Food and the middle class

The site of food transition in rural and urban Bengaluru, India

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List of Abbreviations

AFN	Alternative Food Network
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
EU	European Union
FOR	Forschungsgruppe (Research Unit)
GDP	Gross Domestic Product
INR	Indian Rupee
IT	Information Technology
MRSI	Market Research Society of India
NCAER	National Council of Applied Economic Research
NCD	Non-Communicable-Disease
PDS	Public Distribution System
SES	Socio Economic Stratification
SSI	Survey Stratification Index
WHO	World Health Organisation

1 Introduction

The global food consumption today is environmentally and socially not sustainable. It is not new that diets with a high intake of meat are causing high greenhouse gas emissions (Goodland, 1997; Carlsson-Kanyama, 1998). A relatively new discourse is, however, the combined problematization of diets with a high intake of meat, refined sugar, and refined fat, as having high greenhouse gas emissions and concurrently causing overweight and Non-Communicable-Diseases (NCD) (McMichael et al., 2007; Tilman and Clark, 2014; Rockström et al., 2016). At the same time, hunger and micronutrient deficiencies are still prevalent, especially in the Global South. While overweight, obesity, and NCD have for a long time been considered to be problems of the global upper and middle class (Rockström et al., 2016), these bodily conditions have become a problem for the global poor as well. This concomitant existence of over- and undernutrition is today referred to as the double burden of malnutrition (Kulkarni et al., 2017; Ahmad et al., 2018; Muttarak, 2018), which additionally complicates the question of diets with regard to social sustainability.

This triangle of food practices, health and sustainability represents not only the starting point for my PhD-research, but, also for the subproject C04 "Sustainable food consumption practices of middle-class consumers" of the DFG research unit FOR2432. During the first three years of my PhD-research, I was employed as doctoral researcher in this research unit. Research activities took place in the rural-urban interface of Bengaluru, India. Within the context of India, where undernutrition is still a major issue, we wanted to make sure that we speak to the people who have the means to afford the increasingly problematic diet mentioned above. Therefore, it was decided to work only with middle-class people.

This cumulative thesis consists of four independent manuscripts, which at the point of submission of this thesis are in different stages of the review and publishing process with one German and three international, peer-reviewed journals. I will elaborate on the connection between these three manuscripts by framing them by an introduction and a conclusion, which represent at the same time the journey of my dissertation project.

In chapter 2, I will begin by introducing the reader to the nutrition transition – the concept which was used in the beginning within the subproject. As I became increasingly critical of that concept during the time of my research, I will continue by elaborating on the critique of several scholars as well as my personal critique regarding the nutrition transition concept. In the second

part of this first introduction chapter I will elaborate on how I attempted to observe sustainable diets as the normative frame of the project. I will close the chapter by introducing food transition as the main conceptual frame and practice theory as my theoretical framework.

In chapter 3, I will elaborate on the empirical setting. First, I will introduce the reader to food in India. Second, I will introduce Bengaluru as well as what makes this city special regarding food and food practices. Third, I will review how the Indian middle class is conceptualized in the literature. As this turned out to be one of the major challenges for my PhD-research as well as the project, I will review and critique both quantitative as well as qualitative conceptions of the Indian middle class.

In chapter 4, I will provide an overview over my research stays and my methodology. Altogether, I went on three separate research stays with a duration of two to three month, from August 2016 to December 2017. During the first research stay I conducted a survey on food practices with 300 households in the rural-urban interface of Bengaluru. The survey was primarily conducted as a project requirement. At the time this thesis is finalized, the results were only evaluated descriptively for the first manuscript. Furthermore, the results of the survey provided the substance for the further inquiries during the second research stay. A concise overview of the results is therefore provided in subchapter 4.1 of the methodology and data section of this thesis. Chapters 4.2 to 4.5 provide a concise overview over the methodology applied and the data gathered during the second and third field stay.

In chapter 5 I will provide an overview over the four manuscripts which comprise the core of this thesis. As all manuscripts were co-authored by one to two other authors, I will briefly elaborate on my contribution to the manuscripts in a table for each manuscript. Chapters 6-9 comprise the above-mentioned manuscripts.

The outline of the introductory chapter revealed two important discussions evolving during the time of my research, which will be taken up in the conclusion in chapter 10: The conception of the Indian middle class and the notion of food transition. I will elaborate on how the manuscripts of this thesis contribute to the two discussions and what implications this has for further research. Furthermore, I will also elaborate on the theoretical implications of this thesis for the interrelation of the discipline of human geography and practice theory. In the final chapter I will then synthesize the main findings of this thesis under Schatzki's notion of site. In this dissertation I aim at contributing to a better understanding of the Indian middle class and food transition. I will, furthermore, show that practice theory is a fruitful hermeneutic approach to

the study of food transition. Finally, I strive to encourage geographic enquiries of food transition and to strengthen geography's standpoint as one of the main empirical contributors to practice theories.

2 Conceptual and theoretical frame

In this chapter I will present the development of my theoretical framework through the time of my dissertation. I will start by introducing the concept of nutrition transition as well as the criticism towards it. I continue by framing the normative framework of sustainability by a literature review on what other authors regard as contributions for more sustainable diets. In chapter 2.4 I will introduce the concept of food transition by comparing approaches of authors with different theoretical backgrounds to the concept. Furthermore, I will elaborate on why food transition requires the contribution of geographers. I will use chapter 2.5 to elaborate why practice theory is a promising approach for the study of food transition in the empirical setting presented in the subsequent chapter, whereas the detailed application of the theory will be explained in the dissertations' manuscripts. Furthermore, I will explain why this theory needs the contribution of geography as a spatial science and how the latter can benefit from the application of practice theory.

2.1 The nutrition transition

Unsustainable food consumption is closely connected to a global nutrition transition, which describes an aggregate shift from a monotonous and cereals-based diet linked to undernutrition, towards a diet, which improves human health because of its increased variety and higher intake of fruit and vegetables. However, these dietary shifts also lead to an unhealthy increase in the intake of fat, especially through animal products, but also an increase of sugar, and processed food. Finally, the intake of fat and processed food decreases with a renewed improvement of human health. In most Asian countries the described undernutrition continues to exist for some people, whilst for other people sedentary lifestyles are increasing along with overweight/obesity and NCD (Popkin, 1994; Popkin et al., 2001).

In contrast to most Western countries, countries in the Global South enter the stage of high fat diets at a much lower Gross Domestic Product (GDP). Thus, economic growth cannot be the only explanation for changing diets. Other important factors are urbanisation, global trends in changing diets (Drewnowski and Popkin, 1997), less physical labour, the increasing access to mass media, and, with increasing incomes, an increasing income inequality (Popkin, 2002). Another reason for the increased consumption of fats, despite a relatively low GDP, was the global increased consumption of vegetable fats, due to technical advance in the production of

oilseeds. Thus, the increase in the consumption of vegetable fats plays a more significant role for nutrition transition in the Global South than the increased consumption of animal products. Previous undernutrition of people, also in utero, and/or previous diseases such as Malaria are discussed to have an influence on the remarkable increase of diet related NCD in the Global South, (Popkin, 2002). Theories, according to which there could be a general genetic predisposition for certain NCD in Asian populations (Shetty, 2002), are discussed more critically. However, in Asia people get Diabetes Type 2 at a younger age and at a lower Body Mass Index compared to Western societies (Hu, 2011).

In contrast to other Asian countries, where the increased intake of meat consumption is much higher, the most distinguishing increases in terms of food consumption in Indian nutrition transition are an increased intake of dairy products and added sugars (Popkin et al., 2001). Pingali and Khwaja (2004) describe Indian food transition more detailed in two steps: In a first step of an "income-induced diet diversification", increasing incomes lead to an increased consumption of nutritionally superior foods, decreased intake of rice, consumption of more rice varieties, and an increased consumption of wheat. In a second step of "diet globalisation" people move away from their traditional diets and the demand for animal products, imported fruits and vegetables, and convenience food increases. Furthermore, eating out increases (Pingali and Khwaja, 2004; Gaiha et al., 2013). While there has been a decline in the consumption of proteins, for instance in the form of pulses and legumes, and other macro-nutrients, the share of fats in Indian diets is increasing, especially in urban areas (Shetty, 2002; Deaton and Drèze, 2009).

Urbanization, demographic changes, changing gender roles, and changing ways of living together in one household, e.g. the increase of nuclear families in relation to joint families living together, are regarded as the main reasons for nutrition transition in India (Pingali and Khwaja, 2004; Gaiha et al., 2013).

Looking at calorie intakes related to income in rural areas, Deaton and Drèze (2009) found that the wealthier inhabitants of rural areas show a decrease in calorie intake. For the poorer parts of the population it has been stable, amounting to an overall decrease in calorie intake. Decreased activity levels would not suffice as an explanation for this phenomenon. Another characteristic of Indian nutrition transition are the disparities between rich, urban and poor, rural populations, with the former having progressed further in the nutrition transition with positive as well as adverse consequences (Shetty, 2002). Disparities were also found in the sense that dietary patterns can easily be assigned to either plant-based or animal-based food patterns

(Satija et al., 2015). The high amount of pollutants in food due to, for instance, pesticides and fertilizers are further fostering the development of diseases caused by food consumption and the export of cash crops containing important micronutrients possibly deprives the ones most in need of them (Shetty, 2002). Thus, social disparities somehow disturb the picture of a homogenous food transition.

As a consequence of these increasing disparities, undernutrition, including micro-nutrient deficiencies, prevail on the same rates since the beginning of the 1990s, despite India's economic growth (Deaton and Drèze, 2009). Furthermore, the nutrition transition does also increasingly endanger the livelihood of small farmers as they can often not compete in the increasingly competitive food market (Pingali and Khwaja, 2004).

2.2 Criticizing the nutrition transition

Landy (2009) suggests to increasingly consider cultural factors when researching nutrition transition in India. Furthermore, he questions the validity of the nutrition transition model as "teleological vision leading to one way only" (Landy, 2009, p. 61), namely the Western way which is of questionable desirability anyway. Especially, vegetarianism as well as concepts such as hot and cold food would be unique cultural traits, which could contribute to better comprehend changing diets in India. Indeed, a study by Padmadas et al. (2006) indicates that diets can vary remarkably depending not only on socio-economic but also cultural, religious, and, last but not least, locational background. Teleological development models, such as nutrition transition are, furthermore, criticized as they fail to consider that middle and upper classes might well be able to access the means of their Western counterparts (Mawdsley, 2004, p. 83) . Thus, these classes are even less likely to follow a development model or are often "ahead" of their poorer compatriots. This weakens the narrative of a relatively homogenous nutrition transition in India, but also globally.

Models of nutrition transition are also criticized for underestimating the number of calories consumed while eating out. Except for adding the calories, which might be consumed, but not reported by respondents, into the calculations when it comes to nutrition transition, it is then also important to ask who is consuming these extra calories in order to avoid talking down existing hunger (Smith, 2015). Like Landy, Fourat and Lepiller (2017) criticize that nutrition transition pays too little attention to socio-cultural factors which influence changing diets. Describing the increasing consumption of certain foods as a simple equation of measurable factors

such as GNP, is a gross simplification of people's everyday life (Hansen, 2018). The depiction of diets containing meat and other animal products as being indispensably nutritionally superior to plant-based diets, is highly questionable and not conducive to a transition towards more environmentally sustainable diets (Weis, 2013).

