeling concerning what is to be done). This structure is tied to individual practices and not to individual practitioners. Schatzki (2002) gives an empirical example of herb production practices, where the labourers that performed these practices had personal opinions and emotions that coexisted but did not interfere with the common ends in their work. Welch et al. (2020) claim the teleoaffective structure fails to appreciate the role of reflexivity in future engagement. Similarly Mische (2009) argues that practice theories correctly show that actions are embedded in situated practices and imaginations of the future do not automatically lead to change, but they risk losing out of sight the imaginative, creative and willful in which thought and action are put together in new ways. Especially in times of uncertainty, such reflecting and thinking critically about the future is relevant (Beckert, 2013, 2016; Mische, 2014).

We draw on the concepts of 'modes of future engagement' (Mandich, 2019; Welch et al., 2020) and 'material temporality' (Hernes et al., 2020) to conceptualise engagement with near and distant futures. Both 'modes of future engagement' and 'material temporality' appreciate the boundedness of future imaginations within situated practices. At the same

time, both make a distinction between engagement with near and distant futures that is absent in practice theory.

The 'modes of future engagement' concept embeds projectivity, the forward-looking element of human agency, in the social practices of everyday life (Mandich, 2019; Mische, 2009). Everyday life involves access to reality in different ways, which means the future is projected in different formats, or 'modes' of engagement (Mandich, 2019; Welch et al., 2020). Welch et al. (2020) illustrate this through the example of laundry practices. In the performance of laundry practices, there is an unconscious pull towards what is convenient and familiar. At the same time, the performance of this practice is planned in accordance to other practices (e.g. other chores or paid work) by timing this task and other tasks within a time-frame. On the other hand, when evaluating laundry performance based on criteria such as sustainability, and thinking of changing things, it requires imagination how the present could be different in the future. Similarly, when actively exploring alternative, more sustainable ways of doing laundry, the future is engaged in a more adaptive, improvisational manner. In sum, whereas near futures are engaged in a more teleological, unreflexive way, distant futures require reflexivity and imagination that things could be different in the future.

Hernes et al. (2020) argue, similarly to Welch et al. (2020) and Mische (2009), the need to understand the difference between teleological and imaginary forms of future engagement. Their 'material temporality' concept attunes future engagement to the specificities of food entrepreneurship (Hernes et al., 2020; Moser et al., 2021). In their study, they specifically examine a large beer and dairy company and show that there are different ways in which matter 'does' time, for example, how it determines how human actors perceive, and engage with, time. However, future engagement that is closest to the present relies on direct experience, future engagement with a more distant future requires imagination. When producing six pack of beer, the components of the six pack (the beer itself, the aluminum of the cans and the glue of the packaging material) all flow through time with different durations and speed that can be timed and ordered. However, when imagining an alternative (and more sustainable) production process in the distant future, imagination is required because the altered material processes in the distant future cannot just be timed and ordered in the same fashion as material processes in the near future.

3.2.3 Near and distant future engagement

Table 3.1 shows our conceptualisation of engagement with near and distant futures, which is subdivided in four types of engagement. Near engagement involves practical anticipation, which is characterised by an unreflective and unconscious anticipation to maintain convenience (Welch et al., 2020), and is associated with affective notions such as fear and hope (Mandich, 2019). In other words, when regularities that give us

comfort are threatened, this can cause fear and even panic, which in turn also affects the choices we make. Near future engagement also manifests in the form of timing. This type of engagement is inspired by the mode of probability concept, as well as that of processual temporality. The mode of probability implies imagining a future action as if it is already accomplished (Mandich, 2019; Welch et al., 2020). As Welch et al. (2020) explains, it concerns the timing of multiple practices in a consecutive order. It is not fully unreflexive or unconscious, such as practical anticipation, but can be seen as 'means-to-an-end reflexivity' (Mandich, 2019, p. 9) since it involves setting specific goals and reasoning a way towards it. Similarly, the processual temporality concept involves a form of planning practices in consecutive order, but it highlights the role of matter in this process. It concerns the timing and ordering of the 'nested, continuous and intersecting flows of materials' (Hernes et al., 2020, p. 2). For example, the perishable material of the beer itself, as well as the preservative properties of the cans is ordered in such a way that the beer keeps its quality throughout the supply chain.

Table 3.1 Conceptualisation of engagement with the near and distant future

	Near future engagement		**Distant future engagement**	
Type	*Practical anticipation*	*Timing*	*Exploring*	*Imagining*
Description	Unconscious anticipation of practices to maintain convenience	Envisioning future performance of practices (incl. material processes) within a certain order and timeframe	Discovering the future whilst experiencing it through continuous adaptation to changes	Picturing alternative future practices
Reflexivity	Unreflexive and affective (e.g. fear, hope)	Means-to-an-end reflexive	Reflexive	Reflexive

Distant future engagement is characterised by a reflexive type of engagement that relies on imagination and experimentation. Exploration relies on creativity and results in innovation (Welch et al., 2020). It requires adapting to new circumstances instead of clinging to the past in the present such as practical anticipation, or placing past, present and future in a certain order such as in timing. Rather, it implies continuously discovering the future by experiencing it (Mandich, 2019). By exploring the future day by day, slowly but steadily the distant future draws near. Imagination refers to the imagination of a certain practices in completely different way in a distant future (Mandich, 2019). This also involves the imagination of material processes as part of these practices. As Hernes (2020) argues, a future sustainability target to produce more sustainability invokes a different form of future engagement than planning the near future production within current beer producing practices. 'To aim to launch a new product in 5 years' time means to imagine the intended product 5 years from now, including the processes that

constitute it and the intersections with related processes, such as distribution, acquisition, consumption and disposal' (Hernes et al., 2020, p. 5).

3.2.4 Context: Food entrepreneurship in Flevoland, the Netherlands

We study near and future engagement in practices of food entrepreneurship in the context of sustainability transformations of the food system. The latter refers to the ongoing challenge to (re)organise food systems in a more sustainable way. For instance, there is the aim to produce and process food more sustainably, for instance by using more extensive production methods (e.g. organic). But there is also a challenge in terms of logistics, for instance to create shorter supply chains (Larsson et al., 2016; Paloviita, 2009). The balancing of near and distant futures is important for food entrepreneurship in sustainability transformations. As Dimov (2018, p. 6) explains, entrepreneurship includes bearing uncertainty which he describes as 'being at the mercy of time'. Aspiring to a sustainable future requires making commitments in the present. But because the future might turn out differently, those that make the commitments (in terms of resources, actions, etc.) stand to lose what they have committed to. Furthermore, the uncertainties and opportunities offered by disruptions triggers both creativity and fear in entrepreneurship, causing some entrepreneurial practices to endure over time, some to collapse, and new ones to emerge (Gross & Geiger, 2017; Johannisson, 2014).

By studying (changes in) entrepreneurial practices during the covid-19-induced disruption, it is possible to closely examine how near and distant future engagement feeds into these changes. Our study focuses on food entrepreneurship in the province of Flevoland in the Netherlands. Flevoland presents a relevant research site, because it is the stage on which an ongoing sustainability transformation of the food system is unfolding in which entrepreneurship plays a major role. This province is relatively young, as it was reclaimed from the sea in the fifties and sixties of the 20th century. Originally, the province was created for agriculture and food production. At the same time, the first inhabitants were strictly selected for not just their agricultural skills, but their entrepreneurial prowess as well (Vriend, 2014). In a later stage, cities such as Almere and Lelystad emerged in the province that had a different purpose: to cope with the increasing population in the near city of Amsterdam (Jansma & Wertheim-Heck, 2021). Recently, cities such as Almere are reconnecting with their agricultural hinterland and have started to position themselves as green growing cities. This results in policy that foregrounds sustainable and healthy food, which has a profound influence on food entrepreneurship as well (van der Gaast et al., 2020, 2022a).

3.3 Methods and materials

Our study is shaped by the 2020 covid-19 pandemic. Covid-19 caused several (partial) lockdowns in the Netherlands which resulted in a disruption for food entrepreneurship (e.g. restaurants and shops had to close up for the unforeseeable future). This disruption offered an opportunity to study engagement with near and distant future in changing practices, as was explained before. However, this disruption also limited access to research participants. Safety concerns with regard to social distancing made direct interviewing harder, especially during the first lockdown. Furthermore, adapting to the lockdowns caused time constraints that made it harder for entrepreneurs to participate in the study. Since we are interested in exploring the phenomenon of future engagement in practice in depth, we use an interpretive approach. However, we combine a qualitative and a quantitative form of interviewing. The value of the quantitative study lies not in a traditional, positivist sense of measuring and assessing patterns of variables. Instead, it provides a larger overview in terms of what types of responses to the disruption were visible, and what types of measures were taken. This overview serves as a scaffolding for our in-depth study as is done through semi-structured interviewing. Therefore, no statistical analysis was done and only descriptive statistics were used. For participants, we selected entrepreneurs, since we consider entrepreneurs to be practitioners in entrepreneurial practices that have key insights into the performance of all entrepreneurial practices as performed by their firm. Our study consisted of two phases:

Phase 1: Online survey (n = 31) during the first lockdown (March–June 2020). Because of safety concerns we considered an online survey to be the safest and most efficient means to get inquiries in what happened during this first lockdown. In that sense, the survey must be seen as a digital tool for safe structured interviewing. Even though we did not directly interact with participants, since covid-19 restrictions made this impossible, the online survey format allowed the answering of closed questions by entrepreneurs. The survey consisted of 23 closed questions and took approximately 10 min to complete. The content ranged from questions about entrepreneurial practices in relation to covid-19 disruptions, to expectations about the future. To recruit participants, we used email bulletins of two organisations (Horizon and FlevoFood) that facilitate food entrepreneurship in Flevoland. This resulted in five responses. To increase the response rate, we recruited participants by assembling a list of email addresses of about 100 food entrepreneurs in Flevoland based on a Google search and contacting them directly. This resulted in another 26 responses. A dataset was compiled and analysed through descriptive statistics which provided an overview of the commonalities in responses.

Phase 2: Offline semi-structured interviews (n = 10) during the second lockdown (December 2020–January 2021). In a later stage of the covid-19 disruption, it became possible again

to interact with participants directly. Through the semi-structured interviews, we aimed to identify and analyse practices of entrepreneurship and the changes that occurred in more detail. Because the interviews were conducted during the second lockdown, they helped to reflect with entrepreneurs on what happened during both the first and second lockdown. Six of the participants of the semi-structured interviews were recruited out of the participants of the online survey, which included the option for participants to leave their contact information if they were available for an interview when this would be possible again. We used open questions that allowed a reflection of participants on the daily practices of the firm, the changes in daily practices due to covid-19 and the expectations for the future. All interviews were conducted in Dutch, three of the 10 interviews were conducted online at request of the respondents. Excerpts of the interviews and text of the tables and figures as displayed in the findings were translated from Dutch to English. Table 3.2 shows the participants to both Phase 1 and Phase 2. Since there are six participants that participated in both phases, there are 35 participants in total. Because the urban and rural area of Flevoland have their own dynamic and relationship to food, we balanced the interview participants equally in urban and rural areas of Flevoland. Phase 2 allowed a more in-depth inquiry in the type of food products and services of the entrepreneurs, therefore the types of food firm of #1-#10 are described in more detail.

In both Phase I and II, we chose to not specify our understanding of the concept 'sustainable'. As we discussed before in this paper, in food system transformations there exists multiple imaginaries of what a sustainable food system should or could look like (de Krom & Muilwijk, 2019). Choosing a specific definition would oversimplify this complex reality. Furthermore, explicating to entrepreneurs a specific definition of sustainability could result in the fact they would not discuss certain activities that they themselves might consider part of their sustainability activities because they did not fit this description. This in turn can cause obfuscating practices or forms of future engagement that are crucial for this paper.

3.4 Findings

In our findings, we first provide a more general depiction of the impacts of the disruption on food entrepreneurship. Second, we look more specifically at the changes that have occurred in entrepreneurial practices. We distinguish changes in working conditions and market conditions. Lastly, we will discuss near and distant future engagement as visible in these changes.

Table 3.2 List of participants. The asterisk (*) indicates the interview was conducted online

ID	Type of food firm	Area	Phase 1	Phase 2
#1	Processing and sales of meat, local food boxes	Urban	Yes	Yes
#2	Production and sales of organic wine	Urban	Yes	Yes
#3	Sales of organic vegetables	Urban	Yes	Yes
#4	Production and sales of dairy	Rural	Yes	Yes*
#5	Organic production and sales of vegetables	Rural	No	Yes*
#6	Production and sales of edamame and soybeans	Rural	No	Yes
#7	Care farm, farmers store, organic meat, dairy and vegetable production	Urban	Yes	Yes
#8	Production and sales of beer, local food boxes	Urban	Yes	Yes
#9	Production non-organic vegetables	Rural	No	Yes
#10	Production, processing and sales of organic vegetables	Rural	No	Yes*
#11	Restaurant	Unknown	Yes	No
#12	Consultancy	Rural	Yes	No
#13	Distribution	Urban	Yes	No
#14	Production, processing, sales	Urban	Yes	No
#15	Consultancy	Rural	Yes	No
#16	Production, sales	Rural	Yes	No
#17	Production	Urban	Yes	No
#18	Production, processing, sales	Rural	Yes	No
#19	Production	Rural	Yes	No
#20	Sales	Rural	Yes	No
#21	Production, sales	Rural	Yes	No
#22	Sales	Rural	Yes	No
#23	Processing, sales	Urban	Yes	No
#24	Production	Rural	Yes	No
#25	Processing, sales	Rural	Yes	No
#26	Production, sales	Rural	Yes	No
#27	Production, sales	Unknown	Yes	No
#28	Processing, sales	Rural	Yes	No
#29	Production	Unknown	Yes	No
#30	Production, sales	Urban	Yes	No
#31	Production	Unknown	Yes	No
#32	Processing, sales	Rural	Yes	No
#33	Production, sales	Urban	Yes	No
#34	Production	Rural	Yes	No
#35	Sales	Urban	Yes	No

3.4.1 The impact of the disruption on food entrepreneurship

Before presenting specific changes in practices of food entrepreneurship, we provide more insight in the overall impact for food entrepreneurship due to the disruption. First, we discuss the impact on the economic situation. In the survey, we asked the respondents about the current economic situation of their enterprise and the economic situation of their enterprise before covid-19. Furthermore, we also asked them what they expected in terms of their economic situation for the coming years. By crosschecking expectations with the present and previous situation, it is possible to get a better sense of what impact the disruption has caused. The findings of the survey show most enterprises find themselves in a current position of stability or growth, as is demonstrated in Tables 3.3 and 3.4. Those that considered their position stable prior to covid-19 seem to expect stability, and those that grow expect to continue growing. A similar picture is shown for the relationship between the current and expected situation (Table 3.4). With a difference, that none of the stable and growing enterprises expect a decline, only some (6.5%) of the declining enterprises do not expect to recover.

Table 3.3 Crosstabs of expectations economic situation enterprise in the coming years and situation enterprise before covid-19 (n=31)

Expectations economic situation enterprise	**Economic situation enterprise before covid-19**		
	Decline	Stability	Growth
Decline	0%	3,2%	3,2%
Stability	6,5%	35,5%	3,2%
Growth	0%	12,9%	35,5%

Table 3.4 Crosstabs of expectations economic situation enterprise in the coming years and current economic situation enterprise (n=31)

Expectations economic situation enterprise	**Current economic situation enterprise**		
	Decline	Stability	Growth
Decline	6,5%	0%	0%
Stability	3,2%	35,5%	6,5%
Growth	6,5%	9,7%	32,3%

Second, we discuss the changes in terms of sustainability. We asked the respondents in the survey about the situation of sustainability in their enterprise since covid-19, and how they expected sustainability to develop in their firm the coming years. Table 3.5 shows that none of the respondents consider their firms to have become less sustainable since covid-19. Most consider their enterprises just as sustainable as before and just a small share (9.7%) considered their enterprises even more sustainable. In terms of

expectancy, only a few entrepreneurs expect a delay in the coming years and most expect the same pace or even an acceleration to occur. When cross referencing the expectations of sustainability with that of the current situation of enterprises (Table 3.6), we see that the few respondents that experience a current decline in terms of the economic situation, expect to continue on the same pace (6.5%) or even to accelerate (9.7%) in terms of sustainability.

Table 3.5 Crosstabs of future expectation sustainability own enterprise, and changes in sustainability within enterprise (n=31)

	Sustainability within enterprise since covid-19			
Expectation sustainability enterprise	More sustainable	Just as sustainable	Less sustainable	Don't know
Delay	0%	3,2%	0%	0%
Same pace	0%	41,9%	0%	6%
Acceleration	9,7%	35,5%	0%	3%

Table 3.6 Crosstabs of future expectation sustainability own enterprise, and current economic situation enterprise (n=31)

Expectation sustainability enterprise	**Current economic situation enterprise**		
	Decline	Stability	Growth
Delay	0%	3,2%	0%
Same pace	6,5%	22,6%	19,4%
Acceleration	9,7%	19,4%	19,4%

The semi-structured interviews help to interpret these survey findings on the immediate impact of the disruption. None of the interviewed entrepreneurs report a decline, and most of them claim they perform well economically since the covid-19 lockdown. As several interviewees pointed out: 'people always have to eat' (#3, #5, #6). As far as sustainability is concerned, some interviewees explained the covid-19 situation advances the trend towards sustainability. Many entrepreneurs claim that sustainable food is in even higher demand since covid-19, which also translates in higher demand from large retailers. They attribute this to more concern of people where their food has come from, and that their food has a story behind it, but also that more people are aware of sustainability concerns due to the crisis they are currently in. Moreover, they explain it is not an option to limit sustainability to save expenses on the short term. The following quote illustrates well why this is so:

> If I would want to work less sustainably, I would have to go back on the investments we already did. Furthermore, we would have to work differently which would cost me more and gives me less results. It would mean we would invest time to do worse, so no that is not what I want (#1).

Furthermore, some entrepreneurs indicate most efforts to make operations more sustainable are tied up in long-term investments that are already made, or that are necessary to maintain operations. For example, #5 was in the middle of building a new storage facility with solar panels, residual heating and a rainwater collection system when the first lockdown started. Such long-term investments in sustainability, which also include more energy efficient machines or windmills, are crucial for cutting down costs and therefore cannot be (dis)missed. Lastly, when asked about sustainability efforts, some of the respondents refer to their efforts to adapt towards the changing climate that become more urgent every day and which will be discussed more in depth in the next paragraphs.

3.4.2 Change in food entrepreneurship during the disruption: working and market conditions

Next, we will explore more specifically what changes were brought on by the covid-19 situation. First, we will demonstrate through our survey findings that the changes can roughly be subdivided in changes in working and market conditions. Figure 3.1 displays the survey findings on the question what measures were taken by entrepreneurs under duress of the lockdown. The most popular measures are to develop new business models, sales platforms or markets (23.1%), and to use new or different marketing (20.5%). Figure 3.2 shows that a majority either agrees or completely agrees with the statement that they spend most of their time exploiting new opportunities, whereas the least agreement can be found on the statement that adjustments must be made for survival. In other words, a change in market conditions occurred through to the covid-19-induced lockdown which in turn inspired entrepreneurs to exploit the new opportunities that emerged by developing new marketing, business models and markets.

On the other hand, Figure 3.1 also shows entrepreneurs had to dig into reserves (17.9%), ask for government allowance (7.7) and give out discounts (7.7%). The more impactful means to limit expenses (salary cuts, cutting personnel, hiring less temporary employees, sublease work space, contract termination, delay payments) and increase expenses (hiring new personnel, leasing more workspace, investing in new techniques and machines, higher wages) were less popular. The limited need to radically cut expenses might also have to do with the timing of the survey. It can be linked to the national financial aid that covered salaries of employees of certain business to a large extent to avoid massive unemployment (Antonides & van Leeuwen, 2021). Nevertheless, it becomes clear that some changes to the working conditions were visible in response to the covid-19-induced

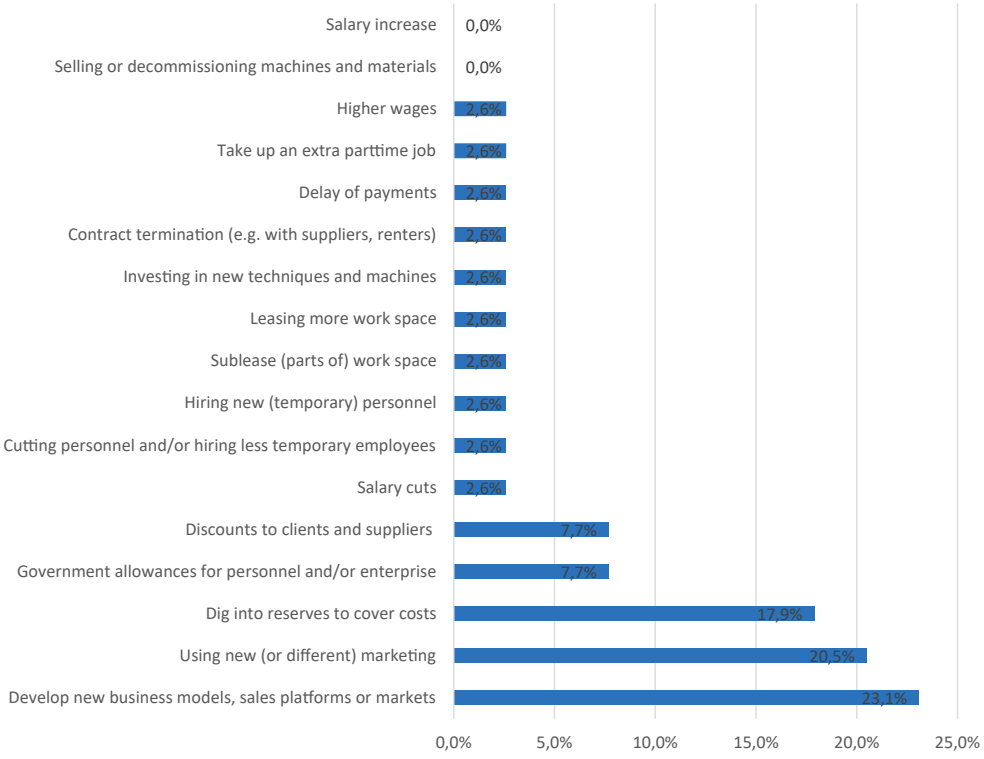


Figure 3.1 Measures taken due to covid-19 (n=31)

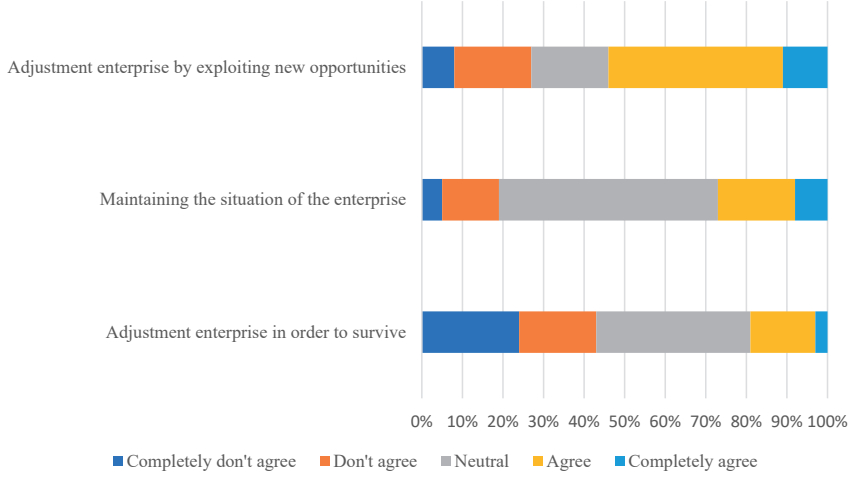


Figure 3.2 Response to covid-19 situation of enterprise (n=31)

lockdown. By means of the semi-structured interviews, we can explore a bit further how these changes affected practices of food entrepreneurship in detail.

3.4.2.1 Change in working conditions: production, processing and managerial practices

The semi-structured interviews showed change in working conditions manifested mostly in production and processing practices and managerial practices.

In terms of production (e.g. sowing, harvesting) and processing (e.g. cutting, packaging) practices, the safety measures (e.g. social distancing) as induced by the outbreak of covid-19 were of almost no concern. These practices are either performed by flexible workers with a wide range of competences, or by the farmer and owner. Especially because most of the production practices are performed outside, there were little to no restrictions in terms of covid-19. One interesting contrast is the wine company of #2 that completely runs on volunteers. The harvest of the grapes was very strictly coordinated according to the standards of social distancing. Some adaptations were necessary to fit the social distancing rules in shops. The shop of #3, that sources local and organic food directly to customers in the city, had to move to a different location because the previous location was too small. A dairy farmer (#4) adapted by inventing a system of small boxes in the countryside where people could come and pick up the products. The most profound changes in production practices have little to do with covid-19 and more so with climate change. The negative effects of climate change require constant changes and adaptation of production practices. Pests, diseases, droughts and heavy rainfall cause impediments that require alterations in production processes. As #10 explained, all the extra revenue that he obtained since the covid-19 outbreak was made undone due to the loss in crops because of droughts and heavy rainfall.