Additionally to the critique of the authors mentioned above, I consider models of nutrition transition to be unrealistic and, thus, inapplicable on the household level. Whole societies do not "enter different stages of what has been called the nutrition transition" (Drewnowski and Popkin, 1997, p. 31) because of increased incomes and urbanization. As indicated in chapter 2, due to, for instance, socio-economic differences, parts of their population do enter ensuing stages of the nutrition transition, while others remain in lower stages (Padmadas et al., 2006).

Furthermore, I argue that especially the publications of Popkin and his colleagues, feed imperialist development endeavour when talking about nutrition transition in countries of the Global South. Drenowski and Popkin (1997) discuss differences in nutrition transition between the Global North and Global South in a questionable way, with the Global North taking actions towards a healthy diet of its people and the Global South as using "their growing incomes to replace their traditional diets, rich in fibers and grains, with diets that include a greater proportion of fats and caloric sweeteners" (Drewnowski and Popkin, 1997, p. 31). These views are perpetuated in later publications of Popkin et al. (2001) in which the authors wonder: "[…] how little these countries [China and India] have focused on fully understanding these shifts [from undernutrition related diseases towards diet-related noncommunicable diseases], their causes, and the ways to address them." (Popkin et al., 2001, p. 388). In these statements they ignore earlier statements of themselves, the difficulty of dealing with the double burden of malnutrition, and corporate influence stemming inter alia from the Global North. In contrast to the Global South, the Global North is praised for its efforts towards healthier diets. It is highly questionable if it is possible that countries in the Global South "facing rapid dietary change learn from the lessons of higher income countries and try to direct the nutrition transitions in more healthy directions" (Popkin, 1994, p. 285). I argue that these publications employ a rhetoric "that has deep colonial lineages, the south is read through a western lens and seen as suffering from *lack* of the vigour and conduct which originates in and finds its full development only in the West." (Sidaway, 2000, p. 603). My critique goes along with assessment of Landy (2009), Hansen (2018) and Weis (2013) of the nutrition transition as a questionable teleological vision.

After the examination of shortcomings of the nutrition transition concept, I therefore decided to apply a different concept for my work. In contrast to Landy (2009), who calls to extend the

nutrition transition with analysis of socio-cultural backgrounds, Fourat and Lepiller (2017) suggest a parallel concept, which looks at changing diets in their socio-cultural context: the food transition. I will discuss their suggested concept and how I apply it in chapter 2.4.

2.3 Transition towards sustainability

So how to induce change in Indian diets to be more sustainable and more conducive to people's health? One insight is that food policies have to move away from a singular focus on how to increase the number of calories for the overall population and instead focus on how to increase nutrient density. Theoretically, such a strategy could improve both ends of the double burden of malnutrition (Thow et al., 2016). Suggestions to advance in that direction include, for example, promoting the cultivation of legumes as they can increase soil fertility and at the same time provide calories and proteins to alleviate malnutrition (Das and Ghosh, 2012). Others add that millets and sorghum could improve both nutritional as well as agricultural diversity and thus contribute to improve provision of micronutrients and biodiversity (Sébastia et al., 2013). Regarding the increasing number of type 2 diabetes patients in India, for whom the consumption of millets can contribute to a relieve of symptoms, millets could also contribute to tackle improve the situation (Shobana et al., 2013). However, Sébastia etal. (2013) stress the importance of including dietary advisors in such plans.

India's organic movement takes up these suggestions amongst others and therefore, seemed to be a part of the Indian food system worth investigating in terms of its transformative potential towards sustainability. Especially the promotion of millets both in organic agriculture as well as consumption, has been a remarkable aspect of this organic movement. If organically produced food is generally healthier than conventional food, is difficult to research and there are only sporadic studies confirming a positive health impact of organic food (Huber et al., 2011). However, except for potential benefits for the consumers, India's organic movement is also involved in improving farmers' livelihoods and in improving environmental sustainability by decreasing the use of chemical pesticides and fertilizers.

Although Indian people are generally concerned about adverse health implications of conventional food, the concept of organic food is not very well known and organic retail is catering only to urban middle and upper classes (Osswald and Dittrich, 2009; Joshi and Hioki, 2012; Nandi et al., 2016). Regarding its class exclusiveness, the Indian organic market does not differ much from its Western counterparts (Goodman and Goodman, 2009). Although overall

knowledge about organic food might be low, retailers in urban centers such as Hyderabad and Bengaluru, where there is a solid customer base for organic food, struggle to meet the increasing demands of the middle class. Beside general health concerns, the diagnosis with NCD such as diabetes is often reported as a trigger to buy organic food, sometimes even upon doctors' advice. Low availability of organic food, price sensitivity, and low trust in organic labels are reasons which decelerate the increase of organic food consumers (Dittrich, 2009; Osswald and Dittrich, 2009; Osswald and Menon, 2013; Sondhi, 2014).

The consequences of this focus on the middle class are unclear. Some authors expect a continuous growth of the organic food market based on a growing consumer demand and increased marketing efforts (Sondhi, 2014; Nandi et al., 2016). I argue that the opposite effect could be expected as well: Middle class consumerism in India (and elsewhere) is often primarily a mean of distinction (Fernandes and Heller, 2006; Brosius, 2011; Anantharaman, 2017). Assuming that buying organic food is also used for distinction, the consumption of organic food becomes more unlikely for lower class people, who might already experience exclusion by the higher prices they would have to pay for organic food. This would result in a lock-in of the organic food market rather than a continued expansion.

2.4 Food transition

As I already indicated in chapter 2.2 the concept of food transition was suggested by Fourat and Lepiller (2017) to provide an amendment as well as an alternative to models of nutrition transition. Unlike other authors who refer to the concept of food transition, they are deriving their approach to food transition directly from their critique towards nutrition transition. While they state that socio-economic factors are the drivers behind changing diets, they argue that socio-cultural factors, partly connected to particular places or regions, would determine how the induced changes unfold (Fourat and Lepiller, 2017). Although diets would change influenced by other food cultures, they would retain some traditional features (Landy, 2009; Jesus Silva et al., 2017). For example, while American fast-food chains have gained a certain popularity in India, their use remains an exception in most people's everyday food consumption, which mainly consists of traditional Indian dishes. Therefore, the extent to which traditional diets are preserved or replaced depends on specific local contexts.

Another way to approach food transition is from the angle of sustainability transitions. These approaches do not refer to models of nutrition transition at all, yet they provide some remarkable

overlaps with the literature mentioned above. In sustainability transitions the theoretical background mainly draws from Socio-Technical-Systems (STS) and the Multi-Level-Perspective (MLP) model[1]. Furthermore, they suggest the application of practice theories for the study of food transition (El Bilali, 2019).

While authors such as Fourat and Lepiller (2017) and Jesus Silva et al. (2017) mainly take an observing role when analysing changing diets, authors working with sustainability transitions rather focus on the possibilities how to govern food transition towards the aspired outcome, namely increased sustainability (Spaargaren et al., 2012; Vivero-Pol, 2017; El Bilali, 2019). This approach of frankly expressing the authors' normative aspirations regarding the analysed transition is endorsed by Shove and Walker (2007). They argue that if the desired outcome is not pointed out and appropriate management approaches or strategies are not derived, studies would tend to overlook that transitions could also go in unsustainable directions. Their critique applies to the approaches of Landy (2009) and Jesus Silva et al. (2017): Although the unsustainability of diets is decried by both authors, their conclusions are confined to approaches how to improve the study of changing diets. Fourat and Lepiller (2017) on the contrary, go beyond that by suggesting a set of approaches how to find ways how to make diets more sustainable. Thus, they clearly define a normative goal for food transitions.

All authors working with clear normative goals provide further suggestions how to achieve these goals, for instance, to investigate movements who work against the current conventional food system. The particular approaches of such movements can reveal how change can be induced in their specific socio-cultural embedding (Fourat and Lepiller, 2017; El Bilali, 2019). According to Vivero-Pol (2017) movements have a high transformative potential when they work in niches outside the conventional food system and reject the notion of food being merely a commodity. To acknowledge the manifold meanings of food is, furthermore, argued by other authors as paramount to understand changing diets (Fourat and Lepiller, 2017; Jesus Silva et al., 2017). In condensed words, understanding the approaches of alternative food movements, who acknowledge the meaning of food beyond a commodity are regarded as purposeful to support a sustainable food transition with research.

[1] I will not explore this theoretical background further in this dissertation as I did not work with that theory in particular. For more information on how STS and MLP are entangled with food transition I recommend El Bilali (2019).

The food industry and governments are actors which can have negative impacts on a sustainable food transition. However, although the food industry is usually regarded as an obstacle to sustainable food transition (Fourat and Lepiller, 2017; El Bilali, 2019), El Bilali (2019) argues that the role of the food industry with regard to sustainability has received too little attention in research yet. Particularly in the context of the Global South, government aid to prevent hunger and malnutrition can have ambiguous consequences for people's diets. The provision with a limited variety of staple foods together with the fact that the consumption of foods such as white rice or meat is often considered as status symbol, can lead to increasingly monotonous diets (Finnis, 2007; Jesus Silva et al., 2017). Thus, while the food industry is responsible for many unsustainable food transitions, it is not possible to pinpoint a single responsible actor. Instead, it is of primary importance to apply system thinking when researching food transition.

To investigate food transition from a geographical viewpoint, I was particularly interested how the authors assess the importance of space for their concepts. Two main themes emerged from that question: First, the meaning of place for food transition and second, the importance of scale. Similar to models of nutrition transition, urban areas are regarded as trendsetting places for changing diets. Both for the creation of counter movements and also the beginning of unsustainable developments such as the increasing consumption of processed food (Jesus Silva et al., 2017; El Bilali, 2019). However, changes do not simply pass through urban areas and finally reach rural areas and the dynamics of how changes unfold from the city are rather complex. Furthermore, the embedding in a particular environment or place has implications on how and to what extent diets change (Fourat and Lepiller, 2017; Jesus Silva et al., 2017).

Scale is important with regard to the epistemology of changing diets as well as the investigation of the effectiveness of transformative movements. Fourat and Lepiller (2017) endorse to study food transitions on different scales in order to enhance the understanding on how changes unfold on different scales. El Bilali (2019) stresses that the effectiveness of transformative movements would depend on the movement's ability to extent vertically on the same scale as well as horizontally onto different scales.

Especially due to its spatial relevance, food transition proves to be an interesting field of research to geographers. While the spatial interdependences of food transition are mentioned, they do still play a minor role in most publications on food transition. The affordance of geographical research could be to explore these interdependences in depth. In this thesis I will mostly focus on how place and the environment influence food practices in transition and less on the impact of different dimensions of scale. Furthermore, with regard to normativity the

findings I generated from the manuscripts of this thesis mainly support a food transition towards increased social justice, as an important part of sustainable food systems.

2.5 The Application of Practice theory

Looking at Fourat and Lepiller's definition of food transition it becomes clear that they encourage to focus on socio-cultural factors dependent on local context when doing research about changing diets (Fourat and Lepiller, 2017). However, they do not specify the analytical unit of changing diets. With regard to transition in practice and in everyday life El Bilali (2019) suggests the use of practice theories with practices as analytical units. I will use the first part of this chapter to elaborate why I concur with that author and applied practice theory to study food transition. I will continue by commenting on how practice theories are applied in the discipline of geography and finally geography's possible affordances for practice theories.

Eating and other aspects of food consumption, such as food shopping or disposing of food packaging and leftovers, are among the most mundane practices of people. Because of this, food consumption tends to become routine and rarely happens deliberately (Warde, 2016). Practice theory is particularly suitable to capture such practices as it focusses on the unconscious aspects of food consumption practices (Halkier and Jensen, 2011). It looks at the doings and sayings of people and connects these to rules, understandings and affective engagements of practitioners (Schatzki, 2000). These rules, understandings and affective engagements are as I use them in this dissertation constituted by socio-cultural factors, which are according to Fourat and Lepiller (2011) paramount for processes of food transition. In turn, doings and sayings in form of practices perpetuate socio-cultural factors. Therefore, I argue that practice theory, with practice as analytical unit, is especially appropriate to study the food transition as suggested by Fourat and Lepiller (2017).

Beside the constituent character of practices for socio-cultural factors, practice theories, in particular the one of Schatzki, can help researchers to grasp local contexts. In fact, I argue that this way practice theory proves to be an appropriate link between food transition and geography as a spatial science.

According to Schatzki, sites can be understood as "[…] arenas or broader sets of phenomena as part of which something – a building, an institution, an event – exists or occurs." (Schatzki, 2005, pp. 467–468). While practice remains the encompassing analytical unit, it is not detached

from its surrounding: "[…] the site of the social is composed of nexuses of practices and material arrangements. This means that social life inherently transpires as part of such nexuses." (Schatzki, 2005, p. 471) Schatzki's notion of the social as always being a mesh of nexuses of material arrangements and practices, enables the researcher to grasp the implications of spatial phenomena without getting carried away with spatial determinism. It can be especially helpful to relate sites, materials, emotions and knowledge to human conduct, which represent important fields in contemporary human-geographical research (Everts et al., 2011). Thus, I concur with Everts et al. (2011), that with Schatzki's site ontology, practice theories provide a valuable heuristic framework for geographers and other researchers dealing with the conceptualization of space for their research. Therefore, I suggest the application of practice theories not only for the conceptualization of socio-cultural implications on food transition but also for the spatial implications on it.

Another important aspect of Schatzki's site ontology is that it stresses the identical composition of all social phenomena. Although Schatzki does not deny the existence of scales, he argues against a reification of them. In order to capture social reality, it would be necessary to meet all phenomena as local phenomena with the same elements – practices and material arrangements – before assigning them to a certain scale (Schatzki, 2005). This perspective can help researchers to acknowledge that scale, despite being a helpful tool to understand certain dynamics, is always constructed by people (Lund, 2014).

Geography can advance Schatzki's site ontology by looking into the spatial arrangements, places and path of and around practices (Everts et al., 2011). To my understanding this means to scrutinize these theoretical contributions with empirical evidence. In contrast to philosophy, which is Schatzki's scientific background, geography's specific role in practice theories could be the data-based scrutiny of this theory and to develop it further based on empirical grounding.

3 The empirical setting

3.1 Food in India

As it was already described in the chapters about food and nutrition transition, diets in India have changed in the last decades. While cereal consumption declined, the consumption of non-cereal food has increased. The decrease of cereal consumption resulted in the preference for barley, maize and tapioca. There are, however, differences, both in traditional diets and also regarding the changes which took place, when comparing rural with urban and Northern with Southern parts of the country. Generally, India's Northern states have a higher consumption of wheat, while in the Southern and Eastern states the consumption of rice prevails. Rural households in the Northern states do also have a higher overall calorie consumption than rural households in the South. Cereal consumption, especially rice, is higher in rural areas, while urban areas have a higher consumption of meat, fish, egg, fruit, and vegetables. In the last decades rural households especially increased their expenditures on cereals, while urban households had remarkable increases in spending on processed food and beverages (Chatterjee et al., 2007).
Although in general eating out becomes increasingly popular, especially in urban areas (Pingali and Khwaja, 2004), fast food outlets are rather a meeting point and the food consumed their does not replace meals eaten at home (Goyal and Singh, 2007). Thus, for those who are able to afford eating out on a regular basis, these calories are consumed in addition to the intake at home and are therefore more likely to represent an overconsumption of calories rather than a way to meet their actual calorie requirement.
From 1997 the Public Distribution System (PDS), which supplies basic food stuff such as grains, sugar and salt to poor households started to primarily supply to households below the poverty line. Households the above poverty line were only granted limited access to the PDS which, against its promises, led to the exclusion of many poor households from the system (Landy, 2017). Private food retail chains started to grow rapidly, assumedly not accidentally, from 1996 onwards, penetrating even small cities and rural towns. Overall, food retail in India developed in consecutive stages: The main pillar of food retail is the PDS with its ration shops developed in 1939 even before Indian independence, cooperative models which came up in the 1960/70s, and private retail, which was established in the second half of the 1990s. Additionally, food is sold at traditional wetmarkets and Kirana shops. Today, all these food retailers continue to exist, however with different importance depending on, for instance, location or financial background

of a household. While ration shops offer reduced rates only to households below the poverty line and their produce has not the best reputation, private retail chains in form of super- and hypermarkets are sometimes out of reach for poor households even today, because of financial and/or locational accessibility of such stores (Reardon and Minten, 2011).

Besides the hard facts presented above, food and eating in India is, as in other countries alike, intertwined with cultural and religious rules (Poulain, 2017). It is also closely tied to the Indian caste system which allows or prohibits certain foods for certain parts of the population. As certain caste groups have structural power advantages over other caste groups, the former tend to declare their dietary rules as superior and until today there are several examples of how they try to impose these rules upon the overall population. For example, vegetarianism, enjoys a high reputation among societal elites, who often have a high caste background (Gorringe and Karthikeyan, 2014).

Beyond food security issues mentioned in chapter 1, food safety remains a dire issue in the Indian food system. While the hot climate and ineffective supply chains make it complicated to supply fresh food to consumers, food adulteration leading to food scandals exacerbate the problem. These problems are critically monitored by the consumers, who have high demands regarding the freshness of foods and who are very aware of the food safety issues of the Indian food system. For example, processed foods do often fail to meet the labelling requirements, which makes it impossible for the consumer to make a judgement on the nutritional value let alone the healthiness of a food item (Dunford et al., 2015).

3.2 Bengaluru

Bengaluru is the capital city of the south Indian state of Karnataka. In the last two decades the city almost doubled in population from 5.6 million in the year 2000 to 11.4 million in the year 2018, thus making Bengaluru the 4th largest city in India and counting to the group of global megacities[2] (United Nations, 2018). In 2006 the city's name was changed from Bangalore to Bengaluru, which is the existing name in the local language Kannada. The city's major economic sectors are engineering, textile and chemical industry (Bengaluru Urban District Administration, 2019), which is why, Bengaluru is sometimes referred to as the high-tech capital of India.

[2] Cities with a population of over 10 million inhabitants (United Nations, 2018)

As indicated by its population growth, the city is also expanding spatially into its surrounding. This urbanization into its surrounding provides interesting dynamics in the city's rural-urban interface. Chapter 8 includes further information on urbanization-related dynamics in Bengaluru and how the city's rural-urban interface is conceptualized for this thesis.

The benefits resulting from the economic development of the city in the last years are divided unequally. While a new middle class earns wages, which can easily compete with Western standards, the larger part of the population remains excluded from these developments (Dittrich, 2007). This inequality becomes also visible in the city's infrastructural developments in the last decades. While public transportation remains largely inadequate to provide a reliable alternative for commuters, infrastructure projects accessible only for the city's middle class are continuously advanced. Examples include the development of the new international airport in the north of the city and the construction of multilane flyover roads to accommodate the increasing number of private vehicles. The priority assigned to such projects can partially be traced back to the pressure put on the government by the city's big IT companies, that are worried about Bengaluru's reputation among (potential) middle-class employees and foreign investors (Upadhya, 2009). Additionally, people increasingly suffer from the environmental damages, which can to a large extent be traced back to industrial activities in the city. However, environmental degradation is also increasingly affecting Bengaluru's middle class and is therefore recently receiving more and more attention.

In terms of trends in food consumption, Bengaluru does not differ much from overall India. Firstly, urban and rural areas differ in the amount of food intake but are moving into similar directions. There is a general decrease in the consumption of grains, and coarse grains such as millets tend to be replaced by rice and wheat, both products being supplied by PDS. In urban areas, however, the consumption of pulses increases, while it declines in rural areas. As a consequence to the decreased intake of cereals, a diversification of diets can be observed, which is more prevalent in urban areas. While the expenditure share used for milk products is still increasing in rural areas, it has already declined in urban areas although the share spend on milk products is still high. This is similar to vegetable oil, which steeply increases in rural areas and increased only mildly in urban areas (Pavithra et al., 2009).

Although super- and hypermarkets are well established in Bengaluru, foreign direct investment in the food retailing sector is still relatively rare and difficult (Franz, 2012). However, although Indian chains such as Reliance and Big Bazaar are most visible in the city, also the German retail company Metro is present in Bengaluru today and enjoys a certain popularity. Despite the

increase of modern retail in the city, street vendors and wetmarkets are still present and have a good reputation among consumers. Eating out, although having a reputation of being generally unhealthy, becomes increasingly popular among all parts of the population. The offers range from American fast food chains, over a wide variety of Indian restaurants, to street vendors with varying food safety standards. The decision on where to eat out is not only a question of occasion but certainly also of financial means. Eating out is, however, also lambasted as one reason for the increasing obesity in the Indian population.

3.3 Middle Class in India

The middle class in India should by no means be regarded as a homogenous group. Scholars tried to approach this section of the Indian population from both quantitative and qualitative angles. Regarding the quantitative conceptions of the middle class, approaches can be differentiated into those that classify social classes on a national level and those that also consider a global scale. As a consequence, the assessment on how big the Indian middle class actually is can differ substantially. I will further elaborate on that in chapter 3.3.1, in which I introduce quantitative approaches. Qualitative approaches do, to my knowledge, only refer to the Indian middle class with regard to the global scale and some even point out the importance of global connectedness for this class. I will introduce qualitative approaches to capture the middle class in chapter 3.3.2. In both chapters, I will elaborate on the advantages and disadvantages of all approaches.

3.3.1 Quantitative approaches to capture the middle class

Several scales have been developed to quantitatively measure the socio-economic strata of a household. The BG Prasad, the Kuppuswamy's, the Udai Pareek and the MRSI scale belong to the most commonly applied ones. Table 1 provides an overview over the factors the different scales consider for calculating a household's socio-economic strata and their scope of application. While the BG Prasad scale completely relies on the income of a household (Khairnar et al., 2016), the Kuppuswamy's scale does additionally take education and occupation into account (Mishra and Singh, 2003). The MRSI scale and the Udai Pareek scale replace the income variable by counting the number of durables from specific pre-defined lists owned by a household and landownership. While the MRSI scale considers education of the household's main

earner as only other relevant variable, the Udai Pareek scale also includes education, caste, occupation, social participation, house ownership, number of draught animals, and family type (The Market Research Society of India, 2011; Singh et al., 2017). Some of the scales are designed for different scopes of application. While the BG Prasad and the MRSI scale can be used for urban as well as rural population, the Kuppuswamy's scale should be used only in urban and peri-urban areas and the Udai Pareek scale was specifically designed for rural areas.