In terms of managerial practices, the covid-19 situation caused reorganisation – in addition to switching from in person meetings to digital meetings, as well as the temporary suspension of international meetings. On the farm of #10, one of the larger agricultural firms that incorporates large processing and production operations, a system was devised to back-up the day labourers by those in daily management. In case of an outbreak, management would step in to enact the processing and production practices. On the farm of #7, that includes a care-farm and a farmer shop, it was the other way around. In the beginning of the lockdown when the care-farm had to temporarily close down, the employees were used to help out in the farmer's store to package the meat from the farm. The care-farm particularly required a lot of reorganisation in terms of the transport of the clients to the farm, and the paperwork to guarantee their safety in the new covid-19 situation. This also meant the managing work shifted; it was less about managing employees in their care-work and more about administrative duties. Another important

change to managerial practices is the application for financial aid from the government in response to the lockdown. Only a small amount of the interviewees applied for this aid, as is congruent with the small percentage as found in the survey (see Figure 3.1).

3.4.2.2 Change in market conditions: sales and logistical practices

Change in market conditions especially manifests in sales and logistical practices. The most profound change is the shift in sales channels from direct sales to web shops. This can largely be attributed to the fall in demand from sales channels that had to close down due to the lockdown, such as cafés and restaurants. For some, the shift towards web shops caused a professionalisation of the logistical process. For example, the wine company of #2 had to introduce automated ordering and payment module and an insured delivery in response to the increase in demand. This considerably reduced the efforts of manually checking whether the payment was done in time and of delivering the wine themselves. The brewery of #8 shifted from direct sales to taking orders via their web shop. Before covid-19, they sold and promoted their beers through fairs, their web shop was barely used. Since covid-19, this turned around completely. They performed the logistical practices (e.g. packaging, delivery) themselves:

> The bar that we use for events used to be in the front of our storage facility because we used it so much, now it is all the way in the back. And the boxes for delivery we have reordered five times over because all we do now is fill boxes (#8).

The covid-19 situation also led to the introduction of several box schemes, where entrepreneurs pool their products together and sell them collectively as one food box. In the interviews, two of those box schemes were introduced. #1 was one of the initiators of Flevourbox, which included produce from all over Flevoland,. #8 invented Allybox which pooled products from within the city of Almere. The development of such schemes involved developing new sales practices (e.g. marketing and promotional activities) as well as logistical practices (e.g. a delivery system to get the products from the wide range of producers to consumers).

3.4.3 Engagement with near and distant futures during the disruption

3.4.3.1 Change in working conditions and near future engagement

Timing was discernable in the reorganisation of working conditions as was done through managerial practices. This was the case with the social distancing conditions in the wine company for instance. As the following quote shows, both groups of people as well as the material flows (harvesting, lunch, bedroom break) were managed in such a way that they would keep a distance towards one another:

> We split everyone into groups of four, with one experienced and three unexperienced volunteers. (…) These groups of four go to a specific part of the vineyard to work, pick grapes and so on. Coffee and lunch breaks are all separate: the experienced volunteer shows them the route towards the lunch facility, to the toilets and after 10 minutes the next group can have their break (#2).

Furthermore, timing was also visible in large agricultural firms that planned ahead for the harvest. In case of an outbreak among their production and processing staff, management would step in to help with the harvest and processing. They also considered a scenario where the borders would close, and workers from other countries could not help to do the harvest, in which case they would recruit people that became unemployed because of the covid-19 situation. For #9, one of the smaller farms with less employees, this was not possible. Hence, in that scenario the produce would have to remain on the land. The care-farm of #7 planned ahead to a possible situation where the care-farm would be forced to close for a longer period, and the government would not help out financially. In that case, they would ask their employees to either take a leave of absence, or work on the 'regular' farm to milk the cows or weed the crops. Two elements of timing are visible in these examples. First, we see a clear imagination of a future action as if it is already accomplished (Mandich, 2019; Welch et al., 2020). Second, we can see that the changes to the labour force due to covid-19 are planned in line with the material properties of the farm and the work that needs to be done.

Practical anticipation is visible in the demand for government aid. For those that applied for government aid, it was the first measure they took after the first lockdown. Therefore, they applied during a moment in time when there was very little knowledge of what the effects of covid-19 would be. This uncertainty triggered emotional responses, such as nervousness and worry. However, it was not just fear, but also the need for convenience and familiarity in daily practices. It is important to note that this fear was not driven necessarily only by concern for the convenience of the entrepreneur, but for the clients and customers. #7 for example asked for the support just in case things would go wrong. She kept the money apart in order for her to be able to give it back at the end of the year in case it turned out she did not need it. For the care-farm, it was important to keep the routines of the clients as familiar as possible and therefore, it was also important to make sure that they could continue pay their employees whatever happened. She applied for the government allowance because she wanted 'no fuss' (#7). This also works the other way around. #6 deliberately did not ask for aid because he was afraid he had to pay it back at some point and he would have already spend the money. In sum, we see an instinctive and unreflexive pull towards comfort, driven by a fear of losing convenience over time.

3.4.3.2 Change in market conditions and near future engagement

Timing is also visible in the change in market conditions. Especially in terms of logistics, planning ahead and envisioning what must be done is important. Furthermore, such changes are co-determined by different material elements such as the living conditions of animals, the processing process and the extra logistics in between that must be ordered. This is especially the case when the product has specific sustainability features. #1 saw an increase in demand for his grass-fed meat because more people started to buy local food online during the first lockdown. Accommodating this higher demand requires timing every element of the supply chain (e.g. purchasing, butchering, processing, distributing) and place them in order. The following quote illustrates this:

> Packaging and freezing takes about three weeks. After a cow gets butchered, it is first kept apart for two to three weeks. Then the meat gets processed: you have to portion it, vacuum it and freeze it, then it is sent to your distribution center, and that takes a minimum of three weeks. So, you have to switch your operations in such a way that you can process five cows a week instead of two. This also means finding out where to get the cattle. In some instances, you have to buy them from somewhere else, but they need to have had the same life as our cows (#1).

A similar process is visible with the wine company of #2, that not only had to set up an online delivery and payment system, but also saw an increase in demand and a better harvest than expected, which meant organising logistics in such a way that the wine could be stored, sold and shipped smoothly. This means taking into account the time it takes to produce, package and store the wine in such a way it does not lose its quality.

3.4.3.3 Change in working conditions and distant future engagement

Imagination was required to deal with the effects of climate change. The wine production company of #2 aspired to the long-term goal of creating permaculture that helps among other things to attract birds, insects and yeasts to keep diseases at bay, and cultivating a more resilient soil to withstand climate change effects. This requires writing a long-term business plan which imagines what this means in terms of revenue and logistics. #10, that claimed all his extra revenue during the covid-19 crisis was made undone due to the damages of climate change, envisioned how he can maintain a resilient soil in the distant future despite the expected damage of climate change. A distant future imagination is crucial in this because it is hard to fathom what will exactly happen, and the effects themselves are easily underestimated:

> Currently I am mostly busy with giving an answer to (…) what climate does to our business model on the long term. Because that is not a small thing and it is going to affect us all. It's just that I already experience the effects, and you

> experience it way less. But overall we all underestimate what will exactly happen (#10, own translation).

Exploration goes hand in hand with imagination in climate adaptation. According to #9, food producers always have to consider every season what crops to change or maintain in their crop rotation, and they base this decision both on the market as well as the environmental circumstances. In other words, they have to adapt to ever changing circumstances. As another entrepreneur explains: 'we are dealing with living products, they can change every day' (#5, own translation). This means in practice that even though imagination produces a distant future of permaculture and soil resilience, exploration helps to get there step by step. Achieving permaculture is a matter of experimentation, such as finding better and more resistant breeds and introducing other crops in the rotation that make artificial fertilizer obsolete. For example: introducing permaculture on a vineyard incited experiments with growing other crops (e.g. potatoes, sugar beets) next to the grapes whilst expanding the vineyard. The use of green fertilizer in growing cabbage is one of the experiments to see if excessive rainfall can be drained more easily, which can help to increase the resilience of the soil.

3.4.3.4 Change in market conditions and distant future engagement

Exploration can be found in the emergence of box schemes. Most firms took up these new box schemes adjacent to their daily operations. They emerged spontaneously out of support for those local entrepreneurs that saw their demand shrink during the lockdown. Those entrepreneurs that were involved in a box scheme (#1, #8) stressed the learning by doing nature of their efforts: what works and what does not work is found out along the way. The pricing of the box, logistics (e.g. the amount of boxes that can be produced or delivered in a short amount of time, by whom and how) were not planned in detail on forehand. Therefore, these entrepreneurship practices were characterised by adapting to what worked and did not work, whilst enacting the logistical and sales practices to create the dinner boxes. As one of the interviewees remarked:

> It is not something we have planned for one or two months in advance, how are we going do it and how are we going to plan it? We just did it (#8).

Since box schemes are not immediately profitable and take up a lot of time, they can interfere with personal life. #1 divided the work for Flevourbox amongst different entrepreneurs, and coordinated the marketing strategy, but did not participate in the day-to-day social media or packaging activities. For the Allybox, #8 had to do everything, from collecting the food from different participating entrepreneurs, to packaging and delivery. #8 kept on going, even though both her time and the profitability of the box were limited, because she expected that at some point in the distant future it would pay

out in one way or the other even though she had no clear idea in what way. In other words, neither timing, nor imagination triggered the emergence of the box schemes but exploration. If this entrepreneur would have planned this from the start, based on the efficiency, logistics and the profitability, the box scheme might not have emerged. But by doing it and inventing it along the way, it emerged anyhow. An interesting contrast is posed by a similar initiative to pool resources of entrepreneurs that only existed in the imagination of an entrepreneur and never saw the light of day. #3 considered collectively selling products with entrepreneurs to occupy the bigger space she had access too since the lockdown. However, she decided to not to actively pursue it. The fear of possible food safety concerns played a large role in that:

> What I aspire, but I need other people to do it, is creating a food hub. I tried to attract cheese producers, bakers or butchers to sell their goods in my shop. But for me, to organise that, it is not convenient. I don't want the responsibility for making sure the meat is frozen in the right way, and if that goes wrong… I don't want all that (#3).

This quote shows elements of fear for losing convenience and comfort, which indicates practical anticipation. At the same time, this fear seems to be brought on by imagining a possible distant future, and realising what this could do to her daily practices. Therefore, partaking in or taking the initiative for a box scheme is a balancing act between the promise of experimentation and the familiarity of keeping things as they are.

3.5 Discussion and conclusion

This paper set out to answer the question: how is engagement with near and distant futures balanced in practices of food entrepreneurship, and what does this mean for sustainability transformations of the food system? Table 3.7 shows an overview of the changes that occurred in the disruption of covid-19 and near and distant future engagement that accompanied these changes.

Table 3.7: Overview of changes in practices and near and distant future engagement

Area of change	Practices	Type of change	Near future engagement	Distant future engagement
Working conditions	Producing, processing, managing	Continuous adaptation to climate change		*Exploration, Imagination*
		Immediate reorganising due to covid-19	*Timing*	
		Immediate application for government aid	*Practical anticipation*	
Market conditions	Sales, logistics	Immediate switch from direct sales to web shops	*Timing*	
		Continuous development of new products (e.g. box scheme, food hub)	*Practical anticipation*	*Exploration, Imagination*

This table shows near future engagement feeds into immediate changes in practices, whereas distant future engagement coincides with continuous change. This relates to the distinction made in our theoretical framework between the continuous change in practices, and the immediate and enforced changes in practices brought on by disruptions. The change in food production practices (e.g. natural fertilizers to create a more resilient soil) as brought on by climate change is not a one-time, enforced rearrangement but a continuous trial and error. It demands continuous experimentation. In contrast, immediate change is visible in the measures taken to adopt to covid-19. The reorganisation of producing, processing and managing practices, as well as the switch from direct sales to web shops was an immediate enforced change in performance and triggered by the restrictions brought on by covid-19. Entrepreneurs had to professionalise their online sales because they were forced to, their usual sales channels were unavailable.

Based on this overview, it is possible to suggest a clear balance between climate adaptation on the one hand, that is associated with continuous change and distant future engagement, and covid-19 adaptation on the other hand that involves immediate change and near future engagement. Yet, this would be an oversimplification. The continuous development

of new products shows why this is the case. The experimentation with new products such as dinner boxes was clearly triggered by covid-19. The enforced change in logistical and sales practices to switch from direct sales to web sales enabled the development of a box scheme. Furthermore, the covid-19 situation resulted in the fact that some entrepreneurs struggled to sell their products and decided to pool their products through these box schemes. On the other hand, distant future engagement, in the form of exploration, was used develop the box schemes step by step. Furthermore, the 'support your locals' idea behind it is also clearly inspired by the demand for shorter supply chains which also precedes covid-19 and relates to sustainability.

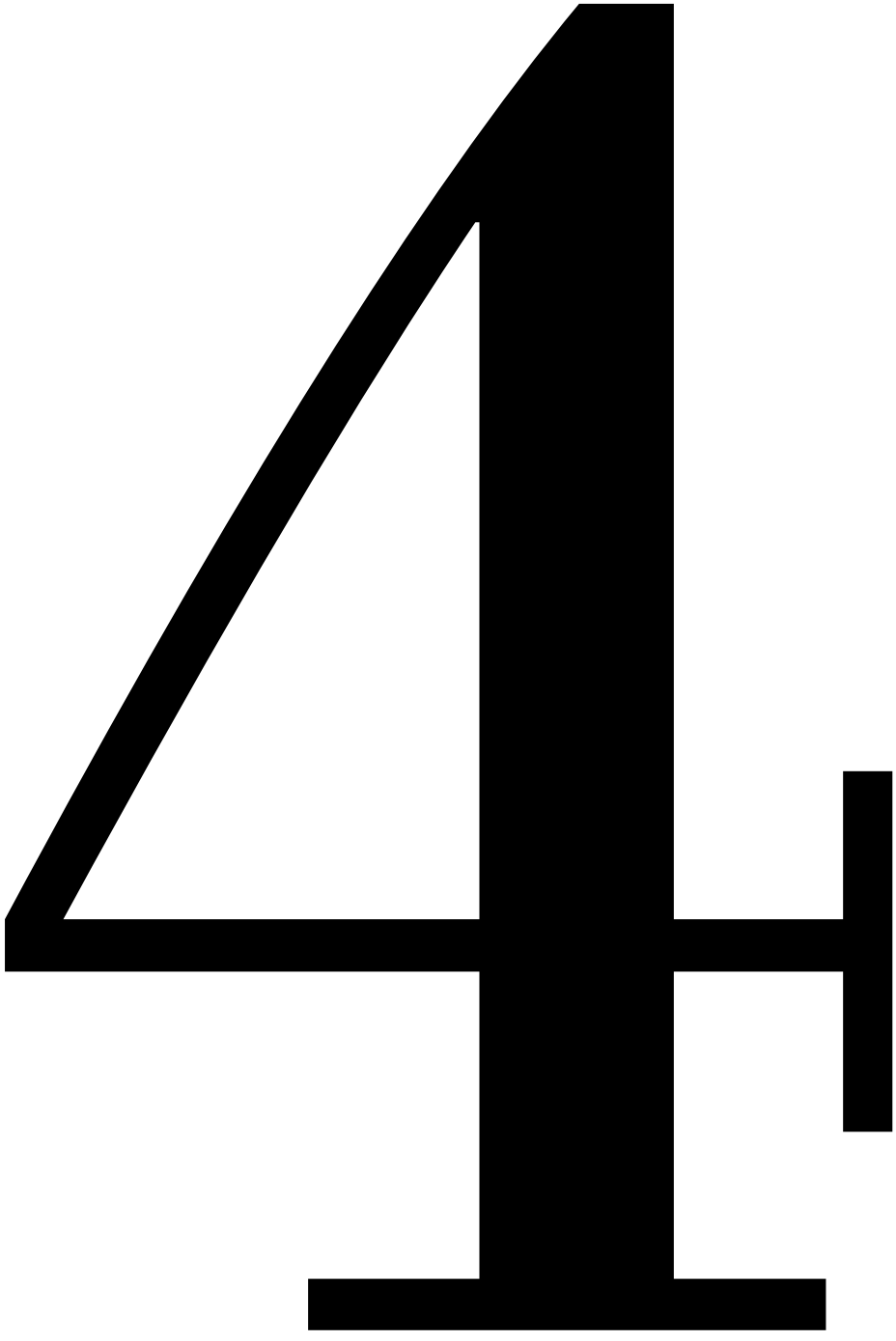
This example shows distant and near future engagement are not necessarily separate pathways, they can become entangled when continuous change meets immediate change within practices. The sustainability concerns that brought on the trend in entrepreneurial practices to shorten supply chains can be seen as a continuous change in practices that preceded the disruption as caused by covid-19. When the disruption of covid-19 caused the immediate and enforced change of logistical and sales practices, this emerging trend of short supply chains was accelerated. Similarly, distant and near future engagement can also clash. In our results section, we discussed the example of the shop owner that sold organic vegetables and was forced to move due to the covid-19 disruption. Her new (spacious) location, together with the pre-existing trend of creating shorter supply chains, led to the imagination of a food hub. However, in contrast to the box-scheme developing entrepreneurs, this entrepreneur did not have to change her logistical and sales practices (apart from relocating). This might explain why practical anticipation was triggered which made the entrepreneur realise how this imagination could cause a breach in comfort and convenience when it would materialise. As a result, the change required to actually let the food hub materialise was never achieved.

This insight in how near and distant futures can together form an enabling or constraining factor is important for sustainability transformations of the food system. Based on the findings of this study, the argument can be made that sustainability has become itself a form of continuous change. As both the survey and interview findings show, sustainability efforts did not diminish during the lockdown. Some changes in terms of sustainability, ranging from ongoing investments in sustainable energy and machines to organic production methods, were already set in motion. When considering organic production practices, for example, the materials used (e.g. seeds, machines) to sow, harvest or weed crops or to process food (e.g. to turn grapes into wine), as well as the methods employed cannot be stopped midway. The same applies to sales and logistics practices when considering short and local supply chains. Such chains, that include customers, contracts and logistical operations, are hard to alter in the spur of the moment. On the contrary, since local and organic food is in demand, and since the effects of climate change

are already experienced by food producers, there is more incentive to further intensify the efforts. However, when it meets disruptive, immediate change such as brought on by covid-19, the specific (re)configuration of practices shape whether sustainability is accelerated or obstructed.

3.5.1 Limitations and future directions of research

Sustainability transformations of the food system are center stage in this paper. However, such transformations are very context-specific. The situated context of food entrepreneurship in Flevoland is distinctive, even on a national scale. They have a relatively high share of organic farmers, mostly in vegetable farming. 15% of the agricultural land in Flevoland is dedicated to organic farming which contrasts with the 3.4% for the Netherlands as a whole (Dekking et al., 2020). This explains the concern for the quality of the soil, and the adaptive capacities of the soil vis-a-vis climate change. A different focus might occur in a different context where non-organic produce is the standard. Therefore, to understand fully how near and distant future engagement interact in food entrepreneurial practices, it is important to study this in other contexts as well, for instance where there is less organic agriculture, more meat or dairy production than vegetables. This might help get more insight in how near and future engagement coexist in various circumstances. Furthermore, this paper also was shaped largely by the specific disruption of covid-19. It might be interesting to study continuous and immediate change in practices, and near and distant future engagement, in other types of disruptions as well. For instance, disruptions on a smaller (e.g. company) scale. Do we see similar patterns in continuous and immediate change? Such research can further the scope of how near and future engagement can shape sustainability transformations of food, in different contexts and circumstances.



Chapter 4

Mission accomplished? How food entrepreneurship discursively constructs futures for sustainable food

Abstract

Several images of the future of food emerge as a response to the need to make the food system more sustainable. Yet so far, the discursive process through which these images manifest is mostly studied from a policy perspective. This paper explores how food entrepreneurship discursively constructs futures for food. A critical discourse analysis was conducted of 102 websites of food enterprises in the Dutch province of Flevoland. The analysis shows entrepreneurship constructs two complementary futures: closed and open futures. Whereas closed futures convey a sense of accomplishment in terms of the sustainability transformation of the food system, open futures display a future for sustainable food that is evolving and incremental. Together, these futures form a continuum with closed futures on the one side that describe specific missions that are attainable, and open futures on the other side to create new or different missions over time. In the discussion, it is argued these mutually constitutive futures contrast the mutually exclusive futures as often dominate the contested debate about food. Furthermore, it argues complementary futures fit the context of food entrepreneurship in Flevoland, because it shows the importance of collaboration within and between firms in working towards more sustainable food systems.

4.1 Introduction

There is a widespread consensus over the need to make the food system more sustainable, yet there is a diversity of images of how such a future sustainable food system should look like. These imagined futures take shape through discourse, i.e. shared systems of meaning that governs the understanding of social reality, and that produces and is produced by social practices (De Cock et al., 2016). Through discourse, the future is 'articulated, projected and made present' (Dunmire, 2011, p. 1). So far, the discursive construction of future sustainable food systems is primarily studied from a policy perspective (De Cock et al., 2016; Dessein et al., 2013). For instance, De Krom and Muilwijk (2019) show the existence of five competing futures as emerging through discourse in Dutch policy-making. In contrast, the discursive construction of the future through food entrepreneurship has yet to be explored. Even though some scholars argue entrepreneurship plays an important role in shaping what futures can and cannot emerge (Beckert, 2013, 2016; Beckert & Bronk, 2018). Entrepreneurship discursively constructs futures through narratives and rhetoric to convince potential clients of the sustainability of the products, goods or services of their enterprises (Etzion & Ferraro, 2010; van Werven et al., 2015). This begs the question, how does food entrepreneurship discursively constructs futures for sustainable food?

To answer this question, this paper follows the critical discourse analysis (CDA) perspective of discourse. Discourse does not reflect or represent images of reality, it constitutes reality (Fairclough, 2003; Nicolini, 2013; Phillips et al., 2008), by projecting futures, i.e. possible ways of being and acting as steps towards changed realities (Dunmire, 2011).

Following Kaal (2015, 2017, 2021), I will analyse how futures of food are discursively constructed by examining how narratives of food are grounded in space and time. Space and time together pose a coherent worldview which in turn projects the future (Bakhtin, 1981; Kaal, 2015, 2021). A critical discourse analysis of 102 websites of food enterprises was conducted. The text of the websites was selected and coded for the descriptive account of food on the one hand, and the mentioning of space and time on the other. By crosschecking the occurrence of codes that describe food, with codes that describe space and time, it was possible to map different configurations of spacetime which resulted in the construction of different imagined futures. The choice was made to select websites from food enterprises in the province of Flevoland in the Netherlands. This province has a history of both entrepreneurship and food production. At the same time, its cities increasingly embrace sustainable food and bring forth a range of future projections on how sustainable food should look like (Jansma & Wertheim-Heck, 2021; van der Gaast et al., 2020, 2022a).

In the next section, the theoretical perspective towards discourse and the construction of time and space will be discussed. Following, the methods section will explain how the material was collected and coded. Lastly, the findings and discussion section will present the futures that were produced, and what can be learned from this futures with respect to the sustainability transformation of the food system.

4.2 Theoretical framework

4.2.1 Critical discourse analysis

This paper adheres to the critical discourse analysis (CDA) approach to discourse. This approach has been used before in studies of entrepreneurship and discourse (Hervieux et al., 2010; Hervieux & Voltan, 2018; Munir & Phillips, 2005). It can be distinguished from discourse perspectives that consider discourse to be a language based representation of reality. Instead, CDA considers discourse to constitute reality instead of representing it (Hervieux et al., 2010; Hervieux & Voltan, 2018; Munir & Phillips, 2005; Nicolini, 2013). CDA links everyday language use to everyday social practices and assumes that both are mutually constitutive (De Cock et al., 2016; Fairclough, 2005; Nicolini, 2013; Phillips et al., 2008). More specifically, this means language does not dictate social practice, nor does social practice determine language. In sum, discourse is defined as a socially shared frame of meaning that governs the understanding of reality and that produces and is produced by social practices (De Cock et al., 2016).

CDA can be a considered both a theoretical and methodological approach. CDA assumes discourse emerges out of the interaction between social actors, their texts and the context in which they interact. It is hard to disentangle the discursive practice, i.e. the production of language, and the discursive event, or the language based text itself (Munir & Phillips, 2005; Nicolini, 2013; Phillips et al., 2008). Discourse exists beyond an individual text. At the same time text is a material manifestation of discourse (Achtenhagen & Welter, 2007; Angermuller et al., 2014). Therefore, the aim of a critical discourse analysis is not to capture a discourse in full but to examine individual texts which allows extracting underlying patterns (Achtenhagen & Welter, 2007) and to gain more understanding of the discourse the text produces, and that in turn has produced the text (Hervieux et al., 2010).

The CDA approach foregrounds the role of imagined futures. Fairclough (2005), one of the founders of this approach, argues imagined futures in discourse especially manifest in times of crisis. A crisis signifies a situation where existing standards of ways of living no longer work or are challenged. In that sense, the food system can be considered in a crisis since it is in need to change according to new standards regarding sustainability.