Table 1: Factors considered in different Socio Economic Stratification (SES) scales

Scale	**Scope of application**	**Factors considered**			
		Income	**Durables and land**	**Education**	**Others**
BG Prasad scale	Rural and urban areas	✓			
Kuppuswamy's scale	Urban and peri-urban areas	✓		✓	✓
Udai Pareek scale	Rural areas		✓	✓	✓
MRSI scale	Rural and urban areas		✓	✓	

Regarding the assessment of middle-class affiliation, there are also other authors that base their assessment entirely on income, two examples being the assessments of the National Council of Applied Economic Research (NCAER) and Meyer and Birdsall (2012). The NCAER regards households with an income between $8 to $40 available per person per day. Meyer and Birdsall (2012) assess this range a little higher from $10 to $50. Both authors refer to the global economy when assigning these values while regarding also the cost of living within India (Meyer and Birdsall, 2012). The BG Prasad scale, that only considers incomes within India, assigns households as middle-class who have between 949 to 6260 INR (about $13 to $88) available income per month per family member (Khairnar et al., 2016). The Kuppuswamy and the Udai Pareek scale assign points for the different factors they consider, so, for example, a household with a higher education scores higher than one with a lower education. The points from the different factors are summed up in the end and then grouped into different categories from lower to upper class. According to the Kuppuswamy's scale a household is regarded as middle-class if it scores between 11 to 25 on the scale, whereas on the Udai Pareek scale a middle-class household has to score between 13 to 42 (Mishra and Singh, 2003; Singh et al., 2017). The MRSI scale divides

households into groups between E3 (no owned assets, illiterate and no formal education) up to A1 (nine or more assets, at least graduate). While the MRSI does not define what households should be regarded as middle-class, other authors have defined a middle class range from C to B (Ramola and Velmurugan, 2016). Table 2 Provides an overview over the scales' different ranges.

Table 2: Possible ranges on the different scales and ranges assigned to middle class.

Scale	Total range	Middle-class range
Meyer and Birdsall 2012	-	$ 10-50 per person per day
NCAER	-	$ 8-40 per person per day
BG Prasad scale	<948 - >6261 INR monthly income per family member	949-6260 INR monthly income per family member
Kuppuswamy's scale	3-29	11-25
Udai Pareek scale	3-64	13-42
MRSI scale	E3-A1	C-B

It is certainly necessary to visualize differences within society in order to point out injustices and to explain the behavior of certain groups, which can be done with all of the scales represented above. However, I argue that all scales include some shortcomings which decrease their validity.

Most of the presented scales only regard income levels and prosperity levels within India. Concurring with Meyer and Birdsall (2012), I argue that this is inappropriate in an economically globalized world. While the overall cost of living might be lower in countries of the Global South, such as India, compared to countries of the Global North, there are items that have the same prices in India as elsewhere and which can significantly contribute to class affiliation. Examples for this are housing prices in India's metropolises, smartphones or branded clothes. To underline the imbalance of scales which only consider inner-Indian comparisons, it is useful to take a look at the World Bank's international poverty line of $1,9 per person per day since 2011. However, according to the BG Prasad scale, a person in the year 2016 belonged to the middle class with only about $0,48 available per day. With more than $3,15 a person would already be counted as upper class. Thus, I argue that scales which only work with an inner-

Indian comparison obscure poverty and the divide between rich and poor, as actually existing prosperity cannot be depicted.

The relevance of a household's income for class affiliation can be questionable for several reasons. Firstly, it might be difficult for interviewees to make a statement here. Especially in contexts where the household's income is not visible on a monthly payroll or a similar document for people and respondents have to sum up incomes from different sources to provide an answer here. Secondly, respondents might mistrust the interviewer and make a wrong statement about their income on purpose because they are afraid that disclosing their income might entail disadvantages for them. Thirdly, and this is especially relevant for the BG Prasad scale, income can at most be regarded as an indicator but not completely represent socio-economic stratification.

Scales which rely on durables and landownership try to avoid this aspect by looking at possessed land and durables, which might be easier to recall and disclose to the interviewers. However, the MRSI scale combines the scores gathered for the possession of durables only with one variable, which still leaves out other important aspects such as social participation and caste. The Udai Pareek scale tries to account for these aspects by assigning points to caste affiliation and membership in organizations. However, all these variables, including recording the durables available in a household, are highly questionable. For example, all durables are regarded as of equivalent value, even though this is certainly not the case. Furthermore, while membership in an organization is probably an indicator for social participation, it is certainly not the only way to participate in social life and can thus not fully represent this aspect of socio-economic stratification.

To sum up, my overall criticism towards the presented scales is that they tempt scholars to pretend to measure an aspect of society, which is not possible or too complex to measure. While it is legitimate to say that certain findings of a study correlate with income or education of the participants, drawing conclusions regarding socio-economic class measured by these scales should be done only cautiously because of India's high "regional diversity" (Mawdsley, 2004, p. 87), I criticize the claim of the different scales to be applicable for all India, some even including, both, rural and urban areas. Depending on the local context, the variables used in the different scales might have very different meanings. Scales, that are claimed to measure socio-economic class in both rural and urban areas are most vulnerable in this regard. For instance, ownership of agricultural land, which is included in the MRSI scale, is certainly of different

value depending on a household's location but it is regarded as equally important for all households. However, even scales which should only be used for either rural or urban populations, do not regard regional differences, such as different living expenses in different regions. Additionally, none of the presented scales defines what a rural or an urban region actually is.

3.3.2 Qualitative approaches to capture the middle class

Instead of counting possessions of durables, money or degrees to capture the middle class, qualitative approaches tend to focus on the behavior of middle-class people in society and its development from Indian independence till today. Particular possessions do rather play a minor role for qualitative research on the Indian middle class.

Over the last century the middle class changed in its composition. Before the 1980s the Indian middle class was mainly employed by the government or at public sector enterprises. This middle class had a relatively consistent caste structure, making it exclusive towards other groups. While they earned significantly higher salaries than large parts of the Indian population, they could not afford high levels of consumption (Nisbett, 2007; Mawdsley, 2009; Upadhya, 2009). This changed with the liberalization policies of the 1980s and 1970s. During that time a 'new middle class' rose, which was the entrance point for other caste groups as well as increasing levels of consumption due to increasing salaries. This was mainly due to the entrance of private companies – especially from the IT sector – which payed higher salaries than the previous typical middle class's employers (Mawdsley, 2004). However, not all sections of the middle class equally profited from liberalization policies. While many children of the old middle-class generation could make it into the new middle class, some got left behind or can – similar to many people who entered the new middle class from lower classes – only under huge efforts sustain their middle-class status. Thus, India's middle class today is far less homogenous then it used to be before the 1980s (Fernandes and Heller, 2006; Upadhya, 2009, p. 257). To distinguish between the overall middle class and the sections who particularly benefited from liberalization, these sections are often referred to as the 'new middle class', a term suggested by Fernandes (2006).

Today, India's middle class does often have more in common with their counterparts in other countries than with most other parts of the Indian population (Mawdsley, 2004). Subsequently, as the divide between rich and poor is quite large in India, in comparison with most Western countries, the middle class belongs to the country's wealthiest inhabitants (Brosius, 2011). Thus,

qualitative approaches to capture the middle class resemble quantitative approaches that consider global income levels for their conception of the Indian middle class such as the conception of Meyer and Birdsall (2012) (see chapter 3.3.1).

Inter alia due to their high incomes, the Indian middle class and, in particular, the new middle class are politically assertive in comparison to other classes. The middle class asserts their political interests often against those of the poor, for example, by pushing the deconstruction of urban slums to increase the city's attractiveness for its middle-class dwellers (Mawdsley, 2009). The power of the middle class is further strengthened by the government's narrative of their purchasing power and its resulting importance for the economic development of India. This narrative is used by the government to establish further liberalization policies that then again benefit the middle class (Fernandes, 2009; Mawdsley, 2009).

The middle class's purchasing power and associated consumption behaviors are also used in many qualitative conceptions of this class (Mawdsley, 2004; Upadhya, 2009). Due to increased access to foreign media or even personal experiences abroad, today, the Indian middle class has developed a taste for new and/or global values (Mawdsley, 2009). This new taste led to new lifestyles mainly perpetuated by the consumption of products reflecting these values (Brosius, 2011). This consumption behavior is inter alia also used by the middle class to represent their class status and to distinguish themselves from other classes (Fernandes and Heller, 2006; Brosius, 2011; Annavarapu, 2016; Anantharaman, 2017).

However, some authors also question whether consumption behavior alone is sufficient to define this class. They argue that there are also other practices which are typical for India's middle class and which are used by them to perpetuate symbolic boundaries between them and other classes. Using the English language in everyday life and sending their children to English-language schools, for example, are described as distinctive practices beyond consumption (Mawdsley, 2004; Fernandes and Heller, 2006; Fernandes, 2009). Therefore, Fernandes and Heller (2006) refer to the Indian middle class as a "class in practice". Furthermore, instead of using their political power to assert public solutions for problems to be solved they often opt for private solutions, such as climatized cars to shield themselves from heavy traffic or moving to gated communities to evade from the ostensible chaotic Indian city. Therefore, some authors accuse the Indian middle class of a rather self-centered view regarding the country's big challenges (Mawdsley, 2009; Upadhya, 2009).

Despite this self-centeredness and the representational purposes of their practices, Solomon (2016) pleads for an acknowledgement of actual health risks of Indian cities and the related

fears among the Indian population, including the middle class. Concurring with Solomon's assessment, in this thesis I argue that it is too simplistic to accuse the middle class of self-centeredness and class distinction without considering their own legitimizations for these practices. Therefore, I decided to analyze this group applying practice theory.

Before I get to that point, I will, however, express some critical thoughts regarding the qualitative conceptions of the Indian middle class. My first critique mainly regards the fuzziness of the terms middle class and new middle class in the conceptions presented above. While it is clear that, for instance, an IT-engineer working for a multi-national company in Bengaluru belongs to these groups, there are also groups of persons whose affiliation to the middle class might not be as unequivocal such as doctors or teachers. Compared to quantitative conceptions of middle class, which define clear boundaries between socio-economic classes, this is clearly a disadvantage of the conceptions presented in this chapter. Then again, whether a person belongs to the middle class might not always be as unequivocal as quantitative conceptions try to make believe.

My second critique regards the focus of most authors on India's urban middle class, more particularly the middle class in India's metropolises. While especially the new middle class preponderantly consists of urban dwellers, I would argue that middle-class and even new middle-class people can also be found in towns or even rural areas, such as big landowners who strategically invest in their children's (English) education. However, this group is never particularly addressed by qualitative research on the Indian middle class. Thus, there are still gaps in the increasing amount of literature, which need to be filled, in order to develop a more complete conception of the Indian middle class.

4 Methodology

Data for this thesis was gathered within the DFG research unit FOR2432 “Socio-ecological systems in the Indian rural-urban interface: functions, scales, and dynamics of transition”. I was employed as a doctoral researcher within the subproject C04 “Sustainable food consumption practices of middle-class consumers” with Prof. Dr. Christoph Dittrich as principle investigator. All researchers of FOR2432 worked in the rural-urban interface of Bengaluru, India (see chapter 3.2).

One aim of FOR2432 was to gather data in a way to make the results relatable to a rural-urban gradient, which was supposed to represent the degree of urbanization of the respective entity of analysis such as households or field plots. In order to assess the degree of urbanization the survey stratification index (SSI) was used. The index consists of a combination of building density and distance to the city center of Bengaluru. A location close to the city center and a high building density indicated urbanity, whereas a high distance to the city center and a low building density indicated rurality. The combination resulted in strata from 1 (urban) to 6 (rural) (Hoffmann et al., 2017). Furthermore, two transects representing the rural-urban strata from 1 to 6 were defined: One in the Northern direction outwards the city and one in the South-western direction outwards the city. Within these transects 61 villages and districts were identified to be surveyed within the project.

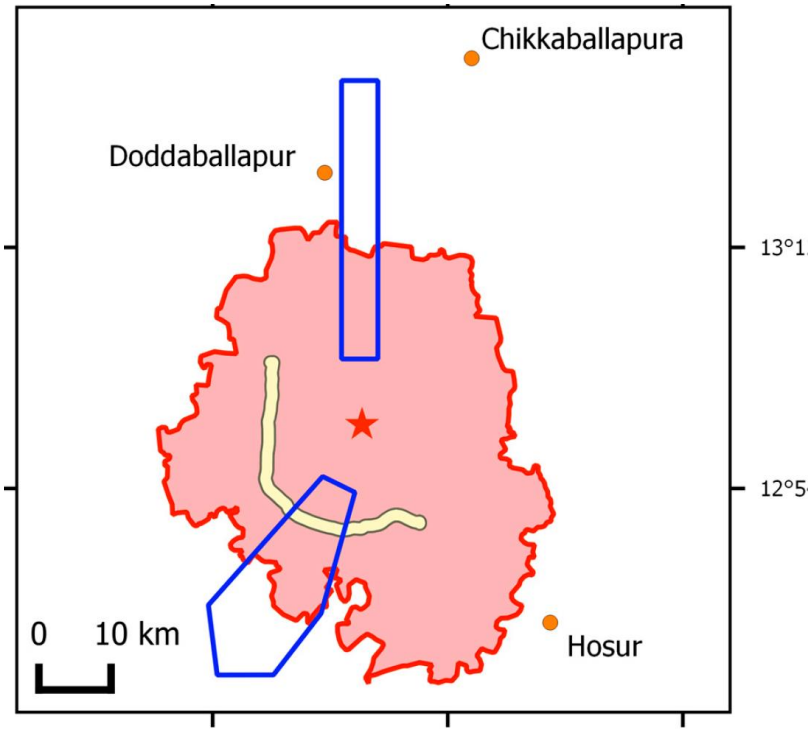

Figure 1: North and South transect of the research unit FOR2432 (source: Hoffmann et al. 2017)

4.1 Survey

From September to November 2016 I conducted a survey with N=300 households in 30 villages and districts, 15 in the Northern (see Figure 2) and 15 in the Southern transect (see Figure 3). Before I started the surveying, I randomly selected 30 villages and districts from the sample of the FOR2432. This second selection was conducted, in order to be able to generate results which allowed to draw conclusions with statistical significance not only based on the project's urbanization index but also based on particular villages and districts, despite the relatively small household sample of N=300. After arriving in the villages or districts on the days we conducted the survey, households were selected by random walks through the villages or districts. The list of selected villages and districts and the number of selected households can be found in Appendix A: Village and household selection survey. To carry out the survey I was supported by a German student assistant as well as two Indian translators.

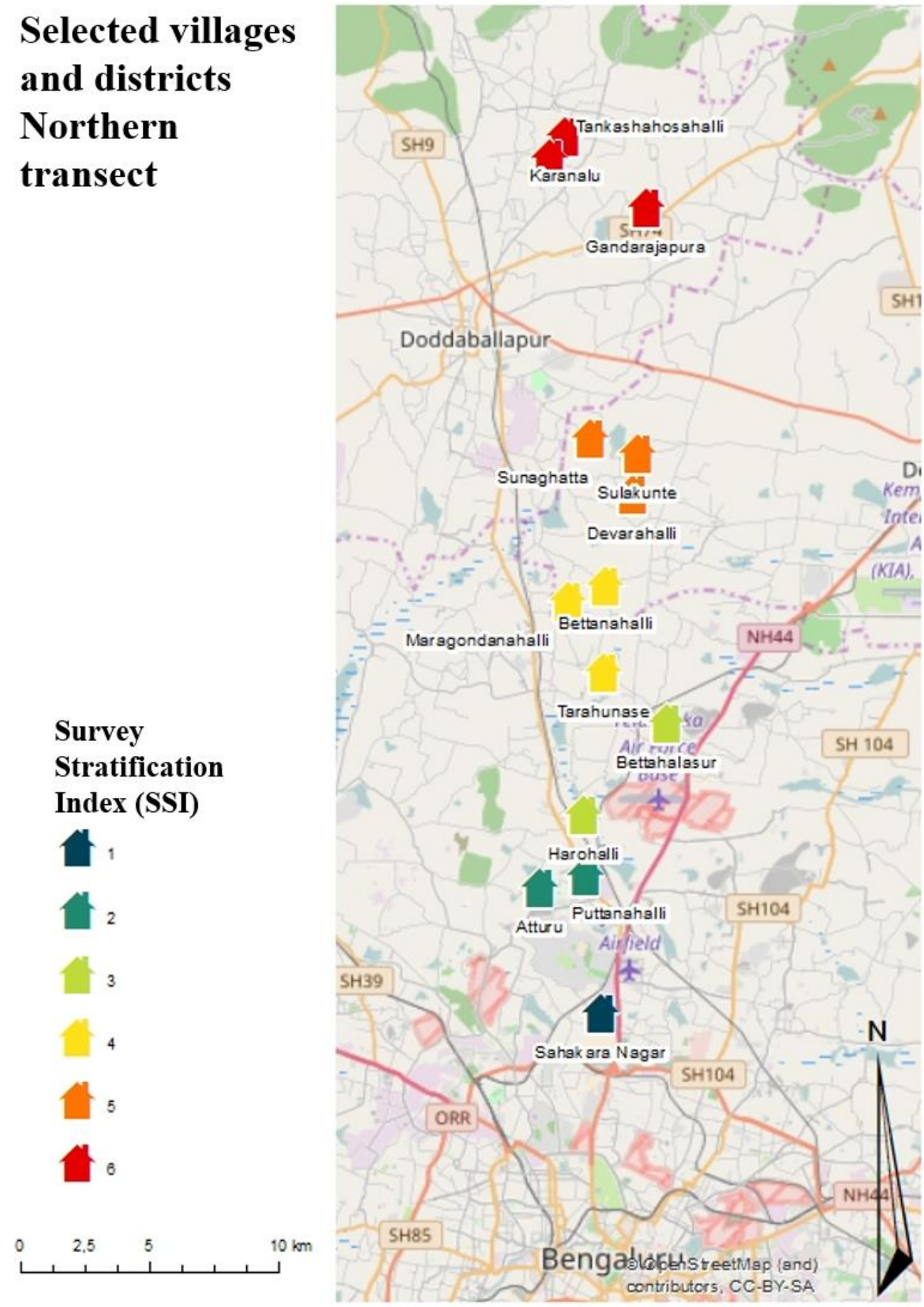

Figure 2: Villages and districts selected for the survey in the Northern transect

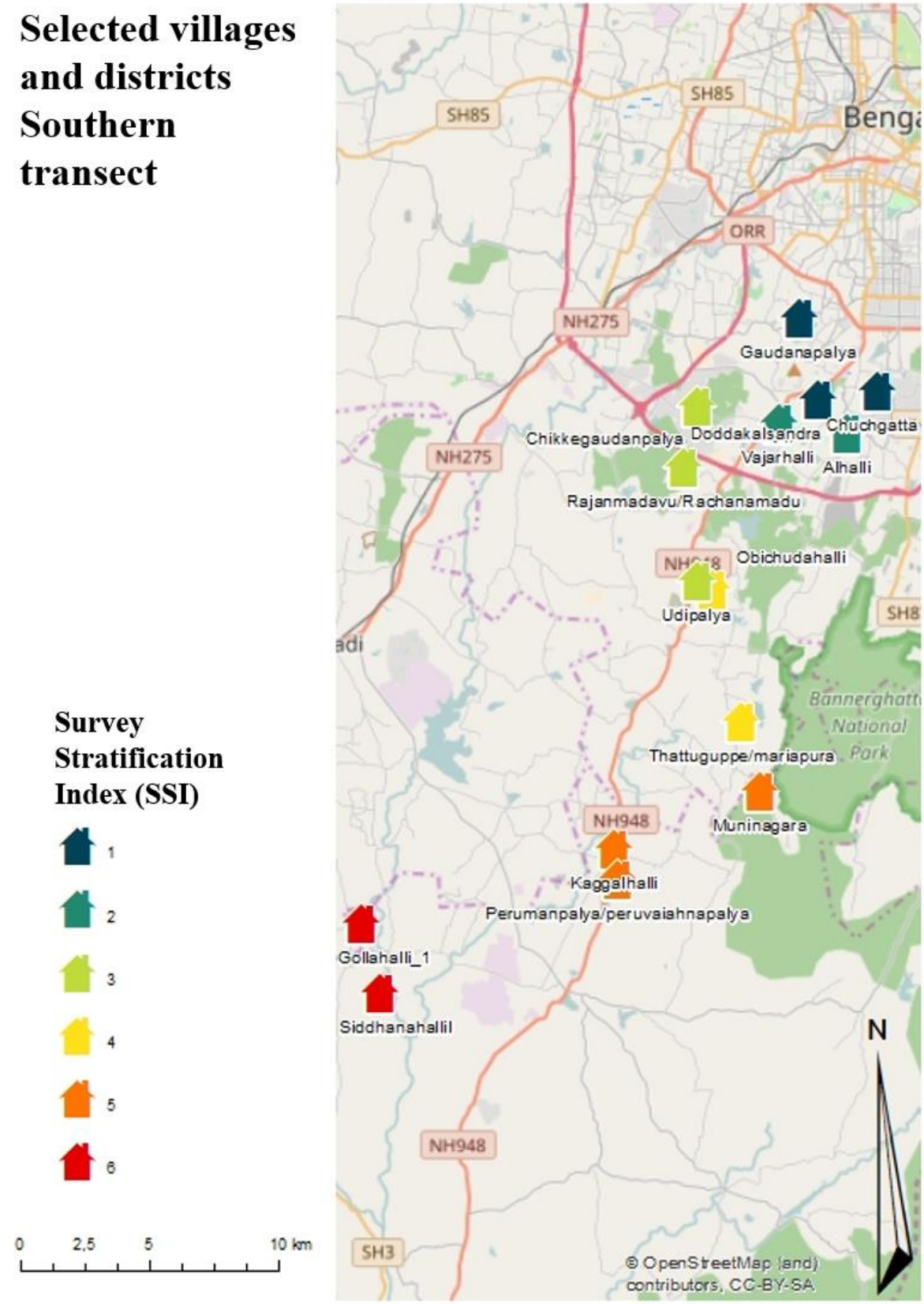

Figure 3: Villages and districts selected for the survey in the Southern transect

The questionnaire for the survey started with a few details on the household composition. We then asked the household about details regarding the possession of different household assets such as refrigerators or two wheelers as well as the highest education of the household head. Based on this information we assessed the socio-economic strata of the household based on the MRSI classification (The Market Research Society of India, 2011). We only continued the questionnaire if the household belonged to the middle or upper class. After asking a few more personal details from the respondent, such as age and occupation, we conducted a few Likert-scale items regarding the respondent's opinion on the food system. In the subsequent consumption part, we asked about the most frequently consumed food items in 15 categories. Furthermore, we asked some questions about food consumption practices such as preference for particular retailers or favorite breakfast items. The whole questionnaire is attached in Appendix B: Questionnaire survey of this thesis.

So far, the results from that survey were only evaluated descriptively for the first manuscript and to inform the questions for the qualitative household survey during my second research stay (see chapter 4.2). Therefore, I will present a few preliminary results from the survey in this chapter.