In discourse, such crises are displayed in narratives that 'seek to give meaning to current problems by construing them in terms of past failures and future possibilities' (Fairclough, 2005, p. 4). Such future imaginaries simplify the chaotic situations of crises. Furthermore, as Dunmire (2011) argues, text itself is projective. The discursive construction as manifesting through texts is sustained by its capacity to script future possibilities and imaginaries. This makes CDA suitable to study the discursive construction of the future.

4.2.2 Food entrepreneurship and the discursive construction of the future

In the entrepreneurship literature, the study of discourse in entrepreneurship is emerging. Entrepreneurship discursively constructs images of the future because introducing a new or distinctive 'sustainable' product, requires legitimacy. This means fitting in, i.e. conforming to existing standards of society, whilst standing out, i.e. by adding something new to society (De Clercq & Voronov, 2009, 2011; Johannisson, 2018; van Werven et al., 2015). A wide range of discursive techniques is employed to accomplish this, such as storytelling, rhetorical devices and argumentation schemes (Etzion & Ferraro, 2010; Garud et al., 2014; Lounsbury & Glynn, 2001; Ruebottom, 2013; van Werven et al., 2015). Through these techniques, 'plots' of stories are created in which futures are projected and steps towards reaching this future are mapped out, whilst providing intertextual associations with stories that are already familiar (Garud et al., 2014). This is not just important when introducing a product or firm. It is an ongoing process in which legitimacy must be maintained, or regained when it is lost over time due to new developments (Garud et al., 2014; Lounsbury & Glynn, 2001). As a result of this process, future imaginaries emerge that are performative: they give direction and guide specific actions (Hjorth, 2013; Oomen et al., 2021; Thompson & Byrne, 2021).

Future imaginaries as manifesting in entrepreneurial discourse do not reflect individual visions of the future of individual entrepreneurs. Following the critical discourse analysis approach, the future imaginaries as discursively produced through entrepreneurship are the results of the interplay between social practices and language. At the same time, the imaginaries themselves contribute to transforming or maintaining social practices and language (Dunmire, 2011; Hervieux & Voltan, 2018). In other words, future imaginaries do not emerge in isolation. Entrepreneurs and enterprises participate in the discursive construction of the future because they perform entrepreneurial practices and use texts to make sense of what they do or will do in the future. The discursive construction of the future is in essence a dialogue between different entrepreneurs, enterprises, their practices and language and the context the operate in (Nicolini, 2013; Thompson & Byrne, 2021). This means a critical discourse analysis of the discursive construction of the future through food entrepreneurship shows insight in two things. First, how images of the future imaginaries are constructed through food entrepreneurship. Second, the

broader context entrepreneurship operates in which is reflected in how future imaginaries are constructed.

4.2.3 The spacetime configuration framework

To explore the discursive construction of futures by entrepreneurship, I will analyse how space and time are construed within texts as produced by food entrepreneurship. In entrepreneurship, future imaginaries are often made by (re)constructing an element of the past of a certain place to generate a future product or service (Anderson, 2000; Hjorth & Johannisson, 2003). For example, by tailoring the sustainability properties of food to fit specific cultural and culinary understandings that have emerged in a certain place in the past (Sjölander-Lindqvist & Cinque, 2014; Sjölander-Lindqvist et al., 2020; van der Gaast et al., 2022a).

This aligns with observations as done by scholars of social time. Originally, the understanding of time and space in social sciences was restricted to clocks, calendars and geographical coordinates. This was based on Newtonian physics that considered the world as a mechanic structure where every element had its fixed place and motion was calculable (Adam, 1998; Knoblauch & Löw, 2020). Sociologists such as Elias (1992) and Giddens (1981) argued that our understanding of time and space stems not from the laws of physics but from our social relationships. Varying social processes lead to the emergence of varying understandings of space and time (Hamann & Suckert, 2018; Munn, 1992; Nowotny, 1992, 1996). Furthermore, the notion of time and how time is perceived is bounded by spatial conditions and vice versa (Adam, 1998; May & Thrift, 2001; Verduyn, 2015). In other words, time and space co-constitute one another as well as reality (Munn, 1992; Nowotny, 1992).

This especially manifests in discourse and the projection of the future. As Munn (2013) argues, social actors position themselves in space and time which in turn also shapes how they project the future in discourse. Discourse emerges when social actors distinguish themselves from and make sense of the ever changing space and time they inhabit (Barad, 2007). The work of Kaal (2015, 2017, 2021) on spacetime configuration inspired my methodological and theoretical framework to study this. Kaal follows Bakhtin (1981) who argues that references to space and time in text work together. Notions of space help to materialise and visualise time whereas time places a certain order on space. Together, they configure spacetime: a coherent worldview which in turn scripts a narrative of the future (Kaal, 2015). Spacetime configuration poses a 'cultural coordinate system that directs the narrative path from known present to likely future' (Kaal, 2021, p. 82).

Bakhtin and Kaal distinguish abstract and concrete time and space. Concrete space refers to geographical references such as specific countries or regions (e.g. Europe, the

Netherlands). Abstract space in contrast is understood as imaginary and mental spaces. This does not mean those spaces do not exist, but that they are not restricted to a specific geographical or physical location. An example of this is 'the region', a term which meaning differs from place to place. Concrete time refers to the time of calendars and clocks, of external timetables. Examples are specific dates (the 1st of January, 2022), seasons (autumn, spring). Abstract time in contrast refers to temporality: a sense of duration and perception of time which is made tangible in text. For example, 'long ago' or 'in the near future' are examples of abstract time. These phrasings refer to a sense of time that is specific to the context of the text (Kaal, 2021). Together, these constructions of space and time compose four different possible spacetimes (see Figure 4.1): Concrete-Abstract Spacetime (CAS), Abstract Spacetime (AST), Concrete Spacetime (CST), and Abstract-Concrete Spacetime (ACS).

These spacetimes create specific worldviews with their own internal logic. For example, 'the Netherlands, on the 1st of January 2022', offers a different staging than 'in the region, some time ago'. Abstract spatial (e.g. near and far), and temporal (e.g. at the same time, at different times) coordinates craft a storyline that is indefinite and consists of a contingency of unfolding possibilities. Concrete time and space fills the narrative with specific rules and a specific order (Bakhtin, 1981). Analyzing spatial configuration in discourse allows exploring different spacetimes to see what staging for sustainable food they afford and thus how they enable discursive constructions of food futures.

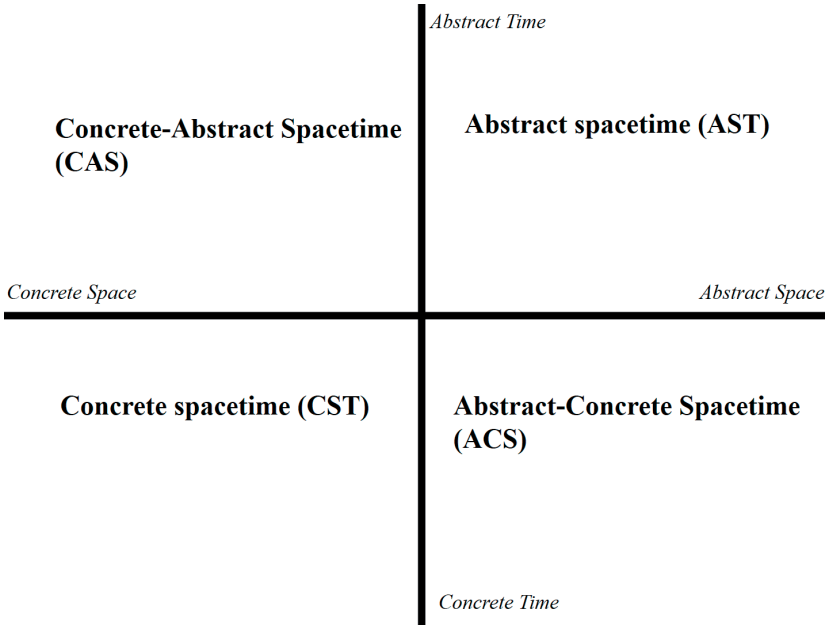


Figure 4.1 The spacetime configuration framework, inspired by Kaal (2021)

4.3 Context and methods

4.3.1 Context: food entrepreneurship in Flevoland, the Netherlands

Food entrepreneurship in Flevoland, a province in the Netherlands, is the main focus of this paper. Flevoland is composed of multiple 'polders', the Dutch term for reclaimed land, and was created in the 20th century, primarily for agricultural purposes. The first inhabitants were carefully selected by a governmental committee. Not only were these first occupants expected to have agricultural knowledge and skills, they were also expected to possess entrepreneurial prowess to be able to pioneer in the still empty land (Vriend, 2014). In the sixties and seventies, the cities of Lelystad and Almere emerged in the western part of the Flevopolder to accommodate the increasing urban population from the nearby city of Amsterdam. They were designed based on a Garden City perspective; to offer its residents a close connection to nature and food. In the last decades, this relationship to food led to more attention in these cities for healthy and sustainable food systems, which spurred different projections of the future as well as new connections between urban and rural food entrepreneurs (Jansma & Wertheim-Heck, 2021; van der Gaast et al., 2020). In short, the history and future of food in Flevoland makes the province a revealing context to study. The origin story of the province is intertwined with the rise of the food producing 'polder pioneers' and therefore had a profound influence on the emerging culture of this relatively young province. Furthermore, the new connections between urban and rural entrepreneurs to explore more local and sustainable food systems actively stimulates this regional culture in the making (van der Gaast et al., 2022a).

4.3.2 Critical discourse analysis, websites, and spacetime configuration

A critical discourse analysis involves the study of texts. This is not done to understand a discourse in full, but to abstract underlying patterns of the dialectic relationship between discourse and social reality. In this case, textual analysis is useful to understand how futures are discursively constructed. Texts are projective, i.e. they 'encode and project distant future realities and attempt to align those projections with the demands of the social complex of the present and the near-term future' (Dunmire, 2011, p. 18). In this study, websites are the 'texts' under scrutiny. The choice was made to focus on websites instead of on the speeches and articulations of individual entrepreneurs. As discussed in the theoretical framework, the discursive construction of the future is not a reflection of the perception of individual entrepreneurs, but of the interplay between entrepreneurs, enterprises, products and the social context they are part of. This makes websites an interesting form of text. Websites are digital artefacts, which Nicolini et al. (2021) explains as entities that are part of daily human activities and that both enable and constrain these activities. In other words, they provide a virtual interface between entrepreneurs, enterprises and the social reality these entrepreneurs and enterprises occupy.

Because critical discourse analysis is so dependent on the specific context in which it is executed, there is no universal methodological approach that can be applied in all instances. This is also why the different steps in the approach must be explained thoroughly (Achtenhagen & Welter, 2007; Hervieux et al., 2010; Hervieux & Voltan, 2018). In this particular study, my approach is informed by the spacetime coordination framework as explained in the previous section. This means I explore the configuration of spacetime in entrepreneurial texts to understand how the future of food is discursively constructed by entrepreneurship. First, insight is needed into the phrasings in which food is discussed on the websites in general. Through coding, I will compile a list of the most recurring phrasings on the websites. Second, I need to understand how space and time is constructed in the entrepreneurial texts. This will be done by coding for abstract and concrete space and time. Together, the codes of food, and the codes of space and time, help to see what storylines are created by what spacetimes and what projections of the future can be linked to what descriptions of food.

4.3.3 Sampling and data collection

The website of a collective of food entrepreneurs in Flevoland (https://www.lokaalvoedselflevoland.nl/koop-lokaal) was the starting point for the selection and sampling of websites. On this website, food entrepreneurs from all over Flevoland present themselves and their products and/or services on a map, powered by Google Maps. To reduce bias, a separate search on Google Maps was conducted to include also entrepreneurs and enterprises that were not presented on this website. It is important to note that food entrepreneurs that do not directly communicate with their consumers (such as farmers that source directly to wholesalers) often don't have websites of their own, even if they are listed in Google Maps as a food enterprise, and therefore could not be included in the sample. In making a selection which websites to study, the spread over rural and urban parts of Flevoland, as well as diversity in terms of the type of enterprise and its products and services was taken into account. This was done because food entrepreneurship in Flevoland both manifests in rural and urban areas. To obtain a clear insight into the discourse as constructed by food entrepreneurship in Flevoland, I specifically made sure the sample consisted of both rural and urban enterprises. Finally, a sample was made of 102 websites of enterprises in Flevoland, of which 65 rural and 37 urban. In Table 4.2 of the Appendix the complete sample can be found.

The content of the websites was copied to multiple MS Word data-files before it was coded and analysed in Atlas TI. The data-file was ordered by inserting the name of each single page above the corresponding text and visuals and following the order as prescribed by the menu of the web-page. Before inserting the MS Word data-files in Atlas TI, the data-file was cleaned and ordered. It was cleaned by deleting irrelevant information and visuals such as external advertising.

4.3.4 Coding

The coding of the data-files in Atlas TI was done in multiple steps. The first step of the coding was an open coding process where sentences and paragraphs were coded in vivo that were relevant to the study, which is the discursive construction of food futures by food entrepreneurship. Therefore, sentences and paragraphs were coded that reflected practices of entrepreneurship related to food. To illustrate, sentences were coded that discussed the products itself or the process of the production or processing of food and its inherent quality.

The second step was another round of open coding in vivo of descriptive terms that specifically referred to food, its production process, its quality. This allowed capturing recurring terms and words. I coded in vivo to limit the interference of the researchers own imagined futures of food and to make sure the implicit assumptions of the researcher (of what constitutes as sustainable food and what not) did not steer the analysis. In vivo coding allowed me to be as agnostic as possible as to how sustainable food was understood. For instance, the second step of coding resulted in a code 'sustainable', which was used to denote all explicit phrasings of 'sustainable' in the text, and did not include the interpretation of the researcher of what is considered sustainable or not.

In the third step of coding, I recoded the codes that resulted from open coding to eliminate terms that signified similar things. In most cases, this meant a simple linguistic reordering (e.g. merging codes such as 'sustainable' and 'sustainably'). In a few cases, this required a bit more interpretation. The code 'circularity' was compiled of the codes 'waste flows', 'circularity' (as specifically used in text), 'recycling' and 'cyclical agriculture' because even though not the exact same phrasing was used, all terms refer to a similar underlying process of using waste flows in the production process of food. After these three stages, I had a list of codes that captured the most recurring terms as used in discussing food on the websites.

For the fourth and last step of coding, I used the spacetime configuration framework as explained in the previous section. In the analysis, the codes as obtained so far, that included the most recurring terms in describing food, were cross-referenced with notions of abstract and concrete space and time. Partially, this was accomplished by recoding (e.g. 'years ago' and 'long ago' could be recoded to 'abstract time'). However, some codes fit either category: they are both relevant recurring terms in describing food, as well as spatial or temporal markers. For instance, codes such as 'Flevoland' and 'Almere' are concrete spatial markers. At the same time they are often used to describe food and its quality (for instance: 'produced in Flevoland'). Therefore, the choice was made to not recode these into one code of 'concrete space'. For concrete space, the code category function of Atlas

TI was used to bundle those codes I already assembled that depicted abstract or concrete space and time. After the fourth step, a total of 169 codes was created.

4.3.5 Analysis and data presentation

For the analysis, the crosstabs function of Atlas TI was used to crosscheck the recurring terms as used to describe food, with codes and code categories of abstract and concrete space and time. This allowed coordinating each recurring term that was used within the four spacetimes as presented in the theoretical framework section. This approach was inspired by Hamann and Suckert (2018), who argue that qualitative and interpretative discourse analysis that deals with notions of temporality can profit from using quantitative and graphical depictions to present qualitative data to make the intangible properties of temporality more accessible. In line with their recommendations, a list is provided of the most prevailing codes, their 'scores' in terms of abstract and concrete spacetime, next to a graphical field of correspondence in which I plot their occurrence in these spacetimes. In the findings section, the scores and plot will function as a scaffolding to aid the interpretive analysis of the narrative structure of the futures different spacetimes pose. I will reconstruct the narratives the different spacetimes afford by analyzing how the codes are positioned within. Text excerpts are used to illustrate some of the arguments made, which were translated from Dutch to English by the author. The authors of the excerpts are referenced by an ID (e.g. #AS) that corresponds with Table 4.2 in the Appendix.

4.4 Findings and analysis

Before presenting the findings, it is important to stress what the findings and analysis do and do not show. One part of the findings is a table (Table 4.1) of most recurring codes pertaining to food and its 'scoring' in terms of time and space, and a figure (Figure 4.2) that shows the coordination of these codes in space and time. This table and figure do not display discourses of sustainable food. For instance, the observation that the 'code' organic is often mentioned does not mean that food entrepreneurship discursively constructs the future of food as 'organic'. It merely reflects the common usage of the phrasing of 'organic', which in turn shows the salience of organic in the context of food entrepreneurship in Flevoland. Together, the coordination of space time and the codes describing food, form a scaffolding to explore the projections of the future that guide the narratives within the different spacetimes. The positioning of 'organic' 'biodynamic' and 'soil' in concrete spacetime helped to focus on narratives that use all three codes, to see how and in what ways notions of space and time construct a certain projection of the future. This is in turn led to the core of the findings: the narratives of closed, accomplished futures and open, evolving futures and the blurry boundaries between them, which leads to the observation that both form a continuum of complementary futures.

In the remainder of this section, I will first show the mapping of the codes in spacetime and provide some first observations of what this means for projections of the future of food. Second, I will discuss the narratives of closed, accomplished futures as derived from CST (Concrete Space Time), and of open, evolving futures as visible in AST (Abstract Space Time). Lastly, I will show the blurry boundaries between them and reflect on what this means.

4.4.1 Mapping the configuration of sustainable food in spacetime

Table 4.1 shows how each code is positioned in time and space. Figure 4.2 plots each code in the corresponding spacetime. This coordinate system does not offer an ironclad positioning but provides a graphical depiction that helps to compare codes in terms of space and time. Table 4.1 shows the fifteen most recurring codes. The scoring shows the sum total of all cross-references with codes of space and time. For example, for the code 'organic' there were 184 occurrences in the texts in total. The columns in the table with AS, CS, AT, and CT show how many of these codes co-occurred with codes that denote abstract space, concrete space, abstract time and concrete time. Based on this, a total score is made of space and time configuration.

Table 4.1 Score of 15 most recurring codes, including correspondence with codes on space and time. Below zero is concrete, above zero is abstract. AS=Abstract Space, CS = Concrete Space, AT = Abstract Time, CT = Concrete Time, AST = Abstract Spacetime, CST = Concrete Spacetime, ACS = Abstract-Concrete Spacetime, CAS = Concrete-Abstract Spacetime

Rank	Code	Occurrence	AS	CS	AT	CT	Space	Time	Spacetime
1	Organic	184	37	64	14	16	-27	-2	CST
2	Nature	107	19	21	8	8	-2	0	CAS/CST
3	Soil	86	16	43	15	20	-27	-5	CST
4	Animal welfare	85	16	4	7	8	12	-1	ACS
5	Sustainable	84	20	11	14	6	9	8	AST
6	Ownership	82	27	20	14	13	7	1	AST
7	Healthy	78	19	12	8	5	7	3	AST
8	Certification	64	6	15	4	3	-9	1	CAS
9	Collaboration	59	16	22	4	4	-6	0	CAS/CST
10	Circularity	57	21	7	8	2	14	6	AST
11	Biodynamic	39	8	21	2	8	-13	-6	CST
12	Honest	34	10	8	3	3	2	0	AST/ACS
13	Artisanal	34	4	6	3	4	-2	-1	CST
14	Pesticides	29	3	9	4	1	-6	3	CAS
15	Farmers	27	23	14	4	3	9	1	AST

In the case of organic, concrete space can be deduced from the 37 AS and 64 CS, which results in a negative score of -27, putting 'organic' in the lower half of the scheme in Figure 4.2. Concrete time can be deduced from the 14 AT and 16 CT, resulting in a -2 score and putting organic in the left half of scheme. Together, the two negative scores place organic in the quadrant left below, or the concrete space time (CST). Figure 4.2 presents a coordinates system that graphically depicts the codes in specific quadrants, that symbolise the spacetimes that are produced in discourse. The choice was made to limit the presentation of the codes to the first fifteen to be able to get a clear picture of the four spacetimes. A full representation of all codes as positioned in spacetime would produce a less comprehensive overview, which defeats the purpose of the coordinates system that is meant to scaffold the interpretative analysis.

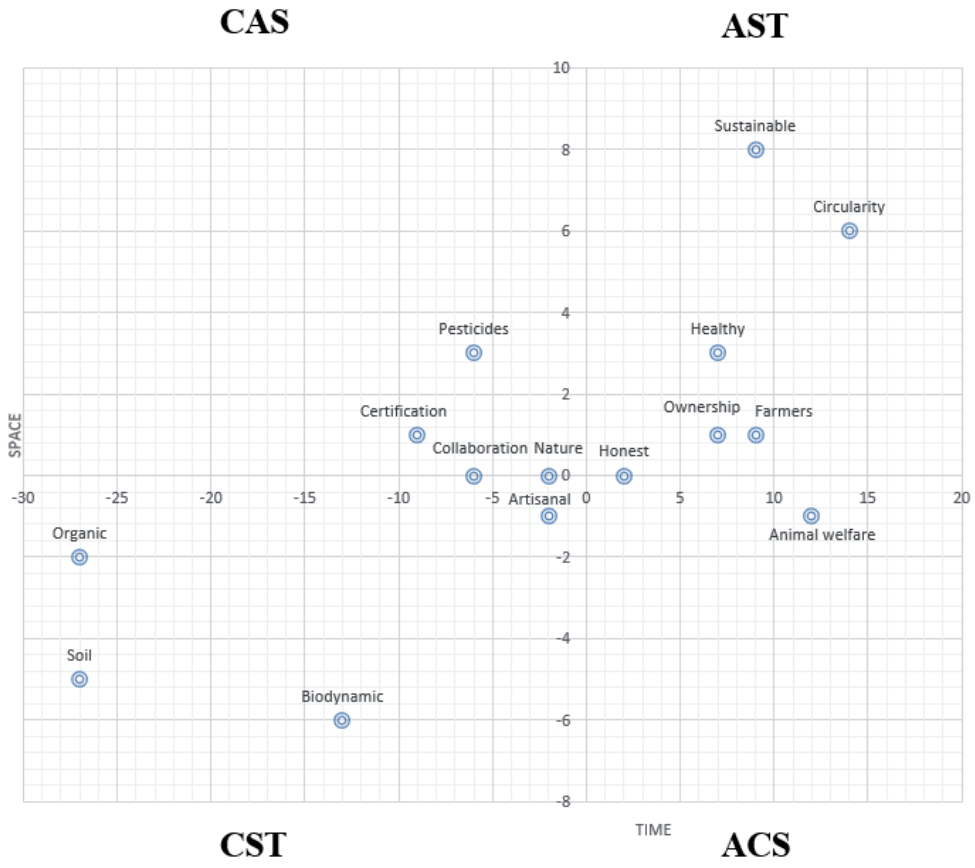


Figure 4.2 Space-time-configuration of the 15 most frequently occurring codes. X-axis conveys space, whereas Y-axis plots codes in time. Below 0 is considered concrete, whereas above zero is considered abstract. AST = Abstract Spacetime, CST = Concrete Spacetime, ACS = Abstract-Concrete Spacetime, CAS = Concrete-Abstract Spacetime

A few first observations can be made based on Table 4.1 and Figure 4.2. First, there is more distance between codes in terms of space than in terms of time. Artisanal and animal welfare (-1), collaboration, nature and honest (0) and certification, ownership and farmers (+1) all dwell on or around the borders of abstract and concrete time. In contrast, there is a lot of distance between some of these codes with respect to space. For example, certification and farmers have the same score in terms of time, but are worlds apart in terms of space (-9 and +9 respectively). This means that certification and farmers are discussed in both abstract and concrete temporal terms, e.g. concrete dates and seasons but also more abstract temporal notions such as 'long ago' or 'soon'. However, certification is strictly discussed almost exclusively in terms of concrete space and thus specific geographical locations (e.g. Flevoland, the Netherlands), whereas farmers are predominantly discussed in terms of abstract space (e.g. the region). This difference in distance of space and time can also be discerned in the codes that clash the most. The contrasts in terms of space between organic, soil (-27) and biodynamic (-13) on the one hand and sustainable (+9), circularity (+17) and healthy (+7) are rather large. The contrast in terms of time between organic (-2), soil (-5), biodynamic (-6), and sustainable (8), circularity (6), healthy (3) are relatively small. The code 'organic' provides a good example of the more flexible usage of time. As Table 4.1 shows, 14 times the code was mentioned in terms of abstract time against 16 times for concrete time. In contrast, 'organic' is almost twice as many times associated with concrete space than with abstract space.

Second, Figure 4.2 shows the most codes can be found in two quadrants. CST is the most dominant one, as it includes the top three codes (organic, nature and soil), followed by AST. Yet, some codes dwell on or near the borders of multiple spacetimes, displaying a sort of continuum between these two spacetimes. In the next paragraphs we will discuss two storylines of the future based on a more in depth textual analysis of AST and CST specifically. The choice was made to limit to these two spacetimes. Not only do AST and CST contain the most codes, they also contain the most contrasting positioning ('organic', 'soil', and 'bio-organic' versus 'sustainable' and 'circularity'). These contrasts help to better understand how different spacetime configurations can lead to different projected futures. CST creates futures that are closed and accomplished, and AST futures that are open and evolving. However, as the analysis shows, those codes that dwell on the border between them show that these two are not binary oppositions. Instead, the boundaries between them are blurry, as will be explained in the following paragraphs.