One general observation when comparing food intake along the rural urban interface is that, according to the SSI (Hoffmann et al., 2017), the first stratum usually showed results which were significantly different from the rest of the strata along the rural-urban gradient. One example was the category of meat fish and eggs shown in Figure 4. Here one can see that, except for beef, the consumption of meat products in stratum 1 is lower for all meat products than in all other strata. Vice versa, the share of households who reported not to consume meat, fish and eggs at all is much higher there than elsewhere along the rural-urban gradient. Reasons for that could be found in the different caste composition of the strata with more vegetarian castes residing in the city than in the villages around Bengaluru. Another interesting observation is the consumption of beef in the second stratum. Here I expect a sampling bias to account for this observation. While almost all interviewed households reported to belong to Hindu communities, we conducted interviews in one village in strata 2 where almost all households belonged to Muslim communities. In contrast to most Hindu castes, the consumption of beef is not considered as a taboo among most Indians of Muslim belief.

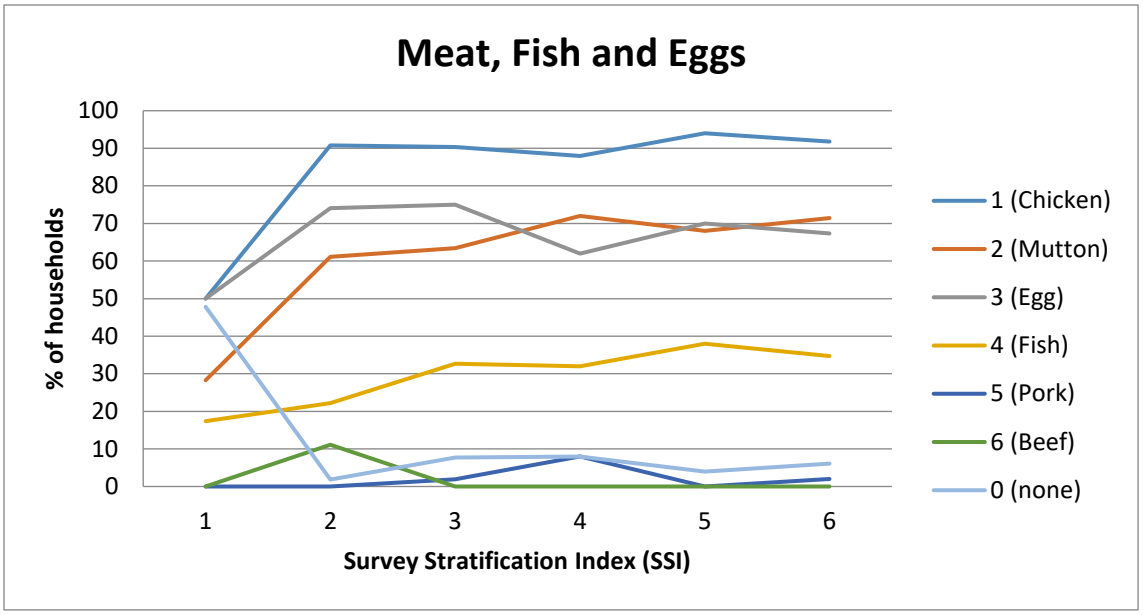

Figure 4: Percentage of households, who claimed to consume these products as one of the three most common out of the category of meat, fish and eggs, sorted by SSI

An interesting comparison is the one between the consumption of ready-made foods and bottled beverages along the rural-urban gradient, shown in Figure 5 and Figure 6. Ready-made food and especially maggi noodles are less popular in the more rural strata of the gradient, whereas soft drinks seem to be more popular there than towards the center of Bengaluru. in the city, the higher share of women working outside of the household could be an explanation for the higher consumption of ready-made foods, whereas the popularity of soft-drinks in the more rural strata remains puzzling. However, it shows that soft drinks as one indicator of a proceeding nutrition transition (Pingali and Khwaja, 2004) are well established in Bengaluru's rural-urban interface. Regarding breaktfast one could then almost speak for some kind of signature dishes for certain parts along the rural-urban gradient. In Figure 7 one can see that Idli[3] as a breakfast dish is very popular in the first two urban strata but is only consumed regularly by less than 10% of the respondents in stratum 6. In contrast to Idli, Chitrana[4] is a popular breakfast item for almost 60% of the households in stratum 6 while only a little more than 20% of the households in stratum 1 named it as one of their three most popular breakfast dishes. Another interesting case here is the consumption of Ragiball[5] for breakfast. While in all other strata the share of households naming Ragiball as one of their three most popular breakfast dishes was between 0% to

[3] Steam-cooked rice cake
[4] Lemon fried rice
[5] Lump of welled finger-millet flour

20%, 50% of the households in strata 3 reported Ragiball among their most frequent breakfast dishes.

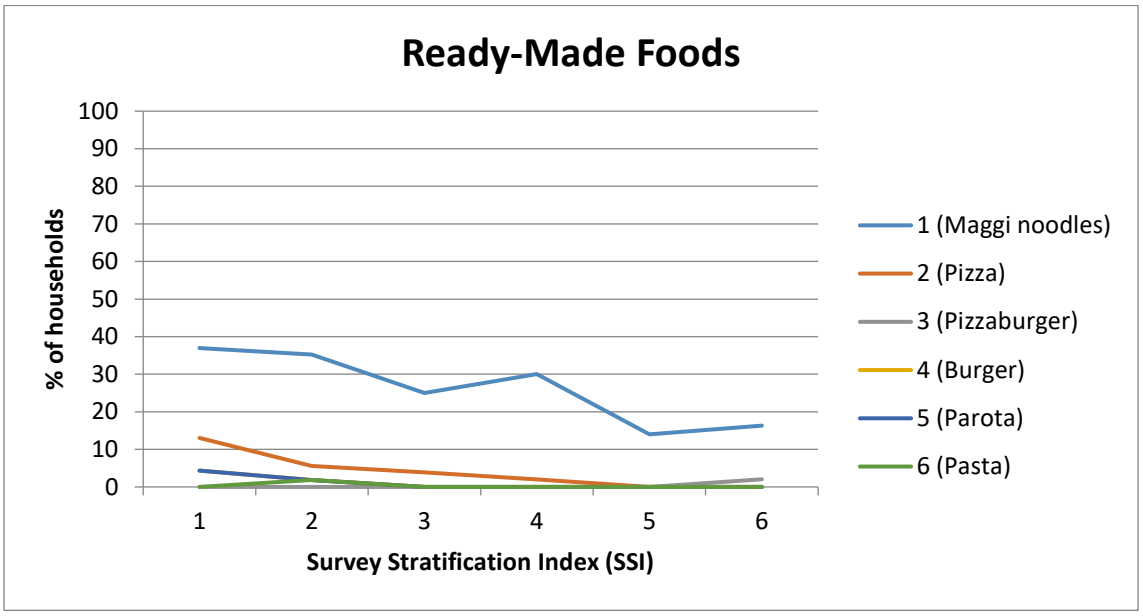

Figure 5: Percentage of households, who claimed to consume these products as one of the three most common out of the category of ready-made foods, sorted by SSI

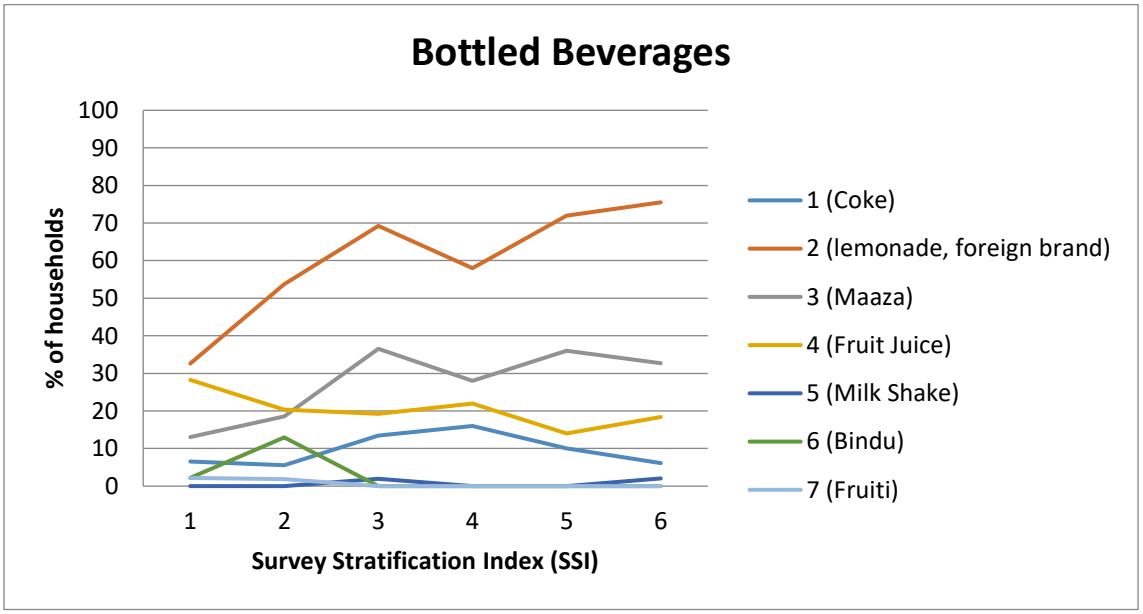

Figure 6: Percentage of households, who claimed to consume these products as one of the three most common out of the category of bottled beverages, sorted by SSI

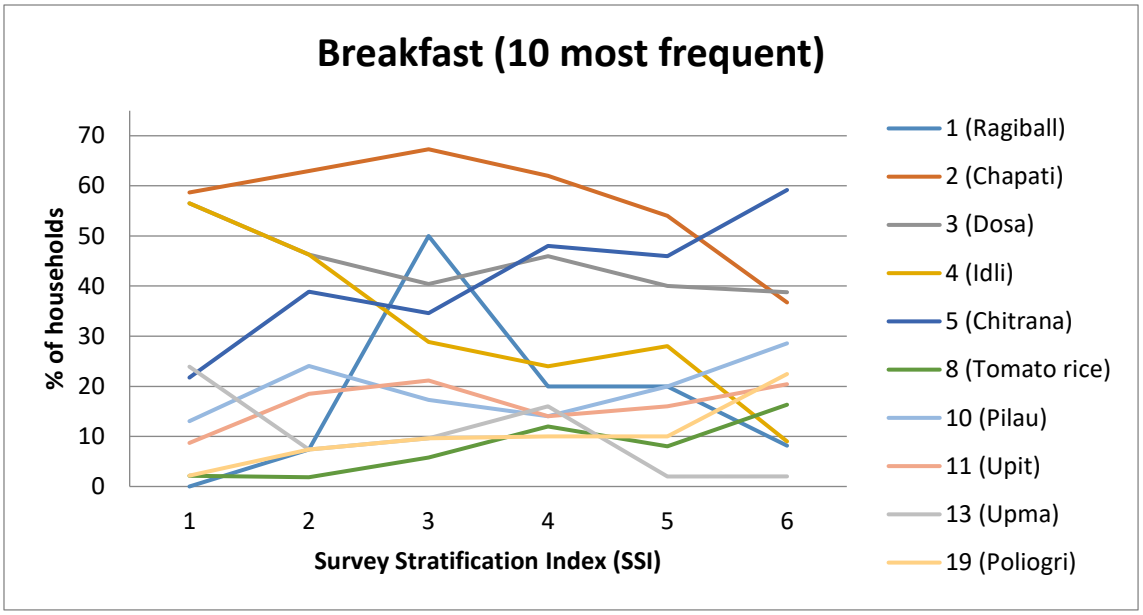

Figure 7: Percentage of households, who claimed to consume these dishes as one of the three most common out of the category of breakfast, sorted by SSI

The conclusion which can be drawn from this short descriptive analysis is that except for the significant differences between stratum 1 and the other strata there are only few general trends which I found in this quantitative data. The high variation of food consumption practices along the rural-urban gradient underlined the need for a qualitative study of these food practices.