4.4.2 CST: the future as closed and accomplished

In CST, space and time are fixed. In other words, a firm or food product is grounded in a specific geographically designated locale and within a specifically ordered sequence of time. The codes of 'organic', 'biodynamic', and 'soil' embody this spacetime configuration. These codes are often part of a narrative that describes the historical development of the

firm. The specific geography of the firm plays an important role in the history lesson that is told. The following excerpts illustrate this:

> The first inhabitants came in 1967 to Lelystad, the first farmers in 1980. The founding fathers had a common vision: professional organic agriculture on the virgin soil. Since the foundation of our farm, our working method is directed towards stimulating natural processes. (#M7)

> Let's go back in time. The seed of organic agriculture and greenhouse horticulture cooperation Nautilus was sown in 1987. Organic and biodynamic produce was still new back then, but some farmers from Flevoland were trying to push advocacy and professionalisation of these products. Since there was already demand back then for more healthy and environmentally friendly produced agricultural and horticultural products, they expected to create new markets. (#NO)

> More than 3,8 meters below sea level, just outside the village of Zeewolde, Vinyard 'Wilgenhorst' is located. On the chalky clay soil of the 'Zuiderzee' which was drained in 1968, the first 900 vines were planted in 2012. In the fall of 2014 we harvested the first grapes and processed them into wine. (…) in the meantime, the stock has expanded and now there are almost 400 vines in the vineyard. (#WIW)

The first excerpt discusses a vision of professional organic agriculture and the first inhabitants of Lelystad. The adjective 'virgin' also denotes the status of the soil as new at the time and a crucial ingredient to organic agriculture. The second excerpt discusses both organic and biodynamic agriculture, and traces this back to a later stage, to the late eighties when some agriculture was already established but not professionalised yet. The last excerpt specifies the quality of the soil by linking it to the historical bottom of the sea on which the province has emerged. All three narratives depict the concrete past and present, and within a specific timeframe, which implies the enterprise and its produce have been here for some time on this specific spot. In other words, fixing space and time establishes authenticity and reliability. In order to use this authenticity to legitimise the firm, the concrete past is connected to the present to show that the standard at that time is still upheld. The metaphor in the second excerpt of the 'seed' that was 'sown' exemplifies this implied relationship between past and present.

However, whereas the past and present is well represented in these excerpts, the future is implicit. Especially the first two excerpts imply an extension of the present into the future. The phrasing 'since' in the two examples denotes that 'stimulating natural processes' and

'producing healthy and environmentally friendly products' was already done in the past and will be continued in the future. The future is not explicitly stated but implied as a continuation of the present. When the future is specified, it is done as an extrapolation of the present. This results in a future that is closed. But the future is not only closed, it is also accomplished. The following excerpt positions organic within an explicit future projection, which illustrates this well:

> In 2030, Green Organics will be the leading player in the European market in organic potatoes, vegetables and fruits. That is our ambition. Not because of scale, but because of our dream to make the agrarian world one hundred percent organic. (#GO)

This excerpt explicates what is implicit in the other excerpts: that organic is the desired end-state for the entire world. What is already the standard for this firm, as established throughout the past towards the present, is a pathway for the rest of the world as well. In other words, the future as projected is already accomplished.

4.4.3 AST: the future as open and evolving

AST manifests through the unfixing of time and space. This means the exact spatial location and timeframe the narrative takes place is left open to interpretation. The codes 'sustainable' and 'circularity' help to clarify how this works.

> We try to be as efficient as possible with our resources and materials. This helps us to decrease our impact on the planet, and by working with other local entrepreneurs we can strengthen each other in sustainable way. We are not 100% green, circular or organic, but by making realistic steps every time we are coming closer and closer. This fits us, and our philosophy. Not by being the biggest or the best, but by (taking) small, realistic and sustainable steps in the right direction. (#BST)

> We want to leave the earth better than we have found her. We use waste flows of agriculture to feed the chickens and use the manure for the chickens to feed the agriculture. This is circular agriculture in optima forma. This is how we continuously work on a better world. (#OH)

Both excerpts display an abstract notion of time. The phrasing 'realistic steps every time', reveals nothing about the intervals of the steps. The notion of 'continuously working', implies some form of time passing without specifying how much. The abstract notions of space structure the problem and solution orientation vis a vis sustainability and circularity. A global reach of the problem is connected to solutions on a more local scale. This

is established by discussing the problem in terms of 'the planet', 'the world' or 'the earth' which encompasses the globe and does not specify a country, region or continent. Furthermore, the solution and or effect of the problem is sought at a more local level, in terms of working with 'local entrepreneurs', and working with one's own waste flows. Again, without specifying how local, i.e. the scale in terms of specific towns and regions.

This unfixing of space and time has repercussions for how the future is understood. Abstract space makes it hard to pinpoint the enterprise and its produce. Abstract time inhibits the possibility of a clear point of departure, and a clear end point of respectively non-sustainable and non-circularity to sustainable and circularity. The global reach of the problem, local scale of the solution and the absence of a clear point of departure and end point obfuscates a specific path from past to present and future. The need for improvement is implied, but there is no specific past or present that depicts why this improvement is needed. The past is invisible, it is not specifically demarcated, neither through abstract nor concrete time. Instead, the present is emphasised, as something that needs to be improved upon. The present here is depicted as incomplete, as not '100%', and the future must be 'better than we have found her'. This results in a future that is projected in an incremental, evolving fashion. The future arrives not by following a blueprint but by taking small 'sustainable steps in the right direction', by 'continuously working' towards a better future. In sum, together space and time configure a future that is open and evolving.

4.4.4 The blurry boundaries between spacetimes

Those codes that dwell on or near the borders of spacetimes show the boundaries between spacetimes are blurry. This can be illustrates by the code of 'artisanal' that is positioned in the CST, close to the boundaries between AST. It is used as an adjective for a variety of nouns ranging from products, production methods, ingredients and equipment, e.g. 'artisanal' wine or cheese, or an 'artisanal' production method to produce wine or cheese. Especially those firms with a specific production process, such as cheese makers, brewers and wine makers are often very specific about their founding date and place. This is done to convey a certain expertise or experience as expressed by the many years they are already wielding their specific craft. Through the same mechanism as discussed before, the reliability of the firm is established. Again, the present is a continuation of the past that extends into the closed future. At the same time, there is a varying degree to which space and time are fixed, which explains why this code is more positioned near the borders of CST. Particular circumstances of the enterprise can demand a more abstract usage of time. The following excerpts show an interesting contrast:

> Since 1900, the most genuine and tastiest farmers cheese is coming from the dairy farm of the family Van Wees. At that time, they were settled in the North

> Holland region of Beemster, later on they moved to Aalsmeer, and since 1970 they are active in the polder of Eastern Flevoland. From small scale production and sales, it grew into a professional cheese production and sales company. The tasty farmers cheese of 'Polderzoom' is very popular on farmers markets. It is called 'Boerenmeshangerskaas' because the product is, according to cheese maker Ard van Wees, 'so soft it sticks to the knife'. After Piet, Cor and Bart van Wees, Ard is the fourth generation that works passionately to create the tasteful and artisanal farmers cheese. (#PZ)

> The Small Distillery is the result of a hobby that has gotten out of hand. After brewing for a couple of years at home, I started in 2017 this artisanal distiller in Zeewolde. A choice was made for a small-scale set up where high end products are made with craft and enthusiasm. (#DKD).

Both excerpts show a narrative with a specific sequencing of time and a specific geographical fixture that is similar to that of the codes of 'organic', 'biodynamic' and 'soil'. In the first example, a development is described from the first family business in another part of the Netherlands, all the way to the current firm in Flevoland. And it is implied that all that time, four generations long, the same artisanal recipe was kept in place. The second example features an enterprise with less experience. The founding date is mentioned (2017), as well as the location which fixes both space and time. However, the origin of the firm as emerging from an hobby at home conveys a more abstract notion of both space and time. This helps to compensate his relatively young enterprise. 'A couple of years' could be two or three years, but it could also mean ten or twenty years. Similarly, 'artisanal' is often accompanied by notions such as an traditional recipe, or old animal breeds without specifying from what specific space this recipe was abstracted, nor when the tradition of this recipe was established. With the code of 'artisanal', there is a more open past that can be stretched or compressed when necessary, there is however still no open future: the future is still closed and already accomplished.

The codes of 'ownership' and 'healthy', that are in AST but close to CST, offer another illustration of the blurry boundaries between open and closed futures. 'Ownership' refers to the use of the adjective 'own', as in 'own' produce, firm, vision or machinery. 'Healthy' in turn not just refers to the properties of the food product, but also to the healthiness of the soil, animals or work environment.

> We are proud of our own malt. This will give further flavor to our beer next to the hop we produce ourselves. With these ingredients we work towards our goal to work as locally a possible through short supply chains. (#ART)

> We aspire to let people eat healthier. We express this way of thinking proudly, and it is rooted firmly in our genes. We distinguish ourselves because our products are produced fresh. We use natural, fresh ingredients and sustainably produced and purchased resources. (#DKR)

These two excerpts speak respectively of a goal and an aspiration, which invokes abstract temporal distance. The first excerpts shows the goal is to work as locally as possible. The unspecified scale in which local is aspired to (e.g. the specific town, region or country) makes it harder to ascertain whether and when the goal is attained. In the second excerpt, the aspiration is rooted in the 'genes', which could refer both in temporal sense to previous generations, but could also have a spatial dimension when it refers to the place they operate in and its history. Either way, it opens up the past as well as the future. The goal and aspiration are not specified, neither in terms of the date in which the goal or aspiration must be met, nor in terms of what must be accomplished to fulfill it. Together, these configurations of space and time depict a future that is open, both in terms of its endurance as in terms of the interpretation of what it will bring exactly.

Yet, in some instances concrete usage of space and time is used in these codes. For 'ownership', the locality is made more concrete to make a stronger claim on the ownership. For instance, by making that which is owned as specific as possible. To illustrate:

> We grow fruit ourselves from our own orchard in Flevoland (#SLB).

Similarly, concrete time sometimes coincides with the code of 'healthy' which emphasises the experiences firms have in providing healthy produce. To illustrate:

> For 30 years, we are dedicated to what is healthy for the soil, the plants, the animals and people (#ZHO).

In sum, the examples of 'artisanal', 'ownership' and 'healthy' show that when the boundaries are fuzzy, the narratives of other spacetimes are sometimes visible. In the code of 'artisanal', the usage of abstract time helps to extend the past, which resembles how abstract time is used in AST to extend the future. In the codes of 'ownership' and 'healthy', the usage of concrete space and time mimics that as used in CST by using specifics of space and time to show experience and embeddedness.

4.4.5 The continuum of accomplished and evolving futures

Based on the former paragraph, it is clear that entrepreneurship does not discursively construct two binary futures for food. Instead, closed and open futures, manifesting in narratives that stress respectively accomplishment and evolution, form a continuum: they

are complementary future imaginaries. To illustrate this, it is interesting to show textual excerpts where organic and sustainability are discussed together. As discussed before, 'organic' is mostly framed in a development from past and present, and where the present is extended towards to future because it has already been accomplished. Sustainability in contrast is still something that has to be aspired towards, and therefore it is invoked in relation to an open future.

> Sustainability is more than just producing organic, and a well-connected supply chain forms the basis for a logical follow-up. Our products are mostly processed and packaged on the farm, if possible already on the land during the harvest. (#BBS)

> From the beginning of Skylark, we have developed the vision of our firm. Sustainability was an intangible concept for us. This is very different now, it is a continuous improvement we develop year after year and in which we grow as enterprise and entrepreneur. Points of concern for us are the sustainable management of the soil (because the soil is the core of everything), become as energy neutral as possible and develop circularity in our company, for instance by feeding our own grain to our chickens and feeding the manure back to the crops. (#PKN)

The first text fragment juxtaposes sustainable and organic. Space is only abstractly mentioned ('land'). In terms of time, 'just' implies that organic is part of the abstracted present because it implies they are already doing that. The mentioning of a 'follow up' suggests a projected future after organic. Together, they pose a more abstract and therefore general process of supply chain management that is not necessarily restricted to the firm itself. Sustainability is juxtaposed to organic because the latter is something of the present that is already accomplished, whereas sustainability is positioned as something of the future that must still be aspired to.

The second text excerpt shows how the codes 'sustainable', 'circularity' and 'ownership' are all discussed in relation to the 'continuous improvement' of Skylark. Skylark is a Dutch initiative for an incremental continuous improvement for the firm in terms of sustainability. In other texts, entrepreneurs first mention 'organic', and then continue to discuss 'sustainability' by referring to Skylark. Even though 'organic' is not mentioned in this excerpt, the text implies sustainability is something to be accomplished over time, without a clear end date. In other words, it evolves in an ever unfolding open future. Yet, in both excerpts there is both a sense of accomplishment, and a sense of what is already done. This suggests closed and accomplished and open and evolving futures not

just co-exist, they go hand in hand and complement another in constructing the future of food in the making.

4.5 Discussion

4.5.1 Empirical reflections

In this empirical reflection I will discuss findings in the light of the context of food entrepreneurship in Flevoland, as well as on the larger context of the food system transformation.

In the findings section, it was explained how codes are positioned in different spacetimes that pose different narratives. These spacetimes pose different future trajectories. For instance, 'organic' has another projected future than 'sustainability'. 'Organic' is the code that was most mentioned in the texts. This can be explained by the prominence of organic produce in Flevoland which goes back to the beginning of the province when these production methods were actively promoted. This resulted in the fact that the province now has a relatively high share of organic produce, compared to the rest of the Netherlands (Dekking et al., 2020). The sense of accomplishment that is associated with this success is clearly visible in discourse, as it is part of the closed and accomplished futures. It also applies to 'biodynamic', which also refers to a production method and quality standard that is dominant in Flevoland. The future trajectory of these codes show a future with clear, attainable goals. In contrast, 'sustainable' and 'circularity' displays the increasing importance of these aspects of food entrepreneurship in Flevoland. These terms are associated with a more open, and evolving trajectory, a future that is built step by step and that is never really finished.

Those codes that dwell on or near the borders of spacetimes show these trajectories are interconnected. Codes such as 'artisanal' and 'ownership' incorporate pieces of storylines from both spacetimes. Whereas 'artisanal' invokes the openness of the abstract time to extend the past from which its authority is derived, 'ownership' in turn displays the closedness of concrete space to specify that which is owned. Together, accomplished and evolving futures form a continuum. With closed, accomplished futures on the one hand, with attainable clear goals and open, evolving futures with a trajectory that stipulates going step-by-step without every finishing. As a continuum, these trajectories don't cancel each other out but work together, which was illustrated in the findings section through those instances when codes such as 'sustainable' and 'organic' are discussed together. Food entrepreneurship constructs open and closed futures that are mutually constitutive: they complement one another in making sense of how the sustainable food future in the making can be reached over time.

The existence of mutually constitutive futures can be explained by how food entrepreneurship in Flevoland functions in the context of the food system transformation. Entrepreneurship produces discourse to gain legitimacy, as was explained in the theoretical section in this paper. And for legitimacy, it needs to stand out while fitting in (De Clercq & Voronov, 2009, 2011; Johannisson, 2018). Especially concerning the issue of sustainability, it needs to show it has accomplished fitting in a particular context by offering what is needed in the here and now. At the same time, it needs to stand out, to always draw up new horizons to explore. In other words, entrepreneurship requires saying mission accomplished, as much as picking out a new mission. In the context of food entrepreneurship in Flevoland, fitting in and standing out often is arranged through cooperative efforts (van der Gaast et al., 2022a, 2022b). The accomplishments of the one, helps the evolution of the other, and vice versa. To illustrate, an important aspect of circularity is the use of waste flows in new products which often means the waste products of one firm can be used in the product of another. The accomplished organic produce can serve the evolving circularity by using the waste flows for a new product. Just as closed and open futures work together, so do different entrepreneurs.

4.5.2 Contributions of this paper and recommendations for future research

So far, studies of the discursive construction of the future in the context of food system transformations focused on discourses in policy circles. This paper offers a perspective on the discursive construction of the future by food entrepreneurship. The findings, that show the existence of mutually constitutive futures, are interesting to consider alongside that of studies of discourse in food policy. One of such studies shows Dutch policymaking in food is dominated by five competing futures of food. Furthermore, this study also argues that creatively combining these perspectives might show a way forward (de Krom & Muilwijk, 2019). Entrepreneurial discourse shows a specific way in which perspectives are combined, by providing complementary trajectories that make room for clear accomplishments as well as ongoing evolutionary processes.

Yet, it is hard to see how and where the discursive roles of policymaking and entrepreneurship differ and overlap. Policymaking and entrepreneurship cannot be reduced to the acts of policymakers and entrepreneurs. A recent study of food policy making in Almere, Flevoland showed entrepreneurship plays a considerable role in shaping food policy (Brons, Oosterveer, et al., 2022). In turn, regulators and policymakers are also said to play a role in entrepreneurial processes, for instance by facilitating certain forms of food entrepreneurship financially or regulatory (van der Gaast et al., 2022a). Future studies could explore the 'capacity to aspire' i.e. different possibilities in participating in constructing the future (Appadurai, 2013; Mandich, 2019) of entrepreneurs and policymakers in entrepreneurial and policymaking processes.

Another interesting research opportunity could be a replication of this study in a different context. This study zoomed in on a sample of 102 enterprises, within a specific region in the Netherlands that is known for both food production and entrepreneurship. The prevalence of 'organic' and 'biodynamic' can be attributed to the specific context of food entrepreneurship in Flevoland. It could be interesting to use a similar research approach to study another context and to see whether the difference in explicit utterances of sustainable food are also reflected in different implicit structures of the future, i.e. in the continuum between open and closed futures. Do utterances of sustainable food always dominate abstract and concrete spacetime? Or are abstract-concrete and concrete-abstract spacetimes in other contexts more prevalent? And what futures do these spacetimes produce?

This paper also offers a contribution to studies of discourse and futures by showing open and closed futures form a continuum. In the literature, closed futures are said to be a feature of early or pre-modernity where the future was a continuation of the past. Open futures in turn are seen as characteristic for modern societies where issues such as climate change make the future seem uncertain and therefore more open ended (Beckert, 2016; Koselleck, 2004; Rammstedt, 1975; Rosa, 2013; Šubrt, 2017; Wenzel et al., 2020). Some scholars argue closed futures and concrete spacetime imply a continuation of the present which does not match well with the current challenges of society such as climate change (Adam, 1998; Bastian, 2012; Braidotti, 2013). Yet, Deleuze (1990) argues closed futures (or 'Chronos' as he calls it) is embedded in the material world whereas open futures (which he refers to as 'Aion') is autonomous from matter and poses a more confusing world. Similarly, Bakthin claims the concreteness of CST 'permits everyday life to be realized within it' (Bakhtin, 1981, p. 120). He argues concretisation introduces an order that helps to tie human life and matter to the specific time and space they are part of. In turn, Bakthin considers AST an 'alien world: everything in it is indefinite, unknown, foreign' (Bakhtin, 1981, p. 101). This study shows neither closed nor open futures necessarily pose the 'right' trajectory for the future of food, and therefore helps to break down binary depictions of either closed or open futures in discourse.

4.6 Conclusion

This study explored how food entrepreneurship discursively constructs futures of sustainable food. This was done through a critical discourse analysis, which assumes discourse results from an interplay between social practices and language and the spacetime configuration framework that assumes space and time together project futures. A critical discourse analysis of 102 websites of food enterprises was executed to examine specific configurations of space and time in text that in turn produce specific futures of food.

The choice was made to look specifically at food enterprises in Flevoland, as it is a region that is known for its food entrepreneurship. Our analysis shows a continuum between two complementary futures. On the one hand there are closed futures, characterised by attainable goals and accomplishments. On the other hand there are open futures, which in turn display evolving and incremental step-by-step developments of food. In the discussion, it is argued these mutually constitutive futures contrast the mutually exclusive futures as often dominate the contested debate about food. Furthermore, it argues complementary futures fit the context of food entrepreneurship in Flevoland, because it shows the importance of collaboration within and between firms in working towards more sustainable food systems.

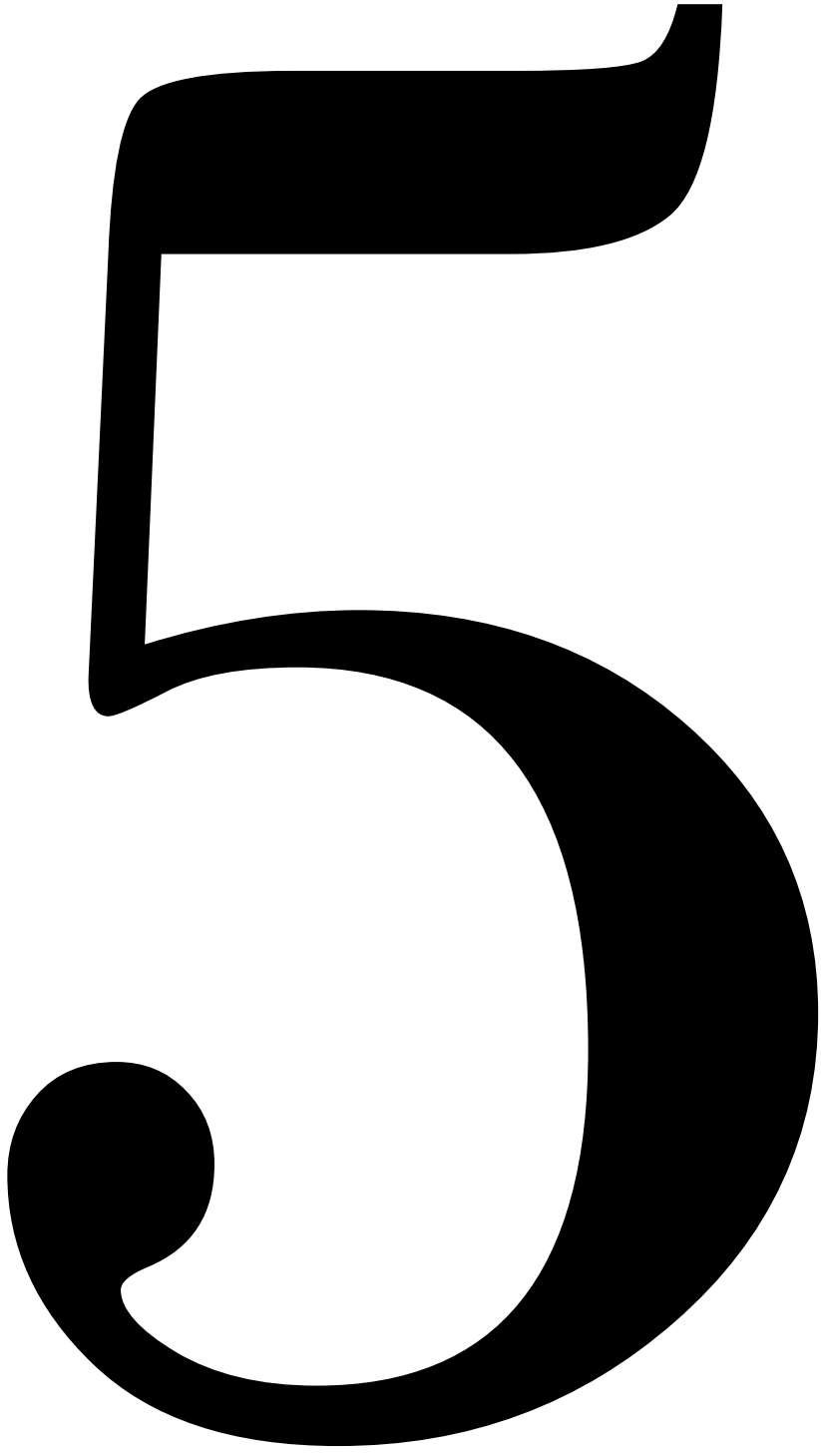
4.7 Appendix

Table 4.2 Sample of enterprises. Websites and names of enterprises are left out to guarantee anonymity

ID	Type of product(s)	Urban/Rural	Website accessed
#AS	Algae	Urban	1-2-2021
#AW	Various products	Urban	1-2-2021
#AG	Salad	Urban	1-2-2021
#AB	Flatbread	Urban	29-1-2021
#BB	Bread	Urban	29-1-2021
#BE	Bread	Urban	29-1-2021
#BE17	Various products	Rural	2-2-2021
#BSP	Spirits and liqueur	Urban	29-1-2021
#BBS	Vegetables	Rural	5-2-2021
#BF	Vegetables	Urban	1-2-2021
#BR	Vegetables	Rural	3-2-2021
#BOD	Vegetables	Rural	2-2-2021
#BVS	Various products	Urban	4-2-2021
#BW	Meat	Rural	5-2-2021
#BFK	Various products	Rural	2-2-2021
#BWS	Various products	Rural	4-2-2021
#BK	Restaurant	Urban	4-2-2021
#BL	Bread	Urban	29-1-2021
#ART	Beer	Rural	2-2-2021
#BOL	Beer	Urban	2-2-2021
#BPR	Beer	Rural	2-2-2021
#BST	Beer	Urban	29-1-2021
#DBB	Meat	Rural	5-2-2021
#DKD	Spirits and liqueur	Rural	5-2-2021
#DKR	Catering	Urban	29-1-2021
#DM	Vegetables	Rural	3-2-2021
#DSB	Various products	Urban	1-2-2021
#DST	Vegetables	Urban	4-2-2021
#DWW	Wine	Urban	4-2-2021
#DS	Soy and edamame	Rural	5-2-2021
#ES	Take out	Urban	4-2-2021
#EKO1	Various products	Rural	4-2-2021
#ELB	Various products	Urban	4-2-2021