4.2 Semi-structured household interviews and group interviews

From April to July 2017 I conducted semi-structured household interviews in three villages in the north of Bengaluru (Karanala, Kodihalli and Bettenahalli) and three group interviews in one district in Northern Bengaluru (Sahakar Nagar) to expand on the quantitative data gathered in the first field stay (see Figure 8). Two of the villages and the district had already been part of the villages sampled for the survey. A third village from the sample of the FOR2432 was included based on advice of project colleagues because of the good field access in this village. An extensive description regarding my approach and further rationales for this methodology can be found in the manuscript written based on the gathered data in chapter 8.6. The interview guidelines for these interviews can be found in Appendix C: Guideline for semi-structured household interviews.

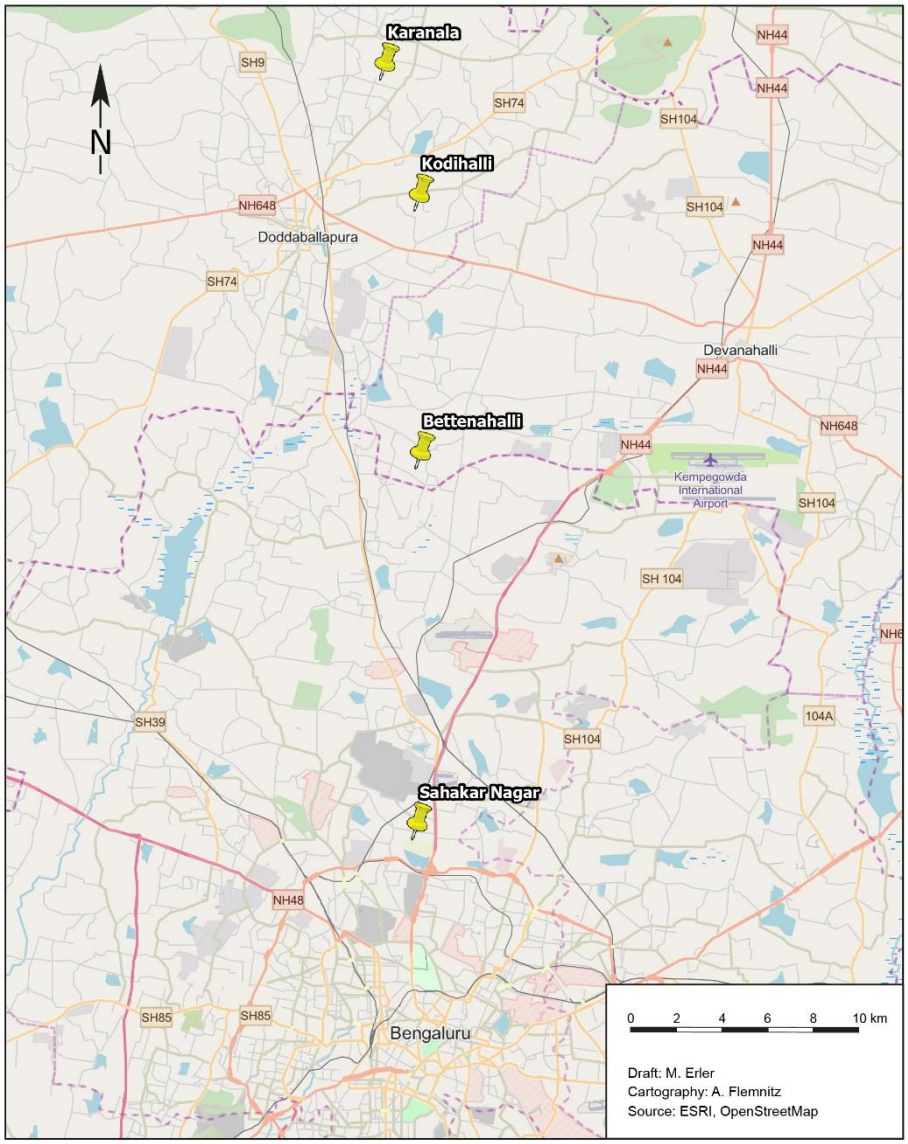

Figure 8: Location of villages and the district selected for semi-structured household interviews and group interviews.

4.3 Expert interviews

Beyond the interest of the respondents to eat healthy, it was not possible to make out particularly sustainable food consumption practices based on the interviews with the households. Therefore, I decided to switch my focus away from the households. To explore possible trajectories towards a more sustainable food consumption in Bengaluru, I decided to study Bengaluru's alternative food networks (AFN). I conducted semi-structured expertinterviews with 17 owners or managers of AFNs in Bengaluru. Interviews were conducted during my second and third field stay. An extensive description regarding my approach can be found in chapter XX. The

interview guideline for these interviews can be found in Appendix D: Questions for interview guideline with representatives of AFNs in Bengaluru.

4.4 Mapping

In order to get an overview over the prevalence of the retail outlets of AFNs in Bengaluru, I tried to map all organic shops in the city. The mapping had already been started by Nina Osswald in 2013 (Osswald and Erler, 2017). Based on the Google queries "organic shop bangalore" and "organic shop bengaluru", I tried to identify and list as many other shops as possible. Based on Osswald's map (see Figure 9) and the list created from the Google queries, I visited all the organic shops, in order to verify their location. This way I updated the mapping from 2013, by deleting obsolete shop locations and adding a new layer with shops, which were not identified in 2013 or had opened after that year. The updated map can be found in Figure 10.