ID	Type of product(s)	Urban/Rural	Website accessed
#FA	Asperges	Rural	2-2-2021
#FL	Meat	Rural	2-2-2021
#FVB	Chips	Rural	5-2-2021
#FH	Fruit	Rural	4-2-2021
#FKO	Fruit	Rural	3-2-2021
#FKU	Fruit	Rural	3-2-2021
#FS	Fruit	Rural	5-2-2021
#GA	Various products	Rural	4-2-2021
#GS	Meat	Rural	3-2-2021
#GO	Vegetables	Rural	3-2-2021
#GPF	Vegetables	Rural	2-2-2021
#HF	Vegetables	Rural	3-2-2021
#HZL	Bread	Rural	5-2-2021
#HV	Various products	Urban	4-2-2021
#HW	Various products	Rural	2-2-2021
#HB	Vegetables	Rural	4-2-2021
#HU	Vegetables	Rural	3-2-2021
#IB	Icecream	Rural	2-2-2021
#IP	Coffee and icecream	Urban	5-2-2021
#JM	Meat	Rural	2-2-2021
#JVDF	Fish	Rural	4-2-2021
#KBE	Dairy	Rural	5-2-2021
#KBO	Cherries	Urban	1-2-2021
#KW	Meat substitute	Urban	29-1-2021
#LD	Fruit	Rural	5-2-2021
#LV	Vegetables	Rural	3-2-2021
#MMB	Coffee	Urban	4-2-2021
#MA	Wine	Rural	4-2-2021
#M7	Wine	Urban	3-2-2021
#MIH	Wine	Rural	4-2-2021
#MY	Mushrooms	Urban	4-2-2021
#NO	Various products	Rural	3-2-2021
#OVK	Various products	Urban	1-2-2021
#OH	Meat	Rural	4-2-2021
#PN	Various products	Urban	29-1-2021
#PPQ	Meat	Rural	2-2-2021
#PPO	Potatoes	Rural	2-2-2021

ID	Type of product(s)	Urban/Rural	Website accessed
#PHO	Meat	Urban	3-2-2021
#PKN	Garlic	Urban	4-2-2021
#PKO	Fruit	Rural	4-2-2021
#PVL	Various products	Urban	4-2-2021
#PZ	Dairy	Rural	2-2-2021
#PHE	Potatoes	Rural	5-2-2021
#PUS	Bread	Urban	29-1-2021
#QUA	Meat	Rural	2-2-2021
#QUI	Quinoa	Rural	3-2-2021
#RS	Various products	Rural	4-2-2021
#SLB	Fruit	Rural	2-2-2021
#SV	Meat	Rural	2-2-2021
#SHA	Wine	Urban	29-1-2021
#TF	Vegetables	Rural	3-2-2021
#UZ	Mushrooms	Urban	29-1-2021
#VAB	Vegetables	Rural	5-2-2021
#VMA	Asperges	Urban	1-2-2021
#VKF	Fruit	Rural	3-2-2021
#VHF	Fruit	Rural	4-2-2021
#VUN	Various products	Rural	4-2-2021
#VF	Fruit	Rural	3-2-2021
#VC	Grassfed meat	Urban	1-2-2021
#VHBS	Herbs	Rural	2-2-2021
#WU	Onions	Rural	3-2-2021
#WEP	Wine	Urban	4-2-2021
#WIW	Wine	Rural	5-2-2021
#WIL	Chicory	Rural	3-2-2021
#YC	Crisps	Rural	3-2-2021
#ZHE	Vegetables	Rural	2-2-2021
#ZHO	Various products	Rural	5-2-2021
#ZS	Bread	Urban	4-2-2021
#ZA	Asperges	Rural	4-2-2021



Chapter 5

Between ambitions and actions: how citizens navigate the entrepreneurial process of co-producing sustainable urban food futures

Abstract

Cities increasingly envision sustainable future food systems. The realisation of such futures is often understood from a planning perspective, leaving the role of entrepreneurship out of scope. The city of Almere in the Netherlands provides a telling example. In the neighborhood Almere Oosterwold, residents must use 50% of their plot for urban agriculture. The municipality formulated an ambition that over time, 10% of all food consumed in Almere must be produced in Oosterwold. In this study, we assume the development of urban agriculture in Oosterwold is an entrepreneurial process, i.e. a creative (re)organisation that is ongoing and intervenes in daily life. To understand how this entrepreneurial process helps to realise sustainable food futures, this paper explores what futures for urban agriculture residents of Oosterwold prefer and deem possible and how these futures are organised in the present. We use futuring to explore possible and preferable images of the future, and to backcast those images to the present day. Our findings show residents have different perspectives of the future. Furthermore, they are capable in formulating specific actions to obtain the futures they prefer, but have trouble committing to the actions themselves. We argue this is the result of temporal dissonance, a myopia where residents have trouble looking beyond their own situation. It shows imagined futures must fit with the lived experiences of citizens in order to be realised. We conclude that urban food futures need planning and entrepreneurship to be realised since they are complementary social processes.

5.1 Introduction

Increasingly cities are seen as the main locus in making the urban food system more sustainable (Battersby & Watson, 2019; Morgan, 2010; Morgan & Sonnino, 2010; Partzsch et al., 2022; Sonnino, 2010). This manifests in municipal governments taking measures, ranging from specific food policies to shared policy pacts with other cities (Moragues-Faus & Morgan, 2015; Sibbing et al., 2021). Cities are also transformative spaces where citizens come together to experiment with new urban arrangements. Previous studies show how citizens are brought together to coproduce the future sustainable urban food system in the making (Hebinck et al., 2018; Mangnus et al., 2019; Vervoort & Mangnus, 2018). In the burgeoning literature on urban future food systems, the role of planning is thoroughly discussed in relation to the realisation of imagined urban food futures (Morgan, 2014; Opitz et al., 2015; Sonnino & Coulson, 2020). In contrast, the role of entrepreneurship in coproducing urban food systems is seldom explicitly addressed. Even though entrepreneurship is considered a force of social change (Calás et al., 2018; Steyaert & Hjorth, 2006) and is known to emerge out of efforts of local communities to organise collectively (Cucchi et al., 2021).

Almere Oosterwold poses an illustrative case. Oosterwold is a relatively new neighborhood in the city of Almere in the Netherlands. Citizens can buy a plot in Oosterwold to build their own house. In return, the new residents of Oosterwold must use 50% of their plot for urban agriculture. The municipality of Almere formulated an ambition for this neighborhood: to produce 10% of total food consumption in Almere over time. In their policy, the municipality implicitly assumes that residents of Almere all are on the same page with regard to how urban agriculture could and should develop in the future. Despite having the ambition of sourcing the city of Almere with the produce from Oosterwold, the municipality did not employ a planning strategy for the distribution of the food from residents in Oosterwold to the citizens in the rest of Almere. It is up to the residents to organise this themselves.

We assume the process of organising urban agriculture in Oosterwold can be characterised as entrepreneurial. We define an entrepreneurial process as ongoing, creative (re)organising that is always becoming and that intervenes in everyday life (Verduyn, 2015). This definition implies entrepreneurship is not separated but part of everyday lived experiences of residents (Steyaert & Hjorth, 2006; Steyaert & Katz, 2004). Residents of Oosterwold continuously coproduce the future of urban agriculture in their neighborhood as part of their own everyday life. To understand better how this entrepreneurial process helps to realise sustainable food futures, this paper explores what futures for urban agriculture residents of Oosterwold prefer and deem possible and how these futures they imagine are organised in the present.

This study uses 'futuring', which refers to a range of methods and techniques that are used to explore more sustainable futures (Hajer & Pelzer, 2018; Hebinck et al., 2018; Oomen et al., 2021) We use a combination of visioning, scenario building and backcasting to imagine preferable and possible futures and reason from futures back to actions in the present. This results in facilitating the co-production process of residents of Oosterwold. During the research process, we provided a methodological platform where participants could engage the future and reason back from the future to distill concrete actions and plans. This deliberation helps us to understand how this entrepreneurial process unfolds. In the next section, we introduce the case of Almere Oosterwold and our conceptual take on the relationship between planning, entrepreneurship and the lived experiences of citizens. In our methodological section we explain our approach to futuring. Following, our findings section presents the contrasting future perspectives, and the struggle to organise the future into the present. Lastly, in our discussion we will reflect on what we have learned about the relation between futuring, entrepreneurship and planning in the case of Oosterwold.

5.2 Contextual and conceptual background

5.2.1 The planning of Almere Oosterwold: a brief history

Almere is the capital of the province of Flevoland in the Netherlands. This province was created by reclaiming land from the sea in the mid-twentieth century, primarily for agricultural purposes. Almere emerged in the seventies to accommodate the increasing population pressure of the nearby city of Amsterdam (Jansma & Wertheim-Heck, 2021; van der Gaast et al., 2022a). The last decade, the city of Almere prioritises food policy as manifests in their signing of the Milan Food Policy Pact and the hosting of the international horticultural festival of the Floriade. Furthermore, the municipality of Almere formulated a goal to produce 20% of the food they consume themselves (Almere, 2009; van der Gaast et al., 2020). One of the means towards this goal is a new neighborhood: Almere Oosterwold. Located at former agricultural land, residents are expected to produce food on their plots. The idea for this neighborhood emerged through a co-creative process with researchers, citizens and municipal agents. Eventually, this idea culminated into a real-life neighborhood which was realised in 2016. Currently, about 2000 residents are living in Oosterwold (Brons, van der Gaast, et al., 2022; Jansma et al., 2010; Jansma & Visser, 2011).

The planning for Oosterwold was unusual. Residents organise the ongoing development of their neighborhood. They organise their own plots as well as the neighborhood including public spaces and basic infrastructure. In the Netherlands, usually the municipality facilitates public infrastructures such as roads, sewage systems, electricity and public

spaces such as schools. In Oosterwold, the municipality mainly enforces the rules of Oosterwold, which were written down in contracts that residents sign when buying a plot of land. One of these rules is the mandatory obligation to produce food on 50% of the plot (Jansma & Wertheim-Heck, 2021, 2022). However, in the zoning agreement the municipality formulated the ambition for Oosterwold to produce 10% of the total food consumption of Almere (Almere & Zeewolde, 2013). In practice this means half of the ambition of the city of Almere, to produce 20% of total food consumption within the city, must be met through urban agriculture in Oosterwold. Yet, the municipality did not specify how this ambition should or could be achieved, leaving open how it will be accomplished.

5.2.2 Urban agriculture, entrepreneurship and everyday lived experiences

In this study, we focus specifically on the organising process of urban agriculture in Almere Oosterwold. With urban agriculture, we mean the production, processing and distributing of food products and services located within or on the fringe of a city (Jansma & Wertheim-Heck, 2021). We understand this organising process of urban agriculture in Oosterwold as entrepreneurial. We define entrepreneurship in this paper as a process of ongoing, creative (re)organising that intervenes in everyday life (Steyaert, 2007; Verduyn, 2015). Because it intervenes in everyday life, entrepreneurship is not restricted to commerce and economic drive alone but refers to an overall process of change and transformation. This means the everyday lived experiences of citizens and processes of entrepreneurship are not separate but intertwined (Steyaert & Hjorth, 2006; Steyaert & Katz, 2004).

Our understanding of entrepreneurship follows the processual understanding of organising. A non-processual understanding of entrepreneurship understands entrepreneurship through fixed categories, such as firms and products. A processual understanding considers these fixed categories in practice as always in motion (Hjorth et al., 2015). Therefore, organisations such as firms are temporary instantiations within an 'underlying sea of ceaseless change' (Nayak & Chia, 2011, p. 284). They are continuously under construction, emerging, evolving or terminating over time (Cloutier & Langley, 2020; Langley et al., 2013; Sandberg et al., 2015). Furthermore, the act of organising itself is ongoing, which means it is always currently happening, shaped by changing past experiences and future ambitions of the actors that enact them (Schultz & Hernes, 2013).

From a processual point of view, entrepreneurial processes intervene in the everyday lived experiences of communities such as Oosterwold because organising involves practices of everyday life (Langley et al., 2013). In their day-to-day life, members of a community such as Oosterwold enact practices such as cooking and shopping but also producing and selling food. These practices of everyday life are organised by planning

and accomplishing them, which involves integrating different tasks and putting them in a certain order (Geiger et al., 2020; Orlikowski & Yates, 2002). This means time and temporal coordination is crucial. A good illustration for food entrepreneurship is provided by Cucchi et al. (2021). Practices of everyday life take time to unfold, for instance, it takes time to learn how to produce food. Practices also have a temporal order. For example, before you can sell food, you need to have produced food. In sum, by enacting and organising their everyday practices, social actors create different temporal situations that in turn enable and constrain how such practices are enacted and organised in the future (Orlikowski & Yates, 2002).

To make this more specific, lets illustrate how this works for Oosterwold. Residents of Oosterwold are involved in an ongoing process of co-creating the neighborhood as part of daily life. For this, they enact practices such as running a household, raising kids, having jobs, family obligations, hobby's. At the same time, they also need to organise their plot and organise urban agriculture. Research in Oosterwold shows there is a temporal order between different practices involving the organisation of urban agriculture. Three stages of urban agricultural organising can be distinguished in Oosterwold based on our findings and an online survey that was conducted in 2020 in Oosterwold (Jansma et al., 2020). In the first stage, residents are *organising their plots*. They don't live there yet or in temporary housing while they await the construction of their house. Based on the survey, about 15% of residents is in this stage. In the second stage, residents are *organising the production of food*. Residents do not produce food or in very small quantities and are mostly concerned with how to produce well, and less with what to do with the food itself. About 45% of the residents is in this stage. In the third stage, residents are organising *the consumption of food.* This stage is reached when residents produce a surplus. This requires organising the food that is not consumed by the household, for example through selling, trading, or giving it away. Approximately 40% of residents is in this stage.

These stages do not imply there are stable trajectories in urban agriculture over time. Yet they provide bearings in the temporal flux of ongoing movement (Hjorth et al., 2015) by showing insight into the different temporal situations that residents are in whilst organising urban agriculture. The process of urban agriculture involves all kinds of activities of different residents, from building and designing their own house to gardening, producing, processing or selling food, all with their own pace and rhythms. This results in the complication that enacting the present out of the imagined future is difficult when there are differences between social actors in terms of the duration and temporal ordering of practices. Furthermore, residents don't necessarily all have the same desires and expectations of the future. Such future imaginaries are shaped by personal circumstances (Mandich, 2019; van der Gaast et al., 2022b; Welch et al., 2020). In that case, it requires a negotiating process to converge social actors (Geiger et al., 2020; Kaplan & Orlikowski,

2013). This negotiation process is what this paper will explore, a process where we engage residents of Oosterwold to both imagine futures as well as reason back from those futures to the present.

5.3 Methods

5.3.1 Action research and futuring

In this study, we use an action research approach. With action research, we mean a 'collaborative production of scientifically and socially relevant knowledge, transformative action and new social relations through a participatory process' (Wittmayer & Schäpke, 2014, p. 484). This form of action research is useful in this instance because it is a situation where it is important to not just understand but also stimulate sustainability transformations (Horlings et al., 2019; Miller, 2012; Miller et al., 2014; Wittmayer & Schäpke, 2014). The food system specifically requires social and organisational change which action research can provide (Braun et al., 2021). As Coghlan and Shani (2020) argue, action research results in organisational change, actionable knowledge and engaging people in a collaborative process all at the same time.

Futuring is the specific method for action research that is chosen in this paper. Futuring refers to the engagement of actors with the future by creating and identifying images of the future in a possibility space for action (Hajer & Pelzer, 2018; Oomen et al., 2021). Futuring is argued valuable in food system transformations because it provides a transformative space for both imagining what actions must be taken and what uncertainties can be encountered (Hebinck et al., 2018; Mangnus et al., 2019). Futuring and action research go well together, as the latter 'builds on what has taken place in the past, intervenes in the present with a view to shaping the future' (Coghlan & Shani, 2020, p. 2).

We follow the distinction of Miller (2012) between a knowledge-first approach where action researchers provide knowledge to inspire action, and a process-oriented approach where action researchers actively intervene by facilitating and participating in a process of change. In this study, we choose the latter approach. We use futuring as a deliberative platform where a specific group of citizens, i.e. residents of Almere Oosterwold, can collectively envision imagined futures and reason back from these futures to the present-day. This allows us to explicate two hitherto implicit notions of urban agriculture in Oosterwold. First, what perceptions of the future of urban agriculture exist in Oosterwold? Second, how are those futures realised in the present? On the one hand, we play a facilitative role where we create a deliberative platform to help citizens. On the other hand, we also learn from the process itself through which citizens deliberate. This helps

to provide a helping hand to spur a deliberation process regarding the future of urban agriculture where none was in place so far. At the same time, learning from a specific entrepreneurial process within the unique situation of Oosterwold also provides useful scientific insights.

5.3.2 Visioning, scenario building and backcasting

We explored preferable and possible futures (see Table 5.1). We used visioning (Year I) to explore *preferable* futures. Visioning helps to uncover what futures are desired by participants and within certain communities (Mangnus et al., 2019; Miller et al., 2014). This method inspires desirable actions and provide directions in terms of the future. We applied scenario building (Year II) to explore *possible* futures. Scenario building enables anticipating the future by plotting desirable directions within a framework of uncertainties (Miller et al., 2014; van 't Klooster & van Asselt, 2006). Our scenario method was facilitated by a scenario-axis. This axis plots four possible scenarios for the future by selecting two driving forces: current developments visible in society that are most impactful and uncertain. By imagining two extreme states of these driving force, four quadrants emerge that show four possible futures. In this study, visioning and scenario building were combined with backcasting, a technique to trace the future back to actions in the present (Mangnus et al., 2019; Voros, 2006). We aimed for the identification of specific actions and actors at the end of backcasting, that allowed the participants to directly act after the sessions were completed.

Table 5.1 Overview of futuring methods, sessions, participants and data. * = registered participants

Year	Futures	Futuring method	Sessions	Date	Participants	Location	Data sources
I	*Preferable futures*	Visioning and back-casting	1	6-10-2020	56*	Zoom (online)	Recording Zoom and online tools, field notes
			2	17-11-2020	91*	Zoom (online)	Recording Zoom and online tools, field notes
II	*Possible futures*	Scenario method and back-casting	3	21-9-2021	12	Oosterwold (in person)	Drawings of scenario's, field notes
			4	5-10-2021	12	Oosterwold (in person)	Post-its, field notes

5.3.3 Research process and the role of the researcher

Wittmayer and Schäpke (2014) distinguish several roles for researchers in action research: the reflective scientist is detached and analyses and reports what happens. A self-reflexive scientist is reflexive of its own role. A knowledge broker tries to make knowledge in terms

of sustainability accessible to stakeholders. A process facilitator hosts the deliberative platform but does not participate itself. Lastly, a change agent also seeks to motivate participants to seek change outside the facilitated process. We agree with Horlings et al. (2019) that in practice the boundaries between these roles are blurry. During the research itself, we conformed mostly to the role of facilitator. Yet, even though we did not participate ourself, we did encourage participants to identify specific actions they could take in the present to arrive at their desired futures. In that sense, the role of facilitator slightly overlaps with that of change agent in this case. To illustrate our role, we will discuss how we set up the research process.

First, to initiate our action research process we had to involve (future) residents of Oosterwold. A starting point was a survey that two of the researchers of this paper had conducted in a previous study. Through this survey, the researchers obtained insights in the current state of urban agriculture in Oosterwold. We presented the findings of this survey to the residents of Oosterwold that had participated in this survey. This presentation was used as an opportunity for a first preparatory futuring session. Second, with the momentum of this first meeting, we organised three more meetings (see Table 5.1). In all meetings, the role of the researchers as facilitator was thoroughly explained. Our role was to facilitate the deliberation process by offering the tools and methods to do so. We set the agenda and the schedules for the workshop, following our futuring method. Yet, in terms of content we did not steer the conversation, nor did we identify or divide tasks or actions as emerging from the backcasting exercise. For the participants, the sessions were useful because they did not had the opportunity yet to collectively discuss possible and preferable futures for urban agriculture. In all sessions, an workshop-atmosphere was created. In the online sessions, we would work in break-out sessions with Murals. In the offline sessions, we would work with professional artists and empty canvases and sticky notes. To make sure all residents had an equal shot at participating, and not just the ones that participated in the first survey, we made online registering forms in advance to each session and spread these forms through email-newsletters of local neighborhood groups as well as through local Facebook groups.

In the next two paragraphs, we will discuss more in depth how these sessions were conducted and how the findings were analysed.

5.3.3.1 Sessions 1 and 2: preferable futures through visioning

In 2020, we conducted two sessions to explore preferable futures. Due to covid-19 constraints, which impeded face-to-face meetings, these sessions were conducted online. Session 1 was a preparatory meeting where findings were presented of a survey on urban agriculture in Oosterwold. Participants reflected on these findings based on their own experiences. This provided some first insights, and allowed building a relationship

with the participants. Session 2 consisted of visioning and backcasting. The visioning started with seven pitches by citizen-participants, in which specific ideas for the future of urban agriculture in Oosterwold were presented. Next, these pitches were the topic of a collaborative backcasting exercise. We used Mural to facilitate this: an online tool that provides a digital canvas with sticky notes. On the top right-hand side of the canvas, the future was symbolised in the form of a specific idea from one of the pitches. On the top left-hand side, the present was symbolised in the form of an empty sheet. Participants were invited to think of specific actions to materialise the imagined future and what actors were expected to perform these actions. Both were written down on virtual sticky notes. The goal was to make a chain of actions from the future to the present, resulting in an action-agenda.

5.3.3.2 Sessions 3 and 4: possible futures through scenario building

In 2021, we used scenario building to plot possible futures. The (temporary) suspension of the lock down allowed for two face-to-face sessions. We selected driving forces in advance through six interviews with residents. In Session 3, we used floor-tape to make an image of this axis on the ground. Participants could literally walk through possible future worlds. Due to time constraints, we only explored two scenarios in detail. We asked participants which scenarios they wanted to explore. In exploring the two scenario's, participants imagined what would change for urban agriculture in the scenarios. This process was facilitated by an empty canvas, sticky notes and a professional artist that made drawings of what was discussed in real time. Each session was moderated by one of the researchers. The artist afterwards merged the drawings into one image for each scenario. In Session 4, we used these images to back-cast towards the present. We asked the participants what elements they thought desirable in these scenarios, and what actions were demanded in the present to realise this. This was facilitated by a timeline from the present towards the future (2030) that showed fictional news article headlines for events associated with these scenarios. We asked participants to reflect on these events, to identify desirable and undesirable elements and to add and/or rearrange the timeline. Finally, we created an action-agenda with actions and actors that would be useful in both scenarios.

5.3.4 Data analysis and abductive reasoning

The data analysis of this paper is informed by abductive reasoning. This approach to analysis is often used in action research which involves surprising, unexpected and puzzling experiences. Abductive reasoning helps to understand what is going on whilst being part of the process. Furthermore, it helps to relate these experiences within action research to a larger research context (Coghlan & Shani, 2020; Shani et al., 2019). We follow the approach to abductive data analysis as prescribed by Timmermans and Tavory (2022), which we will summarise as an iterative process of theorising, coding, and puzzling. The first part of this approach takes place during the research process and the

futuring sessions. In this stage, the processual understanding of entrepreneurship was used as an heuristic tool to focus our observations. This resulted in the first emerging insights, of both the big contrasts in desired futures as well as the fact that few participants were willing to take up a role in accomplishing the tasks they identified as needed to arrive at their desired future. In this phase, we also took note of the temporal differences in stages of urban agriculture.

The second part of this approach was conducted after the sessions, and was done without the input of participants. For this, the output of the four sessions, which resulted in a variety of data sources (see Table 5.1), were transcribed as much as possible to plain text, and inserted into Atlas TI. Following Timmermans and Tavory (2022), we first used open coding for a close reading of our observations. This was done by coding 'in vivo' and enlisting interesting observations and statements of participants. This was followed by focused coding, in which similar statements and observations were bundled into new codes. This resulted in 31 codes in total. Looking at the codes that were most grounded (e.g. most recurring in the data), two different types of code emerged. First, there were codes that represented desired urban agriculture practices or organisations as emerging from the futuring sessions. Such as: 'physical space', 'coordination of produce', 'sales', 'knowledge sharing', 'food production', 'cooperative', 'collective purchasing'. Second, there were codes that represented the factors identified in the obstructions to the taking of desired actions, such as 'regulations', 'municipality', 'commitment'.

In the last phase of the analysis, we puzzled with the data and the codes to see what our study is a case of and to come up with an explanation for the puzzling experience of having different desired futures but not much willingness to commit to these futures. By puzzling with the codes, we found a difference in desired actions and organisations, related to the different stages of urban agriculture participants were in. On the one hand, the inexperienced residents were more prone to envision means for 'knowledge sharing' 'food production' and 'collective purchasing' because they were not yet able to produce food. On the other hand, there were those that emphasised 'sales' and 'coordination of produce' and were aiming for a cooperative to ensure this. By looking more at these contrasts, we were able to come up with two contrasting desired futures, as well as more insight into why most participants were unwilling or unable to commit to the desired actions they identified. Both of these insights will be further explained in the findings section.

5.4 Findings

5.4.1 Preferable futures: Feeding the City vs. Nourishing the Community

We distinguish two competing perspectives on how the future of urban agriculture should preferably unfold according to the residents of Oosterwold. The Feeding The City (FTC) perspective understands the goal of urban agriculture in Oosterwold as sourcing the city of Almere. This perspective follows the ambition of the municipality to source 10% of total food consumption in the city through food production in Oosterwold. Proponents of the FTC perspective consider this not an exact goal but a guideline to strive towards. Therefore, they see a need for upscaling to produce a surplus that can be distributed to the city. Since the scale of production so far in Almere Oosterwold is insufficient, coordination is required to organise both the production and consumption of food in Almere Oosterwold. In the FTC perspective, food production in Oosterwold can only be called urban agriculture when the broader population in the city of Almere can profit from the produced food. The Dutch word 'verwaarden' was often used, which can be translated as 'adding value'. In practice, this means the food that is produced in Oosterwold must find its way to the citizens in Almere. This can be done through idealistic means (e.g. free food for people with less income), or through sales of produced or processed food to local vendors and retailers.

The Nourishing The Community (NTC) perspective in contrast considers the goal of urban agriculture in Oosterwold to develop Oosterwold as a community. The purpose of urban agriculture is to connect citizens by engaging in a shared activity, not to turn citizens into professional farmers. Therefore, sourcing the city is not a goal but a possible positive side-effect of the development of the community. The NTC perspective considers the 10% target unrealistic and questions the need to upscale which can discourage residents from developing urban agriculture on their plots. By making small steps over time instead, the positivity about urban agriculture can be maintained whilst strengthening the community through shared gardening experiences and activities. Furthermore, upscaling is considered economically unsound. Inexperienced urban agriculturalists must compete with professional farmers on the global market where the prices for bulk products are low. Instead, Oosterwold must target niche-products that don't require large scale production. Some participants in the NTC perspective reject the notion of commercialisation of their produce altogether. Others are pragmatic, they consider selling and processing produce an attractive option to cut costs or even to be able to work less in their day job over time.

Though fundamentally distinct in their vision, the supporters of the FTC and the NTC perspective express similar needs to accomplish their preferable futures. First, they wish for a shared knowledge infrastructure. Upon arrival in Oosterwold, most new residents are unprofessional hobby agriculturalists. To perform agricultural activities, knowledge

and skills are required ranging from soil maintenance to crop rotation and equipment use. Simultaneously, the organisation of consumption (e.g. trading, selling and/or processing food) requires specific skills and knowledge of regulations with regard to food quality and safety. Therefore, participants agree on the need for an accessible knowledge infrastructure in Oosterwold. Second, participants want shared spaces in Oosterwold for activities ranging from horticulture to processing, and sales. Oosterwold consists of individual plots of residents where residents have to allot space for all their needs and activities such as housing and gardening. There is little space left for urban agricultural activities such as storage or processing. By creating shared spaces residents don't have to perform all activities on their own plots. Third, participants agree on the need for shared organisation of the coordination of production and consumption. They see a similar need to coordinate what is produced, in what quantities and by whom.

Yet, the supporters of the FTC and NTC voice different forms of organising to make sure these needs would be met. Supporters of the FTC perspective propose one organisation to meet all needs: a producers cooperative called Cooperative Oosterwold. This organisation existed before the futuring sessions. Participants imagine the cooperative will provide knowledge and skills for how to produce, as well as seeds and equipment. Furthermore, the cooperative will organise the logistics by opening a shared space in Oosterwold where the processing, sales, and transport of the products is arranged for distribution to retailers in the city. As a first step, it is suggested to develop an app to coordinate who produces what crops in what quantity, and to match this with consumer demand in the city.

In contrast, the NTC supporters imagine a wider range of organisations. For the coordination of production and consumption, a consumer cooperative is proposed called VoKo. Since most residents not yet produce enough to be self-sufficient, they need to procure food from elsewhere to complement their own production. VoKo coordinates the food procurement. It can help residents in Oosterwold that don't produce enough yet to buy from residents that have surplus. But it also facilitates collective purchases of organic food from local farmers for a reduced price. For the shared physical space, shared fruit processing plants or shared ovens for baked goods are imagined as well as a shared market to sell goods. Other ideas are to build collective greenhouses to produce crops all year round. For the knowledge infrastructure, there is a range of specific fields of expertise in terms of the production of food, from vertical farming to permaculture.

In summary, the FTC and NTC perspectives display a different outlook on what role urban agriculture plays in Oosterwold, and how it should develop. This results in similar needs (i.e. coordination of production and consumption, shared spaces and knowledge infrastructure) with different forms of organising to meet those needs.

5.4.2 Possible futures: Manhattan with Rules vs. Room for Everyone

Before presenting the possible futures as imagined by the residents, we explain the driving forces that were chosen. *Regulation* means the municipality will actively monitor for compliance of the rule to use 50% of the plot to produce food. *Self-organisation* in contrast means residents are themselves responsible for developing urban agriculture. *Open landscape* refers to a current rule in Oosterwold that residents cannot close off their plots for other residents. Residents must be able to cross the plots of others. *Closed landscape* in turn refers to a current trend: a new area in Oosterwold is now in development which will contain high rises to accommodate more civilians per square meter which will possibly erode the open landscape.

5.4.2.1 Manhattan with Rules

In the scenario 'Manhattan With Rules', urban agriculture will be *regulated* and Oosterwold will have a *closed landscape*. Participants distinguish in this scenario 'old' Oosterwold from 'new' Oosterwold. 'Old' Oosterwold refers to the current situation of several smaller plots with a large diversity in types of houses, and types of produce. 'New' Oosterwold on the other hand includes uniform flats and agricultural monoculture. This is because new residents will, under pressure of increased regulations, hire professional farmers to produce for them. The name 'Manhattan' is chosen by the participants because of its association with high-rises, as well as the size of the plot that is under development which is the same as Manhattan. Figure 5.1 shows this in detail. On the left, in 'new' Oosterwold, carrots ('wortels' in Dutch) are produced in between the flats in large quantity. On the right, 'old Oosterwold is visible with its higher diversity in types of houses and produce (e.g. 'aardappelen' and 'duindoorn', potatoes and sea buckthorn in Dutch). In between, there are municipal agents inspecting the compliance of the rules ('inspectie', in Dutch).

5.4.2.2 Room For Everyone

The Room For Everyone scenario shows an *open landscape* with *self-organisation*. In this scenario, there is no divide between old and new Oosterwold. The name of the scenario signifies the existence of a diversity of types of produce and production methods. As Figure 5.2 shows, in this scenario residents produce directly for Almere through short supply chains ('korte keten' in Dutch): the produce of residents will source the city of Almere. There is also literally room in the picture for those not willing or able to participate. In the middle, an angry man is yelling 'why are you not participating?', to a woman looking at her watch and replying 'busy job'. This dialogue is embedded in a picture of the stereotypical non-compliant resident with only grass and one tree ('gras & 1 boom' in Dutch). Despite the emphasis on self-regulation, diversity and freedom, the scenario also mentions a mandatory membership ('verplicht lidmaatschap') of the cooperation that sources the city of Almere.

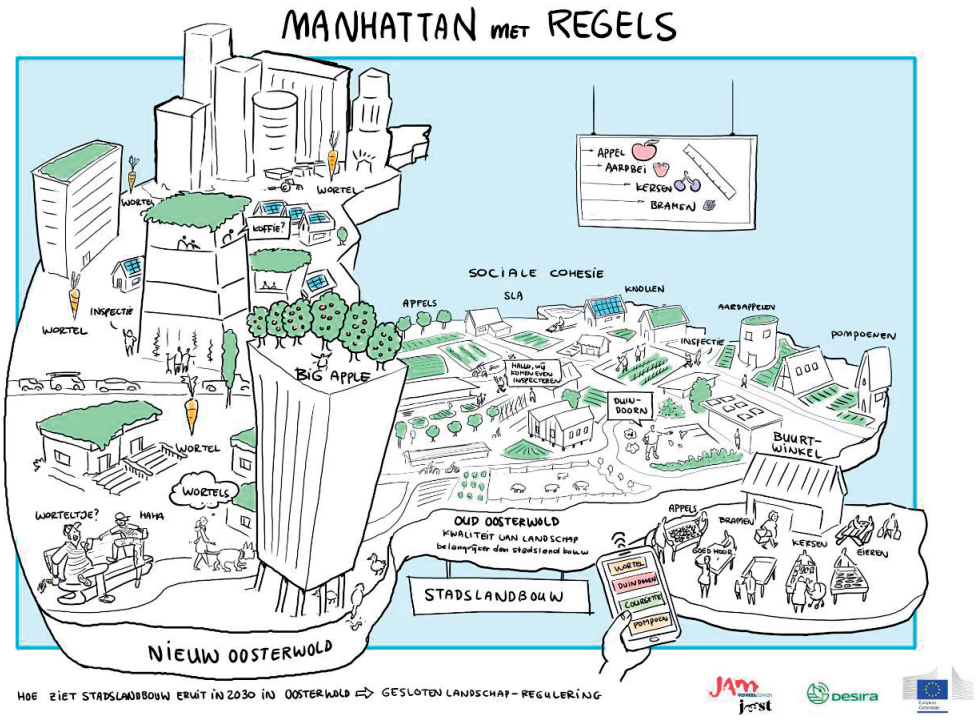


Figure 5.1 'Manhattan With Rules'-scenario. With 'new Oosterwold' on the left and 'old Oosterwold', on the right. Source: Jam Visual Thinking

5.4.3 Backcasting preferable futures

During the backcasting session of *preferable* futures, participants explored how the coordination of production and consumption, shared physical spaces and a shared knowledge infrastructure could be realised. Collectively, participants traced the future back to actions in the present. However, individual participants were unable or unwilling to commit to these actions themselves.

The coordination of production was explored through the aspired producer cooperative called Cooperative Oosterwold. During the session, a detailed plan emerged. First, an app must be developed to coordinate the produce and to make sure residents produce according to the demand of the city of Almere. Second, a plot must be procured to collect, process and package the food before it would go to the city. The backcasting exercise halted when the willingness of participants to commit as a member of this cooperative was discussed. The cooperative requires a sufficient amount of residents to become a member to function in practice. A membership means residents need to commit to distribute (part of) their produce through the cooperative. Furthermore, they must base what to produce and in what quantities on the demand of the cooperative. The participants were in doubt

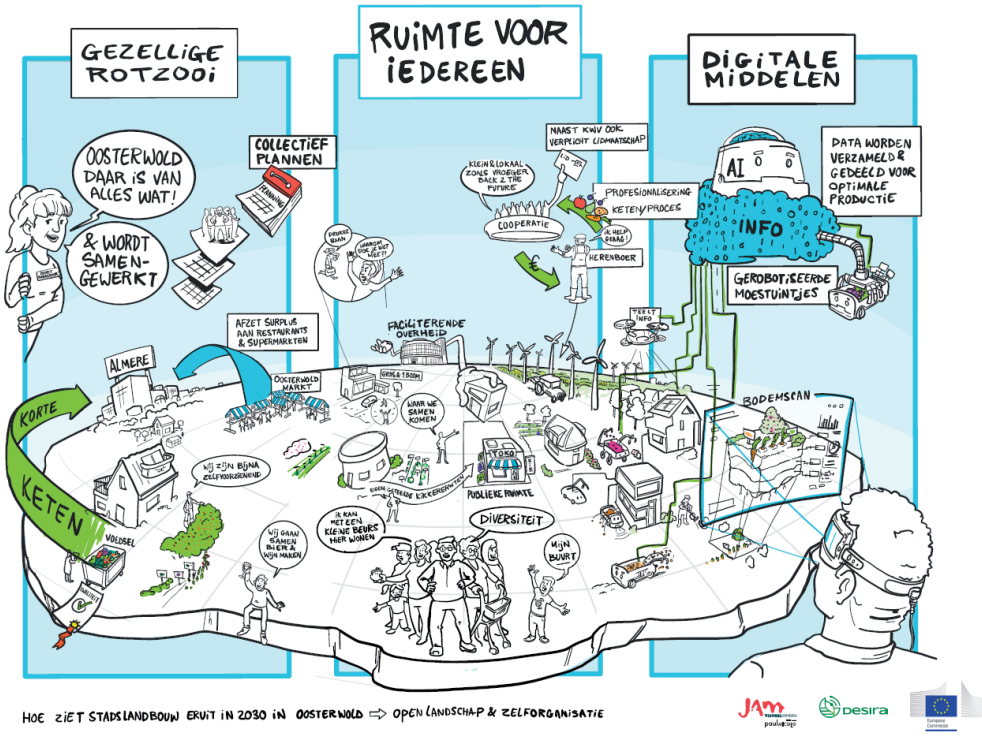


Figure 5.2 'Room for Everyone'-scenario. There is both room for sourcing the city (on the left), as well as for people that are too busy to participate (in the middle). Source: Jam Visual Thinking

whether they would be willing to commit to this. They saw the value in coordinating who produces what, to avoid ending up with surpluses of one particular product. Especially those participants that were still planning their garden were very interested in aid of the cooperative in deciding what to plant. However, some participants considered the ambition too high. Few residents can already produce in high enough quantities to be interesting to meet the demand of procurers in the city. Also, participants feared losing their independence when they have to adjust what they grow to the demand of others.

The coordination of consumption was explored through the aspired consumer cooperative called VoKo. Prior to the session, the frontrunner of the VoKo had set up a digital infrastructure to coordinate shared consumption. This infrastructure was copied from of a similar initiative he was a member of. Yet, he didn't take any further action before having included other residents of Oosterwold since he wanted a 'critical mass' of residents to take the next step. The backcasting session provided an opportunity for this. During the session, actions to realise the VoKo were identified. Residents must be recruited that pay a small fee and help with packaging and distributing the food. Also, a pick-up point and administrative tasks must be set up. Moreover, funding, as well as support and awareness

in the neighborhood must be raised. However, none of the participants in the backcasting sessions were willing to commit themselves to these tasks. Participants refused to commit because they lacked the time and affinity with organising and were primarily interested in gardening.

In the case of shared physical spaces, participants in Oosterwold identified actions that require changing regulations. First, procuring a plot without a residential purpose. Now, the only way to buy a plot of land is by building a house on it which complicates organising a shared space for urban agricultural purposes. Second, building greenhouses on the mandatory 50% of space allotted to urban agriculture. Now, greenhouses are regarded construction and not agricultural food production. This means they are only allowed on the part of the plot designated for home construction. Constructing greenhouses on a plot limits the space for living. Therefore, according to the participants, the first action for achieving shared spaces must be taken by the municipality.

For a desired knowledge infrastructure, a different reason emerged for the municipality to take the first step. The participants mentioned there is a lot going on in Oosterwold already regarding knowledge sharing. Participants discussed the plethora of knowledge sharing initiatives they knew off that all more or less had the same objectives. Some argued that especially with regard to the information technology infrastructure (e.g. hosting and managing websites and apps), concerted action would avoid individuals inefficiently re-inventing the wheel on individual pursuits, while harnessing collective knowledge and experience. A collective organisation overseeing and merging the separate individual initiatives was argued more efficient and encouraging. The participants argued the municipality is responsible for facilitating such collective infrastructures. The costs and efforts of setting up such a central knowledge infrastructure should not fall on one or more individuals while the benefits go the community as a whole.

In sum, residents identified necessary actions but were unable or unwilling to take those actions themselves. In the case of shared physical spaces and a shared knowledge infrastructure, the municipality was singled out as the actor to take these actions.

5.4.4 Backcasting possible futures

In backcasting *possible* futures, participants first identified the desirable elements in the scenarios, and next articulated the requirements to realise these desirable elements. The participants identified a set of actions but similar to the session on backcasting preferable futures they did not commit themselves to the actions. Instead, they pointed to both the Cooperative Oosterwold and the municipality.

In discussing desired elements in the possible futures, the contrasting visions of Feeding the City and Nourishing the Community were visible. From the FTC point of view, the inspections of the municipality as well as professional farmers that are hired to fulfill the urban agriculture obligations are desirable elements in the 'Manhatten With Rules'-scenario. The inspections enforce compliance with the rules. Either residents themselves make an effort to produce food. Or residents, who cannot or will not do the work themselves, hire professional farmers to produce food on their plots. This leads to producing more food anyhow, resulting in better opportunities to source the city. Furthermore, the emphasis on sourcing the city of Almere, as well as the crucial role of Cooperative Oosterwold to realise this, is deemed positive in the 'Room for Everyone'-scenario. In contrast, for the NTC perspective, 'new' Oosterwold in the 'Manhattan With Rules'-scenario was considered the death of Oosterwold as it was intended. For them, the open landscape is more important than upscaling urban agriculture because it helps to develop Oosterwold as a community where everyone connects with one another. They consider the diversity of 'old' Oosterwold as the main goal. Similarly, they like the fact that those that have busy lives and only have grass and one tree have a place in Oosterwold, as the 'Room For Everyone'-scenario suggests.

The differences between the FTC and NTC perspectives were abridged, resulting in the following aspired actions. First, professional farmers don't replace but facilitate residents in food production. For instance, by helping residents to develop skills or assisting in harvesting the produce. It was also suggested more experienced residents should take up mentoring roles for less experienced residents. Second, the inspection of the compliance with food production should not be enforced from the top down, but from the bottom up. Residents inspect each other, though not to sanction non-compliance, but to help co-residents to comply. Third, an obligatory introduction workshop on urban agriculture for new residents should be implemented. Fourth, it was proposed to not only to focus on the development of food production, but also to monitor social development. It was not completely specified how social development could be measured. Some participants suggested a credits-system where activities that help develop the neighborhood of Oosterwold will be recorded and rewarded. Lastly, the cooperative should maintain flexibility in terms of accepting harvests' fluctuations, with food production still in development and residents having different levels of experience.

In discussing who should perform these actions, the participants refused to commit individually. They argued the municipality should take the lead, repeating previously voiced arguments in the sessions on preferable futures. First, the participants reasoned the benefits are collective, and therefore the burden should not be on individuals. Second, a municipal agent knows better what is allowed and what isn't and therefore is better equipped to navigate the complex regulatory dimensions of urban agriculture.

The participants exemplified this with the issue of food safety regulations. Residents expressed they were not confident in knowing what is allowed with regard to selling and processing food. Therefore, the participants suggested the municipality should provide an intermediary agent or agency for assistance not only in food production, but also for guidance in navigating regulation. Here, it is relevant to also note that one participant suggested that this intermediary agent could also be hired by the residents themselves by pooling money. This idea was opposed by most participants, because they did not want to assert the financial risk for hiring personnel, even when the risk would be taken collectively.

In sum, participants were able to backcast the desirable elements of possible futures towards specific actions. They were however unable or unwilling to commit to those actions themselves, mostly because they argued the municipality should take the next step.

5.5 Discussion

5.5.1 Imagined futures, present actions and temporal dissonance in Almere Oosterwold

In establishing the neighborhood of Oosterwold, the municipality of Almere formulated an ambition of producing 10% of Almere food consumption in Oosterwold without specifying how this should or could be accomplished. This paved the way for an entrepreneurial process of organising food production and consumption which our study has explicated. This paper has two main findings. First, the identification of two clashing future perspectives, respectively FTC (Feeding the City) and NTC (Nourishing the Community). Second, the observation that participants were unwilling or unable to commit themselves to the actions they identified to enact the desired futures in the present. Partially, the different future perspectives can be attributed to different ideas on forehand on what Oosterwold can or should be. Some came to Almere Oosterwold to change the food system, others for gardening and green spaces (Jansma et al., 2020). The former might be more inclined to favour fast upscaling of production, whereas the latter might a favour incremental development of urban agriculture that facilitates community development.

On the other hand, the entrepreneurial process that was revealed through this study, and the temporal ordering within the organising process, also provides an explanation for these findings. The futuring sessions in this study resemble what Kaplan and Orlikowski (2013) and Geiger et al. (2020) call temporal work, i.e. linking of projections of the future with views of past and present to resolve tensions between different understandings. Yet, these authors also state the negotiation between converging actors and their different

temporal structures can be time intensive (Geiger et al., 2020) and does not always lead to organisational change, sometimes it can be obstructed by inertia (Kaplan & Orlikowski, 2013). One cause of inertia can be the existence of multiple temporalities between social actors (Bastian & Bayliss Hawitt, 2022) which leads to 'contradictory expectations about how to temporally structure their activities' (Orlikowski & Yates, 2002, p. 687). According to Geiger et al. in that situations temporal autonomy is required, which they describe as looking ahead in time. For instance by synchronising activities and routines. Yet, the findings of this study shows the opposite of this. It resembles what Zivkovic (2018) calls temporal dissonance, it is the 'disjuncture experienced by participants in the act of emplacing themselves or their loved ones ahead of time' (Zivkovic, 2018, p. 20). In this study, temporal dissonance means it is not only hard for participants to look ahead, but also to look back. In other words, it is the inability to look beyond the own temporal situation (e.g. stage of urban agricultural development) one occupies.

To illustrate this, it can be useful to reiterate the three different stages of urban agricultural development in Oosterwold we identified in Section 2: the organisation of the plot (1), of production (2) and of consumption (3). As we have seen in this study, participants were not all in the same stage during the futuring process. Whereas some residents still designed and constructed their houses (1), others were starting food production (2) or produced already a surplus (3). For those in (1) and (2), the idea of what to do with the surplus was less urgent. In turn, those that produced surplus (3) had to deal with the food products they could not consume themselves, and therefore were more concerned with the coordination of production and consumption. Furthermore, whereas some progress swiftly through these stages, for others it can take more time and effort. Some encounter more constraints (e.g. time, knowledge, skills) than others to develop urban agriculture and can become 'stuck' in one stage. For instance, residents with jobs, kids and other pressing tasks and with less preexisting skills in food production take longer to get to stage (2) or (3), than residents that already are familiar with gardening, are retired and/or have no jobs or families.

In sum, residents have different lived experiences in Oosterwold because they operate in different stages of urban agricultural development. This led to temporal dissonance. Residents producing at scale found it hard to understand residents with trouble getting there. In turn, residents that were not producing yet, or only on a small scale, did not feel the pressure of a surplus of food that needs to be organised. Therefore, these different lived experiences resulted in different imagined futures. The stereotypical resident with 'grass and one tree' provides an illustrative example. The FTC perspective considers this type of resident an impediment to urban agriculture, imploring inspections for compliance. The NTC perspective in turn stress the 'split', between daily life and the goal of urban agriculture and has understanding for this type of citizen, who's actions can be explained

by the lack of time to develop urban agriculture next to a (fulltime) job or a family. Here we can discern the different temporal situations manifesting. Residents that feel the urgency of fast upscaling due to the fact they produce a surplus, versus residents that are constrained by the confines of busy daily life's in developing urban agriculture.

Temporal dissonance also plays a role in the lack of commitment to the identified actions. Despite this lack of commitment, many participants provided examples of themselves organising what they need as part of daily life. Participants discussed examples such as a baker seeking poppy seeds for the bread he was baking, and a resident supplying him some for free in exchange for a loaf of bread. There were also examples of participants organising individual processing facilities (e.g. professional ovens). In other words, the participants were not idle. They were indeed putting in the work to develop urban agriculture in their neighborhood. Yet, they did so within the confines of their own temporal situation. Residents that already have produce to spare, seek out other residents that have a use for them. Residents that are still struggling with how to produce food, seek out others to share experiences and swap skills. This implies residents have trouble in committing to actions they themselves don't directly profit from (yet). This shows again the role of temporal dissonance, i.e. the myopia of participants to look beyond their own temporal situation. Participants did not look back or ahead in organising what is needed to develop urban agriculture, they just committed to organise what they required themselves in the present.

5.5.2 Methodological repercussions of temporal dissonance

In the previous paragraph, we presented temporal dissonance as an explanation of why contrasting desired futures emerged and why participants were unable or unwilling to commit to the actions they identified. This is in line with our action-research approach which arrives at an exploratory hypothesis of what was going on in the action research process (Shani et al., 2019). This begs the question what can be learned from this explanation for similar studies. Braun et al. (2021) presents an action research study of 22 enterprises in farming, processing and trading in the region of Berlin, Germany. In this study, they facilitate an interorganisational learning process for entrepreneurs to both learn from one another as well as to strengthen the local supply chain. This study manages to incite actors to question routines and foster new visions. In contrast, in Oosterwold most participants were hardly experienced in food production and almost none were entrepreneurs. Furthermore, in our study they were asked to come up with shared visions for the neighborhood, instead of individual visions for the own enterprise. Residents were invited to design a future of urban agriculture collectively which resulted in clear plans of action for formalised, collective organisations. Temporal dissonance complicated this attempt.

Mangnus et al. (2019) involves a futuring study that includes both visioning and backcasting in the context of sustainable urban food systems in Japan. In this study, a clear set of imagined futures and present actions are presented. Yet, the study also mentions time constraints in this study makes it impossible to assess the impact of these futures and actions. Since this study was not conducted through an action-research approach, the insight into the process through which imagined futures and present actions were organised was absent. Our study showed futuring can be hindered by temporal dissonance when combined with an action-research approach. Therefore, it shows futuring does not generate change out of nowhere. When the imagined futures don't match the lived experiences of citizens they will not materialise. However, it is important to mention that the sessions are a snapshot of the ongoing development of urban agriculture in Oosterwold. It continued after our last session and still continues. Therefore, it is hard to claim with certainty what our study did, and did not incite in terms of change.

In sum, our study shows the temporal context matters in futuring and action research in organising processes such as entrepreneurship. In our study, residents of Oosterwold shared a similar spatial context but at the same time they were occupying different temporal situations. Therefore, future research should take the temporal context into consideration. In this study, this was done by exploring in advance the population under study through a survey (Jansma et al., 2020). This helped to already have an insight into the different stages of urban agriculture, and how this affects the visions of residents.

5.5.3 Entrepreneurship and urban food planning

In the introduction, it was mentioned studies of urban food planning seldom explore the role of entrepreneurship vis-a-vis planning (Morgan, 2010; Opitz et al., 2015; Sonnino & Coulson, 2020). This study has showed some insight into this. As explained before, the municipality of Almere specifically designed the neighborhood of Oosterwold, including urban agriculture, with limited government planning. They deliberately did not plan for a public enterprise or service for urban agriculture. Currently, there are no official processes and places where residents regularly (can) meet and discuss their progress and problems with urban agriculture. However, the municipality did formulate an ambition for the food production in Oosterwold to be enough to source the rest of the city of Almere as well. Therefore, they expected limited planning would result in the residents of Oosterwold organising both the production and consumption of food themselves. In other words, the municipality expected that limited government planning would result in entrepreneurship.

This study shows limited government planning does result in entrepreneurship to some extent. Residents of Oosterwold make efforts to organise production and consumption of food. However, residents also encounter obstacles and limitations for which they claim

the government is best suited to remove them, such as the regulations regarding a shared physical space, or the issues with food safety. Some already try to navigate regulations inventively. For instance, residents worked around the rule that makes it impossible buy a separate plot just for the purpose of a shared physical space. They asked permission to use an empty plot that cannot be used for construction because it contains an archeological significant site. Residents are also in contact with the municipality to change the rules regarding the building of greenhouses, in order to make it count as part of the mandatory urban agriculture efforts. Yet, all these efforts requires skills, time, and resources, and continuous efforts. Not all residents have these to their disposal in equal share. This explains the wish of residents that the municipality hires an intermediary to guide their entrepreneurial process and help them where they themselves lack the time or the skills.

In sum, even though an entrepreneurial process has emerged where government planning was deliberately limited, to develop it further it requires more government planning than has hitherto been provided. If the municipality does not step in to provide more government planning, there is a chance this might discourage residents of Oosterwold altogether. This could lead over time to the downplaying of urban agriculture in the neighborhood, resulting in a failure to meet the aims as posed by the municipality. This shows entrepreneurship and planning are complementary social processes that need one another to succeed.

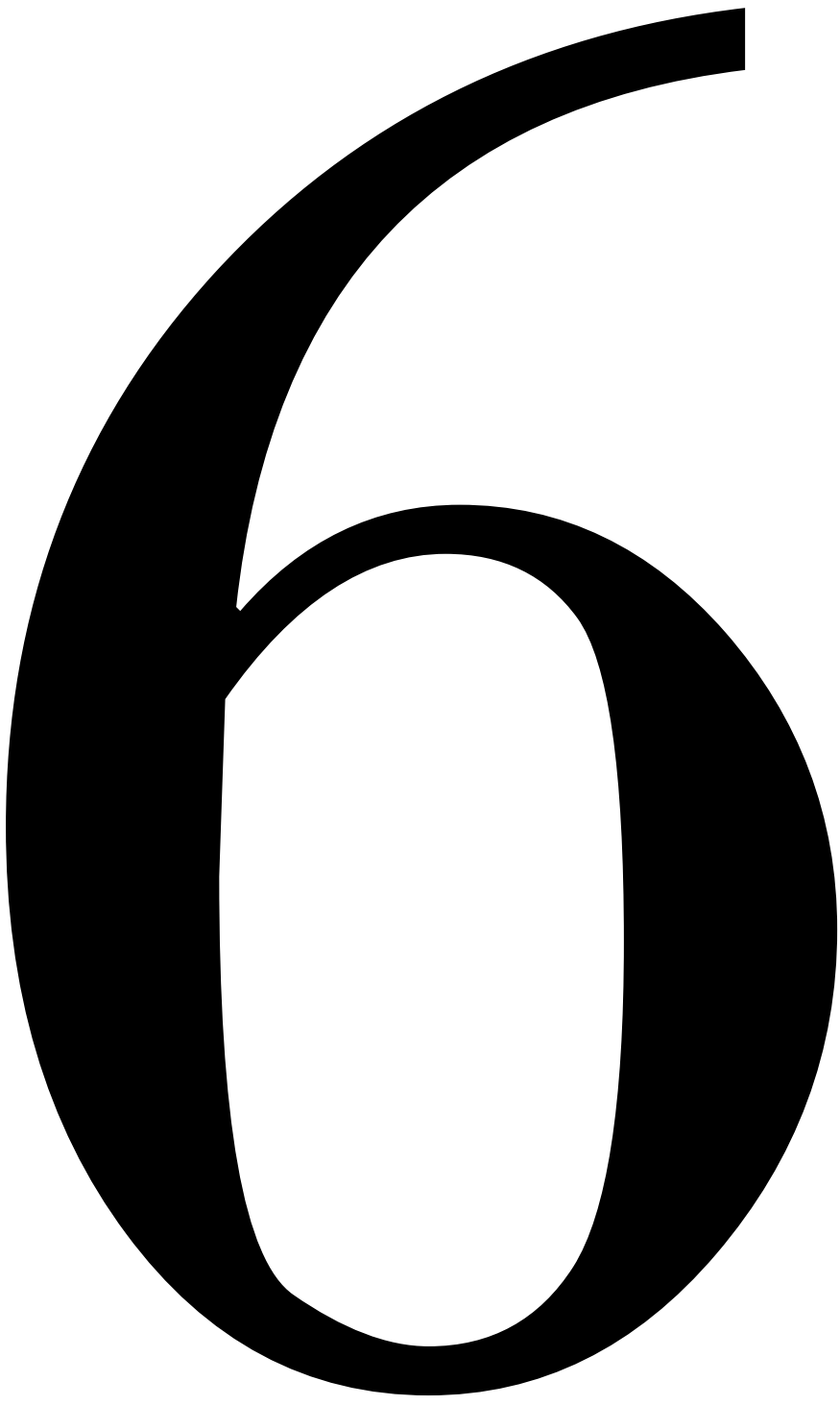
Based on this insight, it is possible to formulate two recommendations for urban food planning and policy. First, when formulating policy ambitions for sustainable food systems, government actors must at forehand explore to what extent they expect citizens and entrepreneurship to organise this themselves. This way, they can already anticipate the need for (more) government planning in those instances citizens and entrepreneurship cannot do it alone. Another important recommendation can be the role of intermediary actors by government agencies, as requested by the residents of Oosterwold. This intermediary actor resembles what Giambartolomei et al. (2021) call 'policy entrepreneurs', actors both inside and outside the government that foster crucial relationships and networks and thereby not only set things in motion but also inspire other actors to make an impact. In short, by looking ahead and hiring intermediary actors that bring planning and entrepreneurship together, the reciprocal relationship between entrepreneurship and planning can be improved.

5.6 Conclusion

Cities increasingly envision more sustainable food futures. The realisation of those futures is often understood from a planning perspective, leaving the role of entrepreneurship

unspecified. This paper explicates a specific entrepreneurial process to understand how it contributes to realising sustainable urban food futures. We studied Almere Oosterwold, a neighborhood where residents are contractually obligated to produce food on 50% of their plots. The municipality of Almere has the objective to source 10% of the total Almere food consumption from Oosterwold, yet it did not specify how this goal should be achieved. By using futuring as a methodological platform, we engaged residents of Oosterwold to explore what possible and preferable futures they imagine for urban agriculture in their neighborhood. Following, we backcasted these futures towards concrete actions in the present. Our findings show contrasting future perspectives that underlie the entrepreneurial process. Furthermore, we observe a lack of commitment of residents in realising imagined food futures. We argue the contrasting futures and lack of commitment are the result of a temporal dissonance; a myopia where residents have trouble looking beyond their own situation. Temporal dissonance relates to the existence of different temporal situations since every resident has its own pace in how urban agriculture develops, which explains the discrepancy between images of the future and what residents can and want to commit to individually and collectively.

Based on this, we conclude imagined futures must fit with the lived experiences of citizens in order to be realised. Citizens have different situations and perspectives on what is desirable which can constrain entrepreneurship. Therefore, planning is demanded to some extent to spur collective action where none emerges on its own. In sum, urban food futures need both planning and entrepreneurship to be realised since they are complementary social processes.



Chapter 6

General conclusion

6.1 Introduction

In the introduction of this thesis, I discussed an essay of Donella Meadows about envisioning a sustainable future. Participants of her workshop on imagining a sustainable future for food were discouraged by doing so because they perceived a gap between what they aspired and what they could achieve. In the introduction I argued this this gap is a mirage. What is aspired and what is achieved is constantly shifting and changing. The future is a lived entity, something that is always ongoing in the practices of everyday life. In the transformation of the food system, sustainable food futures are imagined everyday through sustainable food entrepreneurship. In this thesis, I show more insight in how they do this, and what this means for their role in the transformation of the food system. In this conclusion, I will try to answer the question I formulated in the introduction of this thesis:

How are imagined futures lived out in sustainable food entrepreneurship and how does this shape the ongoing transformation of the food system?

First, I will summarise the findings of this thesis by answering the sub-questions as posed in the introduction (see Table 6.1). I will reiterate how I explored the lived futures of sustainable food entrepreneurship through three lenses and four different sites of study. This resulted in a conceptual framework of the ongoing process of sustainable food entrepreneurship that centers imagined futures (Chapter 2), an account of how near and distant futures are engaged in sustainable food entrepreneurship during the covid-19 disruption (Chapter 3), an exploration of how futures are discursively constructed through sustainable food entrepreneurship (Chapter 4) and an in depth study of how imagined futures are shaping up in a specific case of sustainable food entrepreneurship in Almere Oosterwold (Chapter 5).

Together, these different lenses and sites have helped to distill an overall characterisation of how futures are lived out in sustainable food entrepreneurship. Therefore, the research question as set out in this study will be answered by introducing the concept of *plan-and-play*. Living out imagined futures means both planning for the future through ambitions and goals, and playing out how these futures come about through an iterative process of adapting to ever changing circumstances. Yet, the capacity of sustainable food entrepreneurship to spur and incite change has its limits. Therefore, this conclusion also offers a reflection on the transformative capacity of sustainable food entrepreneurship, particularly in relation to the transformation of the food system. This includes recommendations for policy. It also offers recommendations for future research that incorporates the theoretical and methodological approach as used in this thesis in

entrepreneurial studies as well as other fields of studies such as alternative food networks and degrowth.

6.2 Answering the sub-questions

In this section, I will address the answers to the sub questions as formulated in the introduction based on the findings of the previous chapters of this thesis.

Table 6.1 Overview of sub questions, study site, lens and methods for each chapter of this thesis

Sub questions	Lens	Site	Methods	Chapter
How are imagined futures shaping up in the process of sustainable food entrepreneurship and what are the implications for the transformation of the food system?	Process	Scientific and practical expertise on food entrepreneurship in Flevoland	Literature review and expert interviews	Chapter 2
		Process of emerging sustainable food entrepreneurship in Almere Oosterwold	Futuring	Chapter 5
How are near and distant futures engaged in practices of sustainable food entrepreneurship and what does this mean for the transformation of the food system?	Practice	Practices of food entrepreneurship in Flevoland during disruption of covid-19	Interviews and survey	Chapter 3
How are futures for sustainable food discursively constructed through sustainable food entrepreneurship, and how does this affect the transformation of the food system?	Discourse	Websites of food enterprises in Flevoland	Discourse analysis	Chapter 4

1. *How are imagined futures shaping up in the process of sustainable food entrepreneurship and what are the implications for the transformation of the food system?*

In Chapter 2, the process of sustainable food entrepreneurship was mapped out through the construction of a conceptual framework. The framework was made by scrutinising expertise on entrepreneurship, both in the literature and with experts in Flevoland that were interviewed. This framework, the Sustainable Food Entrepreneurship Framework (SFEF), departs from the notion of uncertainty. Uncertainty incites a cyclical process of change and implores entrepreneurs to reflect on the past before imagining the future. These imagined futures must be fitted to the socio-material context before emerging as artefacts (e.g. products, services or firms), which incites new uncertainties and new cycles of change. This framework helps to understand the extent how imagined futures are shaping up. It shows an ongoing process which includes continuous change where

imagined futures are tried and retried over time. For example, in Flevoland there was the example of the meat of male goats. The introduction of this meat as a product was troubled by the fact that it did not fit in the socio-material context. Yet, the entrepreneurial process did not stop there. New attempts are made over time to reflect on past experiences to create new images of the future. Therefore, the framework incites a reevaluation of terms such as 'success' and 'failure'. Today's failure can be tomorrow's success and vice versa. Moreover, it stresses the importance of intermediary actors in realising imagined futures, since imagination futures over time recruit new actors to try to realise them in daily life.

In Chapter 5, a particular entrepreneurial process was explored to gain more in-depth understanding of how imagined futures are shaping up in sustainable food entrepreneurship. This particular process was that of urban agriculture in Almere Oosterwold. Both the preferred and possible futures of residents were explored, as well as how these futures were organised in the present. The findings show residents have different perspectives of the future: the Feeding the City perspective proclaims the need to upscale as fast as possible to source the city of Almere, whereas the Nurturing the Community perspective in turn emphasises the need to build up the community step by step with urban agriculture as a shared activity. Furthermore, residents are capable in formulating specific actions to obtain the futures they prefer, but have trouble committing to the actions themselves. In Chapter 5, it is argued this is the result of temporal dissonance, a myopia where residents have trouble looking beyond their own situation. It shows imagined futures must fit with the lived experiences of citizens. This is important, because it shows entrepreneurship can only realise imagined futures to some extent; only when the imagined futures fit the specific context and lived experiences of society can it materialise.

2. *How are near and distant futures engaged in practices of sustainable food entrepreneurship and what does this mean for the transformation of the food system?*

In Chapter 3, the engagement with near and distant futures was studied in practices of food entrepreneurship during the covid-19 induced lockdowns of 2020. This was done through an online survey and in-depth interviews with practitioners of entrepreneurial practices. The findings show near future engagement is mostly associated with immediate change in practices enforced by the covid-19 lockdown, whereas distant future engagement primarily was visible in continuous change in practices as associated with sustainability. However, this does not mean near and distant future were perfectly balanced. Therefore, pre-existing trends with regard to sustainability can be accelerated or obstructed when they meet the immediate effects of disruption. Based on the findings of this study, the argument can be made that sustainability has itself become a form of continuous change. As both the survey and interview findings show, sustainability efforts did not diminish during the lockdown. Some changes in terms of sustainability, ranging from ongoing

investments in sustainable energy and machines to organic production methods, were already set in motion.

3. *How are futures for sustainable food discursively constructed through sustainable food entrepreneurship, and how does this affect the transformation of the food system?*

In Chapter 4, the discursive construction of sustainable food futures by food entrepreneurship was explored. Websites of food enterprises in Flevoland were analysed by using the space-time-framework that distinguishes between abstract and concrete usage of space and time in text. This results in multiple spacetimes that guide the narrative and projects trajectories for the future of food. The analysis shows the continuum of two constructed futures: closed and open futures. Whereas closed futures convey a sense of accomplishment in terms of the sustainability transformation of the food system, open futures display a future for sustainable food that is evolving and incremental. To illustrate, closed futures are associated with terms such as organic and biodynamic production, that involve a clear goal that can be worked towards. Open futures in turn are associated with more incremental step by step plans to be more sustainable, and is associated with terms such as circularity and sustainability. In this chapter, the argument is made that these futures are not mutually exclusive but mutually constitutive. They reflect the broader perspective of entrepreneurship which involves both attaining specific goals as well as dealing with ever evolving processes over time. Closed futures help to make sure specific missions are accomplished and open futures help to create new or different missions over time. This has relevance for the transformation of the food system by showing multiple visions of the future do not have to exclude one another but can co-create the future in the making over time.

6.3 Answering the research question: *plan-and-play*

This thesis set out to answer the question: how are imagined futures lived out in sustainable food entrepreneurship and how does this shape the ongoing transformation of the food system? In answering this question, this thesis departed from two linked assumptions. First, the notion that there is no single future that can be reached over time, as the future is lived out every day. Second, food entrepreneurship is not about discovering the future, but about imagining futures. Both signify the fact that the future cannot be planned in advance, it is always shifting and ongoing. The findings of this thesis shows that even though the future cannot be planned, planning for the future is part of the lived futures of food entrepreneurship. Yet, it is part of a dynamic process which I will call: *plan-and-play*. By this, I mean that living out the future in entrepreneurship involves having ambitions and goals for the future. At the same time, the formulating and pursuing of these goals

and ambitions is done through a process that can be seen as playful: it involves an ongoing iterative process of adapting to ever changing circumstances. This study, which centers food entrepreneurship in the so called 'polder' of Flevoland, a place that is renowned for its pioneering spirit, shows in-depth how this process of plan-and-play works.

Plan-and-play can be seen as the essence of the SFEF framework introduced in Chapter 2. This framework consists of an iterative cycle of sense making of past experiences and imagined futures and fitting imagined futures to socio-material contexts which results in new past experiences and imagined futures. Furthermore, fitting imagined futures in socio-material contexts requires 'matching meaning and materials'. In Chapter 2, the example was provided of the meat of male goats, which did not match with the socio-material context of Flevoland. Yet, continuous efforts were visible of trying to match the meanings of the male goat to the context. This was done by experimenting and trying out all sorts of recipe's and means of presentation of the meat to make it work.

Plan-and-play is also a crucial element in the entrepreneurial process in Oosterwold as discussed in Chapter 5. The contrasting perspectives of Feeding the City (FTC) and Nourishing the Community (NTC) nicely illustrate this. FTC involves the planned upscale of food production, whereas NTC signifies the more incremental development of urban agriculture in the neighborhood. This resembles plan-and-play by setting attainable goals on the one hand (FTC) and working a way towards goals in a playful, step-by-step, manner (NTC). Furthermore, in organising the future perspectives into the present, it becomes clear that the goals as identified by the residents do not fit (yet) in their daily life. Therefore, residents deal with the impediments of their life to obtain the desired goals, for instance by playfully trying to work within the regulations of Oosterwold when it comes to creating a shared space for urban agriculture.

Plan-and-play is also visible in near and distant future engagement in Chapter 3. In distant future engagement, food entrepreneurship involves both exploration and imagination of the future. The former refers to a more experimental process of seeking out the future step by step and adapting to new circumstances along the way, which involves playing. The latter in turn involves picturing a state in the future and making a plan to get there, which can be seen as planning. As the study shows, in practice these two processes coincide. For example, in working towards climate adaptation, food producers plan by making new business plans to deal with smaller harvests. At the same time, they play by exploring new forms of climate resilient production methods.

Lastly, plan-and-play is discernable in the discursively constructed open and closed futures as discussed in Chapter 4. Open, evolving futures are associated with incremental, step by step approaches and with terms such as circularity and sustainability. This resembles

more the playful ways of experimenting towards the future. Closed futures in turn refer to accomplished futures which involve attainable goals such as certified organic and bio-organic food production. This in turn resembles the role of planning the future. As argued in Chapter 4, open and closed futures in discourse from one continuum: they complement one another in making sense of how the sustainable food future in the making can be reached over time.

The findings of this thesis also show the entrepreneurial process of *plan-and-play requires both time and space to unfold over time.* First, there is time and space needed for practitioners of entrepreneurship to partake in plan-and-play, which means time and space to imagine futures, setting goals and readjusting and trying again.

In Chapter 2, the differences were discussed between entrepreneurs and types of enterprises in the extent to which they have resources to make a transition towards more sustainable food. Some entrepreneurs have to spend all their time and energy on food production and keeping up with administration. Therefore, there is no space for looking for new forms of revenue associated with sustainable food. This also shows the need for other actors than entrepreneurs, such as investing agencies, policy makers and researchers in fostering the connections between different elements of the entrepreneurial process. Similarly, Chapter 3 showed the differences in performances of entrepreneurial practices. In some firms, all practices are performed by the owner which leaves little room for maneuver. In other firms, production, processing and marketing is mostly done by a variety of employees, opening up space for the owner or manager to strategise for the future. Chapter 5 shows the contrast between those residents that have a lot of time on their hands in developing urban agriculture in the neighborhood, and those that are less able to, due to fulltime jobs, families, etc.

Second, time and space are needed for the process of plan-and-play to produce imagined futures with recognizable shapes or forms. Chapter 2 shows it takes time in some instances before meaning and matter matches, for instance in the case of the male goat meat which does not fit the cultural connotations of the meat yet, but which can change over time. Chapter 3 shows the need for time to unfold in the developing of dinner-box schemes that emerged over time without a clear plan or purpose, and was developed over time through adapting to changing circumstances. This in contrast to the food hub that did not emerge because there was limited time and space to let the process unfold. In Chapter 5, the issue of temporal dissonance is discussed: of residents having difficulty looking beyond their own temporal situation. This results in pessimism about the development of urban agriculture in the neighborhood, that might not be warranted since the neighborhood is in a relatively premature stage.

Plan-and-play shows the strength of entrepreneurship in the transformation of the food system as well as its limits. Entrepreneurship is a process of change that can bring innovation and novelty to the food system through plan-and-play. This process of change is not an isolated social phenomenon. It is inherently embedded in daily life and therefore taps into the strength of the community. Future products, production methods, means of distribution and transport take a variety of actors and activities to imagine and organise: from managers to employees, from civil servants to researchers, from producers to consumers. Therefore, the role of entrepreneurship in the transformation of the food system cannot be reduced to that of individual entrepreneurs and enterprises: it involves the community at large and their ability to connect and organise collectively. To phrase it differently: it takes a village (or a city) to be entrepreneurial.

This can be seen as a limitation of entrepreneurship as well. The efforts of those wide range of actors comes at a cost. It requires patience, and it is never really fully accomplished. First, the ongoing nature of entrepreneurship makes it hard to assess its value at a given moment in time. When an imagined product, production process of firm does not materialise in the near future, it can still inspire a successful firm or product in the distant future. This also makes it hard for policymakers and investment agencies to assess the value of entrepreneurship. Furthermore, actors such as entrepreneurs but also investors, civil servants or researchers, that allot time, space and resources to make it work, pay the price of plan-and-play. Even though in the larger process of change they are involved in, their efforts that may not immediately pay off can become successful in a later stage. At the moment however, those actors risk that the time, energy and resources they spend to not immediately benefit them personally.

6.4 Contributions of this thesis to science and society

This thesis has made a contribution to science and society in different ways. First, it has added to the entrepreneurship-as-practice literature by further exploring the usefulness of its theoretical scope to understand entrepreneurship. In particular, it has further explored the various ways in which the future is lived out in entrepreneurship, which is a relatively newly researched topic. This was done in a context that was hitherto not very thoroughly explored in the entrepreneurship-as-practice literature, which is the context of the food system transformation. Even though there is a strain of literature on entrepreneurship as social change (Calás et al., 2018; Poldner, 2020; Steyaert & Hjorth, 2006), the role of entrepreneurship in transformation processes, especially revolving around imagined futures, has not been researched much up until now. This thesis has opened up the debate in this field of study.

Second, this thesis has added to the literature on food system transformations by providing a more detailed and thorough account of the role entrepreneurship plays in this ongoing transformation. This is important for the Alternative Food Networks literature that, as discussed in the introduction of this thesis, hitherto used entrepreneurial theories without acknowledging it as such (Feyereisen et al., 2017; Grivins et al., 2017). This thesis, both in terms of the theoretical and methodological approach, as well as its findings, provides further understanding into the way in which mainstream and alternative practices co-create sustainable food futures over time. For example, in the alternative food networks literature, currently questions are asked about the barriers and opportunities for organising such networks (Poças Ribeiro et al., 2021). The theoretical and methodological approach to studying the organising process that is entrepreneurship, can be applied to future studies of AFN to explore precisely such questions.

This thesis also contributed to society. The research was done in an applied science context which both helped to stay grounded in the field, and at the same time inspired me to provide insights that are valuable for the field itself. The findings help policymakers to reorient themselves from the processes within firms, towards the processes that connect entrepreneurs, firms and products to society. It helps entrepreneurs themselves to see the wider network they are a part of, and to further appreciate both their own role, as well as the importance of connecting to other entrepreneurs and actors in society to make imagined futures a reality.

Lastly, in doing the research I also aimed to spur or inspire change itself. Increasingly, transdisciplinary science is hailed for providing not just an objective account from afar but also actually contributing to change (Horlings et al., 2019; Jahn et al., 2012). Particularly in the context of climate change and sustainability, the quest for transformation is urgent enough for scientists to also take up an active role in that. Especially in the action research in Oosterwold, as presented in Chapter 5, I contributed to this. I constructed a methodological platform for residents to work towards change. In that sense, I provided an opportunity to discuss imagined futures and change where there was none. Even though the outcome was mixed in terms of what was accomplished, as explained in Chapter 5, the actual intervention in Oosterwold did result in the fostering of connections of ideas, people and resources, which is itself a contribution to entrepreneurship.

6.5 Reflection on the theoretical and methodological approach

In this thesis, the lived futures of sustainable food entrepreneurship were studied in four different sites, using three different theoretical lenses and a variety of methods. As explained in the introduction, this rather complex approach was deemed necessary

due to the elusive nature of both lived futures and the process of entrepreneurship. This required a specific configuration of theory and method to capture different dimensions of the topic under scrutiny. The three lenses are derived from the same theoretical family, yet they help to hone in on different aspects of the same entrepreneurial process which manifested in multiple sites. In that way, they provided complementary perspectives that helped to provide a more comprehensive picture of the lived futures of sustainable food entrepreneurship as a whole.

To illustrate this, the use of the process lens in Chapter 2 results in an overall picture of how the process of sustainable food entrepreneurship unfolds in time and space in an ongoing and iterative fashion where imagined futures play a pivotal role. It highlights specific elements of entrepreneurship that are further explored in other chapters. For instance, the iterative process of creating new products, services or firms over time was further explored in Chapter 3 with the use of the practice lens, to understand more about the day-to-day performances of entrepreneurial practices. Furthermore, in Chapter 4 a critical discourse analysis helped to gain insight into how language and entrepreneurial practices shape one another, particularly when it comes to constructing projections for the future of food. Whereas Chapter 3 focuses more on the doings, Chapter 4 focuses more on the sayings, both show great insight into the important connection of the practical and imaginative aspects of entrepreneurship. Lastly, Chapter 5 explores a specific entrepreneurial process and adds to the iterative process as conceptualised in Chapter 2 by providing in-depth insight into a specific entrepreneurial process with more detail.

Three different aspects of the theoretical and methodological approach are important to reflect upon in more detail. First, I would like to point out the temporal scope of the chosen approach. As this thesis set out to capture the imagined futures as part of daily life, a big obstacle was the unfolding of time itself. When observing a process that is ongoing, one makes a snapshot in time and space that cannot completely capture the whole process. To illustrate this, as I am finishing this thesis, I hear of new developments in Almere Oosterwold and of products and firms in Flevoland decaying or flourishing. At some point in time this study ends, and entrepreneurship still unfolds. Yet, the methodological approach as chosen in this thesis helps to limit this effect.

In my approach, I tried to capture the phenomenon under study in multiple moments in time. In Chapter 3, the survey and interviews were executed in different stages of the covid-19 induced lockdowns. In Chapter 5, online and offline futuring methods were used in different years. In Chapter 4, we used a combination of interpretive discourse analysis with a more quantitative mapping approach, thereby following the advice of Hamann and Suckert (2018) who argue quantitative and qualitative elements together help to capture the multi-temporal dimensions of studying the future in discourse. Even

though this approach did not eliminate this limitation altogether, it helped to create a wider temporal scope that helps to capture a clear picture of what the process entails.

Second, I want to discuss the broader applicability of the theory-method packages this thesis has used. This thesis aimed to explore the lived futures of sustainable food entrepreneurship in a specific setting, through different manifestations, to gain more understanding of how such a process can unfold and what can be learned from that. Therefore, its findings are context-specific and cannot be generalised for other regions in the Netherlands, nor other countries in Europe or outside of Europe. To illustrate this, Flevoland has a particular history that favours entrepreneurship in the food sector. This manifests among other things in its affinity with organic farming (Dekking et al., 2020), which is unique in the Netherlands.

Yet, despite the fact that the empirical findings are hard to generalise, the approach to study the lived futures of sustainable food entrepreneurship can be expanded to other contexts, regions and countries. The theory-method packages for each chapter of this thesis are specifically configurated to fit the specific site of study. They can again be altered to fit other contexts, for instance to study food entrepreneurship in other regions, or to study entrepreneurship in other sectors seeking more sustainable practices.

Lastly, it is important to mention the role of the covid-19 outbreak. This was a major event during the research for this thesis. In the end, it both posed an opportunity as well as a constraint. Because entrepreneurs were busy adapting to the lockdown, the response rate for the survey in Chapter 3 was relatively low. Furthermore, the first and second futuring session as presented in Chapter 5 had to be conducted online. Similarly, some methods that could have provided interesting perspective became less realistic due to the constraints as posed by the lock-downs. For example, an ethnographic approach such as participant observation of the day-to-day activities of entrepreneurs could have provided a better picture of both the unfolding process of entrepreneurship, as well as the performance of practices and the role of future engagement.

At the same time, covid-19 also steered the research in a positive way. First, it allowed the opportunity to study the connection between immediate and continuous change as was explored in Chapter 3. Furthermore, it allowed experimenting with both online and offline forms of futuring as displayed in Chapter 5. Even though the participation and discussions were less profound, the online sessions could be done with a higher quantity of residents, providing a broader view of the various perspectives.

6.6 Recommendations for future research

This thesis affords opportunities for further research in the context of sustainable food entrepreneurship. First, the theoretical and methodological approach could be applied to different regions or countries to see to what extent other regions display different ways in which the future is lived out in sustainable food entrepreneurship. For instance, research on food entrepreneurship in Southern European countries such as Italy emphasise the role of heritage and culture in food system transformation. It could be interesting to use the approach of this thesis in a different geographical and cultural context, and to see whether common patterns can be distilled with regard to the role of entrepreneurship in food system transformations. Second, the theoretical and methodological approach can be further strengthened by using it in a longitudinal study that captures a certain site of sustainable food entrepreneurship for a longer period of time. The use of ethnographical methods, such as participant observation, can be useful in this pursuit. This can also help to map out more systematically how practices, processes and discourses change or stabilise over time and what factors contribute or obstruct these changes.

Additionally, this thesis also provides the tools to study the transformative potential of entrepreneurship. It could be interesting to study this in other contexts of transformation. This could apply to other systems within society that need to become sustainable, such as the energy or water system. But it could also be interesting to look at the extent to which entrepreneurship can contribute to the transformation of the organisation of the economy in general. The lived futures of entrepreneurship are inherently bound to a form of social and economic organising where imagined futures are used to anticipate unrealised profits. In other words, the lived futures of entrepreneurship are inherently part of capitalism (Beckert, 2016). Yet, as Calás et al. (2018) argue, entrepreneurship can also pave the way for a world beyond capitalism. The entrepreneurial lens as provided in this thesis in turn can help to explore the extent to which capitalism can be transformed through entrepreneurship.

A particularly interesting avenue to study this is degrowth. Degrowth prescribes the policy objective of keeping the economy within planetary boundaries, fair redistribution between rich and poor, and an efficient allocation of resources to maximise well-being (Bodirsky et al., 2022). It involves both the design of policy instruments to reduce material and energy output on a large scale and to increase the quality of life simultaneously. At the same time, it also involves experimenting with ways to reshape the economy and society, which includes changing food production, consumption and distribution (Hickel, 2020; Kallis et al., 2020; Schmelzer et al., 2022).

Feola (2019) and McGreevy et al. (2022) already show in their degrowth studies, processes and conceptualisations that resemble what has been found in this thesis. Feola (2019) argues that to achieve degrowth, it is important to unmake the capitalist imaginary. He argues this is done through the practices of mundane everyday activities in creating alternatives for the here and now. Furthermore, he argues unmaking involves a combination of situated and ongoing processes that are never fully finished and specifically emphasises the role of practice theory to understand how this unmaking unravels. McGreevy et al. (2022, p. 4) particularly emphasise in their study into degrowth and sustainable food systems that 'experimental and experiential approaches to the future allow for co-creation, creativity and "practicing with the future", which can avoid risk and lead to more optimistic, innovative and broadly supported food futures'.

In sum, studies of degrowth already show processes of change that have many similarities with that of the lived futures of entrepreneurship. Therefore, the perspective provided by this thesis could be used to explore how entrepreneurship contributes to the transformation of capitalist practices in the food system as well.

6.7 Policy implications and recommendations

This study explored the setting of sustainable food entrepreneurship in Flevoland, the Netherlands, as part of an ongoing transformation of the food system. In this particular setting, a city-region food system is shaping up that involves a (re)connection of the emerging urban centers of Lelystad and Almere, and the surrounding food producing rural villages. In this study, it became clear that government officials play a crucial role in stimulating entrepreneurship. On the provincial government level, there is an investment agency called Horizon which actively seeks and fosters connections between entrepreneurs, ideas and products, appreciating the wider scope of what entrepreneurship entails.

On the other hand, in my various dealings with civil servants of the municipality of Almere over the years, it became clear to me that local government expects a lot from the ingenuity of individual entrepreneurs in exploring and exploiting the new opportunities for profit that emerge out of the food system transformation. They assume the government plays a limited role in this, and that entrepreneurs can find out new pathways on their own. Similarly, in the case of Almere Oosterwold as discussed in Chapter 5, the local municipality of Almere expected the food as produced in Oosterwold to arrive over time in the rest of the city of Almere. Yet, they did not explicate nor actively stimulate the entrepreneurial process required to achieve this, even though the residents that were expected to play an entrepreneurial role demanded this.

This study has two implications for policy-making. First, it shows policy-making must appreciate the complex process of (re)organising the food system through sustainable food entrepreneurship. The phrasing 'plan-and-play' as chosen in this thesis is a deliberate wordplay on the well-known phrase 'plug-and-play', which refers to a system that works automatically without much external support. In contrast, plan-and-play does not emerge automatically. First, it requires a social infrastructure of actors that not just includes enterprises and entrepreneurs but also investors, researchers, policy makers, NGO's etc. As discussed before in this thesis, in the entrepreneurial process the boundaries between entrepreneurs, citizens, consumers, but also policymakers and researchers become blurry. All can have a pivotal role in bringing forth transformation. Second, it requires actors that connect all these different actors with different ideas, interests and capabilities. Those actors need to have time on their hand to experiment, to foster connections. Such actors can be entrepreneurs, but in those instances when entrepreneurs lack the time or opportunity to do so, other actors can play this role.

Second, this thesis also raise a question about the 'speed' of entrepreneurship vis-à-vis policy. Considering the fact that plan-and-play takes time and space to unfold, can society at large afford the patience of relying primarily on the entrepreneurial process? In other words, is food entrepreneurship going 'fast enough' on its own to be expected to solve the challenges as posed by climate change? This links to a wider policy debate concerning the role of the government in the economy. Three recent books from a new generation of economists proclaims the needs for a stronger (financial) role of government in steering the economy, especially with regard to issues of climate change. Stephanie Kelton challenges the idea that government deficits hamper the challenge to solve climate change, by arguing that large deficits do not endanger future prosperity but stimulate it (Kelton, 2020). Mariana Mazzucato similarly argues the need for an entrepreneurial state that actively steers the economy through large, and financially costly public projects (Mazzucato, 2021). Kate Raworth in turn shows the need to steer the economy in such a way that it fits within both social and environmental boundaries, the so- called 'donut economy' (Raworth, 2017). These economists have in common that they do not expect the economy to automatically resolve its own issues. They emphasise the return of the state to actively plan parts of the economy.

This leads to three recommendations. First, it is crucial to have an insight into the network of actors, resources, ideas and capabilities that enables entrepreneurship. Local government and knowledge institutions can work together on this. For instance, by designing a living monitoring dashboard that maps the relationships between firms, entrepreneurs and other relevant societal levels (e.g. NGO, advocacy) and that is updated regularly through both quantitative and qualitative data. Such a dashboard must not only show the flashy success stories, but also those entrepreneurs, products or areas that

struggle and that demand more support. The updating of such a dashboard could be done by knowledge institutions such as universities of applied sciences. The dashboard itself in turn could be operated by the statistical agency of the municipality, and be used by policy makers in the field of food and entrepreneurship.

Second, it is important that within such an network, different actors, ideas and resources are connected over time. Both in Chapter 2 and Chapter 5, the role of intermediary actors is mentioned as pivotal in the entrepreneurial process. Giambartolomei et al. (2021) call them 'policy entrepreneurs', i.e. those actors that make things happen. The availability of such actors, both in local governments but also in civil society and in business networks, function as the oil in the wheels. Such actors can play a role in connecting and fostering relationships and helping out with navigating administrative and regulatory difficulties such as was desired by the residents in Oosterwold. Such actors can also play an important role in setting up longitudinal action research processes. For instance, by collectively creating new business models for individual entrepreneurs and/or collective organisations such as cooperatives to foster entrepreneurship. As Chapter 5 shows, these co-creative processes in which multiple stakeholders collectively imagine the future are not automatically a success. Still, they can create an impulse and stimulate processes of change that might not have emerged without it.

Lastly, governments can play a more steering role in facilitating entrepreneurial transformation processes that are stuck or cannot get off the ground. To illustrate, in Almere there is an area called 'the Buitenvaart', which used to host horticulture and flower production. Currently, civil servants expect entrepreneurs in Almere Buitenvaart to make a transition to growing sustainable food instead, yet they expect entrepreneurs do organise this on their own. So far with little success (van der Gaast et al., 2020). Governments could also actively steer the transformation of this area. First, by changing the zoning policy to make sure the area is only designated for food production. Second, by buying out all entrepreneurs that cannot or will not make the change to food production. Third, by actively stimulating entrepreneurs that have innovative ideas regarding food production to set up shop at Almere Buitenvaart. It is questionable whether such a strategy is realistic at the moment since it requires financial resources that municipalities have little of. Still, considering the changing perspective of the role of the government in steering the economy, it is not completely unrealistic to foresee that in the future governments might be willing to spend more financial resources to foster entrepreneurship when it cannot blossom on its own.

6.8 Concluding remark

I would like to conclude this thesis with a message of hope. In the last stages of writing this dissertation, I read the book 'The Dawn of Everything' by David Wengrow and the late David Graeber. In this book, these scholars argue that human societies have experimented with new forms of organising themselves and their economies for thousands of years. Societies took shape in a wide range of ways, from egalitarian to hierarchical, from equal to highly unequal in terms of the distribution of resources. Some societies even switched from one type of organising form towards one another when seasons changed. They argue that it was playing that acted as a site of social experimentation and innovation that drove this continuous and ongoing process of change:

> 'If something did go terribly wrong in human history – and given the current state of the world, it's hard to deny something did – then perhaps it began to go wrong precisely when people started losing that freedom to imagine and enact other forms of social existence, to such a degree that some now feel this particular type of freedom hardly even existed, or was barely exercised, for the greater part of human history.' (Graeber & Wengrow, 2021, p. 502)

This thesis shows that playing is still visible in how imagined futures are lived out in sustainable food entrepreneurship. This can be seen as hopeful in times of crisis, with climate change, a pandemic and geopolitical upheaval. It shows change and transformation can emerge out of the everyday lived futures: when there is the freedom to imagine different futures and when there is the freedom to play to make such futures into reality.

Summary

The current food system causes problems such as biodiversity loss, water shortages, pollution and desertification that will become more severe over time. Furthermore, the scientific and societal debate on how a sustainable future of the food system should look like is getting more and more contested.. Yet, at the same time, there are several examples of actors and organisations that are already working towards more sustainable food futures despite all the difficulties that lie ahead. A case in point is food entrepreneurship, and its role within the ongoing food system transformation. So far, the scientific understanding of food entrepreneurship is mostly restricted to the individual agency of entrepreneurs as economic actors that exploit the new opportunities the market for sustainable food affords. Instead, in this thesis I argue the need for a new perspective: that of sustainable food entrepreneurship.

In this perspective, entrepreneurship is considered a social process of change itself that is driven by imagined futures. Imagined futures drive the daily life of entrepreneurs, which connect them to a wide range of human and non-human actors within a larger process of change. This process of change in turn shapes the future of food continually over time. In this understanding, the sustainable future of food is not a static state that can be achieved over time. It is a lived entity that is constantly evolving and changing. Such a perspective helps to understand more about what role entrepreneurship plays in the ongoing food system transformation. In other words, this thesis sets out to answer the following research question: How are imagined futures lived out in sustainable food entrepreneurship and how does this shape the ongoing transformation of the food system?

This study is conducted in the context of food entrepreneurship in Flevoland, the Netherlands. This region has a history of food production, as it was reclaimed from the sea to function as agricultural land. In a later stage, cities emerged in this region that currently are positioning themselves as green growing cities: cities that want to stimulate more sustainable and healthy food. The lived futures of sustainable food entrepreneurship in Flevoland are studied through three different theoretical lenses in four different empirical sites. These lenses and sites are thoroughly introduced in the introduction of this thesis (Chapter 1). The process lens helps to understand more about the ongoing entrepreneurial process itself, and how imagined futures are shaping up within this process. This is accomplished by conceptualising the entrepreneurial process based on the insights of practical and scientific expertise (in Chapter 2), and by exploring a specific entrepreneurial process in Almere Oosterwold through action research and futuring (in Chapter 5). The practice lens was used to explore engagement with near and distant futures in changing entrepreneurial practices during the disruption as caused by covid-19 (Chapter 3). Lastly, the discourse lens was used to study how futures of food are discursively constructed

through food entrepreneurship. This was done through a critical discourse analysis of websites of food enterprises (Chapter 4).

In Chapter 2, the process of sustainable food entrepreneurship was mapped out through the construction of a conceptual framework. The framework was made by scrutinising expertise on entrepreneurship, both in the literature and with experts in Flevoland that were interviewed. This framework, the Sustainable Food Entrepreneurship Framework (SFEF), departs from the notion of uncertainty. Uncertainty incites a cyclical process of change and implores entrepreneurs to reflect on the past before imagining the future. These imagined futures must be fitted to the socio-material context before emerging as artefacts (e.g. products, services or firms), which incites new uncertainties and a new cycle of change. This framework helps to understand the extent how imagined futures are shaping up. It shows an ongoing process which includes continuous change where imagined futures are tried and retried over time. Therefore, the framework incites a reevaluation of terms such as 'success' and 'failure'. Today's failure can be tomorrow's success and vice versa. Moreover, it stresses the importance of intermediary actors in realising imagined futures, since imagination futures over time recruit new actors to try to realise them in daily life.

In Chapter 3, the engagement with near and distant futures was studied in practices of food entrepreneurship during the covid-19 induced lockdowns of 2020. The findings show near future engagement is mostly associated with immediate change in practices enforced by the covid-19 lockdown, whereas distant future engagement primarily was visible in continuous change in practices as associated with sustainability. However, this does not mean near and distant futures were perfectly balanced. Therefore, pre-existing trends with regard to sustainability can be accelerated or obstructed when they meet the immediate effects of disruption.

In Chapter 4, the discursive construction of sustainable food futures by food entrepreneurship was explored. The analysis shows the continuum of two constructed futures: closed and open futures. Whereas closed futures convey a sense of accomplishment in terms of the sustainability transformation of the food system, open futures display a future for sustainable food that is evolving and incremental. Open futures in turn are associated with more incremental step by step plans to be more sustainable, and is associated with terms such as circularity and sustainability. In this chapter, the argument is made open and closed futures are not mutually exclusive but mutually constitutive. They reflect the broader perspective of entrepreneurship which involves both attaining specific goals as well as dealing with ever evolving processes over time.

In Chapter 5, a particular entrepreneurial process was explored to gain more in-depth understanding of how imagined futures are shaping up in sustainable food entrepreneurship. This particular process was that of urban agriculture in Almere Oosterwold. The findings show residents have different perspectives of the future: the Feeding the City perspective proclaims the need to upscale as fast as possible to source the city of Almere, whereas the Nurturing the Community perspective in turn emphasises the need to build up the community step by step with urban agriculture as a shared activity. Furthermore, residents are capable in formulating specific actions to obtain the futures they prefer, but have trouble committing to the actions themselves. In Chapter 5, it is argued this is the result of a temporal dissonance, a myopia where residents have trouble looking beyond their own situation. It shows imagined futures must fit with the lived experiences of citizens.

Chapter 6 contains the final chapter and conclusion of this thesis. In this conclusion, a characterisation of the lived futures of sustainable food entrepreneurship is provided based on the findings of all four empirical chapters. The lived futures of sustainable food entrepreneurship are part of a dynamic process which I will call: plan-and-play. By this, I mean that living out the future in entrepreneurship involves having ambitions and goals for the future. At the same time, the formulating and pursuing of these goal ambitions is done through a process that can be seen as playful: it involves an ongoing iterative process of adapting to ever changing circumstances.

Plan-and-play shows the strength of entrepreneurship in the transformation of the food system as well as its limits. Entrepreneurship is a process of change that can bring innovation and novelty to the food system through plan-and-play. This process of change is inherently embedded in daily life and therefore taps into the strength of the community. Therefore, the role of entrepreneurship in the transformation of the food system cannot be reduced to that of individual entrepreneurs and enterprises: it involves the community at large and their ability to connect and organise collectively. This can be seen as a limitation of entrepreneurship as well. The efforts of those wide range of actors comes at a cost. When an imagined product, production process or firm does not materialise in the near future, it can still inspire a successful firm or product in the distant future. Yet, not all actors that risk time, energy and resources benefit from this personally.

This thesis ends with pointing out implications and recommendations for policy and future research. For future research, it is suggested to use the theory-method package as developed in this thesis to study the transformative role of entrepreneurship in other contexts. Furthermore, for policy making it is deemed important to assess the role of entrepreneurship in food system transformations not through the role of individual enterprises and entrepreneurs, but through the wider social infrastructure they are

embedded in. This implies intermediary actors are important that foster relationships between actors, resources and ideas. Furthermore, the time and space needed for an entrepreneurial process to unfold, means governments in some occasions need to play a more steering role through enabling and constraining policies and financial incentives.

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About the author

Koen van der Gaast was born (1989) and raised in Amsterdam. He gained a bachelor's degree in Political Science from the University of Amsterdam in 2012. In 2015, he obtained a master's degree in Environmental Sciences from the University of Utrecht, and majored in Environmental Governance. As part of his thesis, he did an internship at the WRR (the Dutch Scientific Council for Government Policy). In 2015, he started as a junior lecturer at the Institute of Interdisciplinary Studies, which is part of the University of Amsterdam. For three years, he taught students of the bachelor's programme Future Planet Studies. In this period, he also wrote a book on academic skills for interdisciplinary studies. In 2018, Koen started as a PhD candidate of Aeres University of Applied Sciences and Wageningen University and Research. As of October 2022, Koen is employed as a Senior Researcher and Advisor at the Dutch Food and Consumer Product Safety Authority (NVWA). He works for the Office for Risk Assessment & Research (BuRO), an independent department of the NVWA. He is part of the Cluster Trends and Future research, and helps the NVWA to explore futures and anticipate upcoming risks and opportunities.

Koen van der Gaast
Wageningen School of Social Sciences (WASS)
Completed Training and Supervision Plan

Name of the learning activity	Department/Institute	Year	ECTS*
A) Project related competences			
A1 Managing a research project			
WASS Introduction	WASS	2018	1
Writing the research proposal	WUR	2018-2019	6
'Practicing futures in food entrepreneurship'	Summer conference, Lancaster University	2019	1
'Sustainability in times of disruption: engaging with near and distant futures in practices of food entrepreneurship'	European Sociological Association (ESA), Barcelona	2021	1
'From prosumership to entrepreneurship in Almere Oosterwold'	Scientific Conference: Reinventing the City, AMS Institute, Amsterdam	2022	1
Paper review	Scandinavian Journal of Management	2022	1
Paper review	Sustainability: Science, Practice and Policy	2022	1
A2 Integrating research in the corresponding discipline			
Academic Publication and Presentation in the Social Sciences	WASS	2021	4
Summer school Practices and Process Studies	University of Warwick	2020	1
Summer school Living Labs	AMS Institute, Amsterdam	2020	1.5
PhD Workshop Entrepreneurship as Practice	VU, Amsterdam	2020	1
Analysing Discourse: Theories and Methods, CPT 56303	WASS	2020	6
B) General research related competences			
B1 Placing research in a broader scientific context			
Alternative Remote Research Methods Training	Otherwise, Wageningen	2021	1.5
Interdisciplinary Methods	ENP, WASS, SENSE	2019	1.5
Visual research methods, CPT 53302	WASS	2020	2
Summer school Futuring	Urban Futures Studio, Utrecht University	2019	1.5
B2 Placing research in a societal context			
Co-organizing AESOP SFP PhD & YP Workshop (3 days)	Aeres University of Applied Sciences Almere	2019	4
C) Career related competences/personal development			
C1 Employing transferable skills in different domains/careers			
Career assessment	WGS	2022	0.3
Total			**36.3**

*One credit according to ECTS is on average equivalent to 28 hours of study load

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