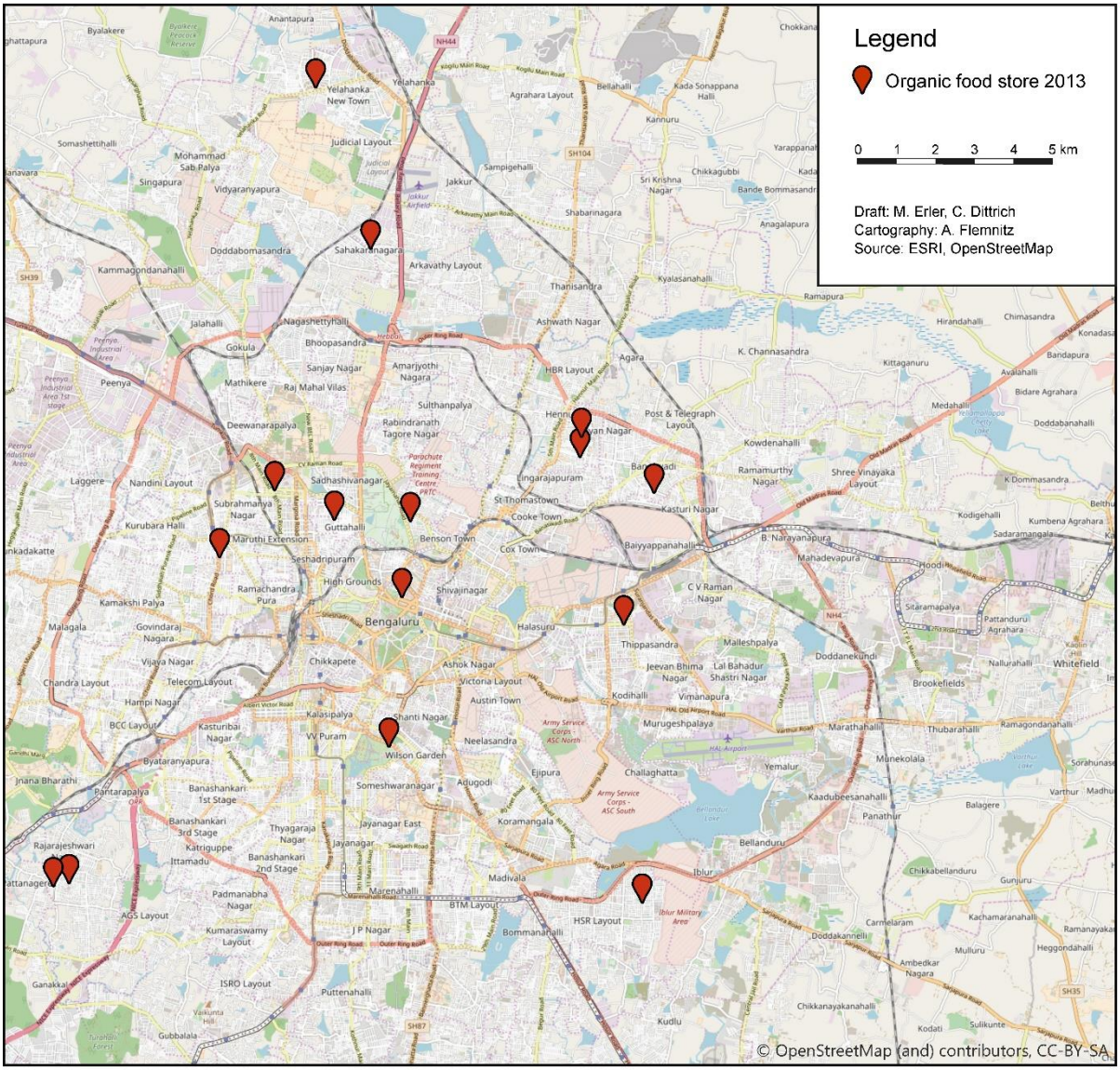

Figure 9: Organic shops identified in 2013

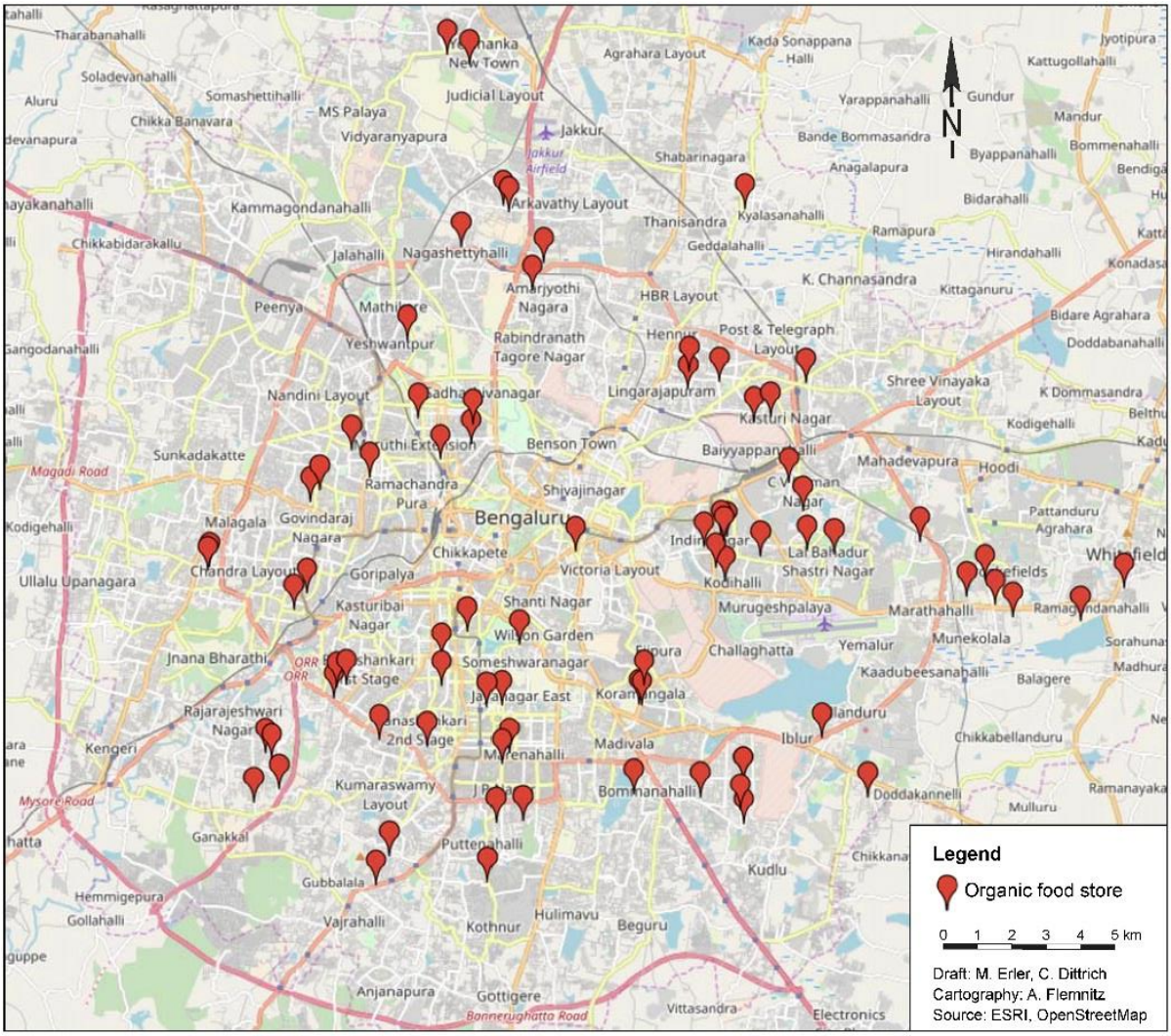

Figure 10: Organic shops identified in 2017

4.5 Semi-structured interviews and observations of organic shop customers

Organic shops were the most common way for consumers in Bengaluru to get in contact with Bengaluru's AFN. I expected that the costumers of those shops would consume more sustainably than the average South Indian. Based on the updated mapping of organic retailers in Bengaluru (see Figure 10), I sampled 5 different shops. In total, I and a student assistant accompanied 104 customers in these shops during their purchase in the shop, while observing and interviewing them. An extensive description regarding my approach can be found in the manuscript written based on the gathered data in chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**. The interview guideline for these interviews can be found in Appendix E: Guideline for semi-structured interviews with customers of organic shops.

5 Structure and contribution

The core of this thesis comprises of four individual manuscripts, which have been published by or submitted to four different journals. In this chapter I will summarize the respective manuscripts in a rhetorical précis, name the (intended) journal, the stage of the submission or publication process and a short rationale why the respective journal was chosen. A table listing detailed divisions of contributions to manuscripts will be provided for each manuscript.

5.1 Manuscript 1: Nahrungs- und Ernährungsverhalten urbaner Mittelschichten in Bangalore

In "Nahrungs- und Ernährungsverhalten urbaner Mittelschichten in Bangalore" me and my co-author Christoph Dittrich elaborate on the nutrition transition of the middle class in Bengaluru, India and the health risks related to that transition. We do so by connecting a review of relevant literature on the topic to our own observations in the city. We conclude the paper by highlighting that against the general trend there is an increasing awareness about the need for healthy eating and a trend to look into traditional food for a healthier diet. With the article we try to reach an academic audience and geography teachers and employ an accessible language in order to provide an entrance to the topic.

The paper was published in "Geographische Rundschau" (69/12) in December 2017. The journal was chosen as the journal edited an issue on "Food and Nutrition in the Global South" (original title: Nahrung und Ernährung im Globalen Süden), which provided an opportunity for us to reach a broad audience at German universities but also schools at a relatively early stage of the research project.

Table 3: Contributions of Mirka Erler (M.E.) and Christoph Dittrich (C.D.) to the manuscript "Nahrungs- und Ernährungsverhalten urbaner Mittelschichten in Bangalore"

Author contributions	**Author**
Conceptualization	M.E., C.D.
Methodology	M.E., C.D.
Formal analysis	M.E., C.D.
Investigation	M.E., C.D.
Data curation	M.E., C.D.
Writing—original draft preparation	M.E., C.D.
Writing—review and editing	-
Visualization	M.E., C.D.
Supervision	C.D.
Project administration	C.D.
Funding acquisition	C.D.

5.2 Manuscript 2: The changing meaning of millets: organic shops and distinctive consumption practices in Bengaluru, India

In “The changing meaning of millets: organic shops and distinctive consumption practices in Bengaluru, India” me and my co-authors Markus Keck and Christoph Dittrich argue that middle-class customers of organic shops contribute to the exclusion of other classes through distinctive consumption practices. We support this claim by showing how the customers draw symbolic boundaries between them and other groups and classes legitimized by affective engagements, for example by changing the meaning of millets from a staple to a superfood. We allude to the role of commercial communications, in order to show how organic retailers, contribute to reproduce class-based consumption practices in India. This paper is intended for an international academic audience within geography and other sociological disciplines, who are either interested in food studies or the application and development of practice theories for the study of (food) consumption.

The paper was published online first in January 2020 in the “Journal of Consumer Culture”. The journal was chosen because I believed that the paper would contribute to the discussion of

practice theoretical approaches to food consumption, which is predominantly published by this journal.

Table 4: Contributions of Mirka Erler (M.E.), Markus Keck (M.K.), and Christoph Dittrich (C.D.) to the manuscript "The changing meaning of millets: organic shops and distinctive consumption practices in Bengaluru, India"

Author contributions	**Author**
Conceptualization	M.E.
Methodology	M.E.
Formal analysis	M.E.
Investigation	M.E.
Data curation	M.E.
Writing—original draft preparation	M.E.
Writing—review and editing	M.E., M.K.
Visualization	M.E.
Supervision	M.K., C.D.
Project administration	C.D.
Funding acquisition	C.D.

5.3 Manuscript 3: Facing food transition. Food practices in Bengaluru's rural-urban interface

In "Facing food transition. Food practices in Bengaluru's rural urban-interface" me and my co author Christoph Dittrich argue that in order to food-transition in Bengaluru's rural-urban interface unfolds in many different dimensions. Based on semi-structured household-interviews adress people's discoursive and material food practices and show how they are interrelated in social and material space, instead of being influenced by one-dimensional economic drivers. With this manuscript we intend to reject literature, which describes food transition as a one-dimensional, path dependent process, in order to point out ways for a food transition towards sustainable diets. This paper is intended for an international academic audience as well policy makers, who are interested in theoretical and practical implications for a normatively framed food transition.

At the point of the submission of this thesis this manuscript is under review at “Food, Culture and Society”. The journal was chosen because we think that this journal provides the right outlet for the philosophical considerations regarding food and space in the paper and because of its scope for papers having dietary transitions as a topic.

Table 5: Contributions of Mirka Erler (M.E.) and Christoph Dittrich (C.D.) to the manuscript "Facing food transition. Food practices in Bengaluru's rural-urban interface"

Author contributions	**Author**
Conceptualization	M.E.
Methodology	M.E.
Formal analysis	M.E.
Investigation	M.E.
Data curation	M.E.
Writing—original draft preparation	M.E.
Writing—review and editing	M.E.
Visualization	M.E.
Supervision	C.D.
Project administration	C.D.
Funding acquisition	C.D.

5.4 Manuscript 4: Middle class, tradition and the Desi-realm – discourses of Alternative Food Networks in Bengaluru, India

In “Middle class, tradition and the Desi-realm – discourses of Alternative Food Networks in Bengaluru, India” me and my co author Christoph Dittrich refute that the traditionalization of agri-food system leads primarily to improved farmer livelihoods. We support this refusal by anlysing the traditionalization discourse of Alternative Food Networks (AFN) in Bengaluru and connecting it to scholarly discourses on AFNs and traditionalization in India. We categorize different forms of traditionalism as either unreflexive and defensive, in order to show different consequences traditionalization might have for AFNs but also for the wider societal discourse. This paper is intended for academics working with AFNs, traditionalism and discourses of the far-right in India, whereas it also holds some important insights for AFN practicioneers.

At the point of submission of this thesis the paper is under review with Sustainability. It was written for the Special Issue “The Invisible Sustainability of Otherness: Rethinking Food Systems from the Margins” edited by Petr Jehlička and Annalisa Colimbo.

Table 6: Contributions of Mirka Erler (M.E.) and Christoph Dittrich (C.D.) to the manuscript "Middle class, tradition and the Desi-realm - discourses of Alternative Food Networks in Bengaluru, India"

Author contributions	**Author**
Conceptualization	M.E., C.D.
Methodology	M.E., C.D.
Formal analysis	M.E.
Investigation	M.E.
Data curation	M.E.
Writing—original draft preparation	M.E.
Writing—review and editing	M.E.
Visualization	M.E.
Supervision	C.D.
Project administration	C.D.
Funding acquisition	C.D.

6 Nahrungs- und Ernährungsverhalten urbaner Mittelschichten in Bangalore

Die Nahrungs- und Ernährungssituation Indiens ist durch zwei gegensätzliche Dynamiken gekennzeichnet: Während sich die Ernährungslage der Armutsbevölkerung weiterhin als außerordentlich prekär darstellt, werden die traditionellen Ernährungsgewohnheiten wohlhabender Bevölkerungskreise zunehmend überlagert bzw. abgelöst von westlichen Konsummustern. Damit verbunden ist eine alarmierende Zunahme ernährungsbedingter Krankheiten. Dies lässt sich insbesondere in den rasant wachsenden Megastädten feststellen. Der Beitrag widmet sich am Beispiel der südindischen Neun-Millionen-Metropole Bangalore den Veränderungen im Nahrungskonsumverhalten der Mittelschicht und beleuchtet gesundheitliche Folgen des Ernährungswandels.

Das lange Zeit dominierende Armutsimage Indiens wird überlagert von einem optimistischeren Bild. Es zeigt das mit 1,34 Mrd. Einwohnern nach China bevölkerungsreichste Land der Welt als entwicklungs- und anpassungsfähige Wirtschafts- und Atommacht, die mit aller Kraft in den Club der Großmächte drängt. Wesentlich verantwortlich für diesen Imagewandel ist neben der makroökonomischen Dynamik eine wachsende Mittelschicht, die im Zuge der Einbindung des Landes in globalisierte Wirtschaftskreisläufe als wichtigste Antriebskraft der Modernisierung gilt und das „neue“ Indien selbstbewusst repräsentiert. Diese überwiegend großstädtischen Bevölkerungskreise tragen als Konsumenten auch wesentlich dazu bei, global verfügbare Konsumgüter zu verbreiten. Aus ihren Reihen rekrutiert sich der steigende Bedarf an Fach- und Führungskräften in den technologieorientierten Wirtschaftsbranchen. Die zunehmend ressourcenintensiven Konsum- und Lebensstile dieser wohlhabenden Bevölkerungsschicht haben allerdings auch einen maßgeblichen Anteil daran, die urbane Umweltkrise zu verschärfen. Die Luft- und Trinkwasserqualität in Indiens großen Städten ist gesundheitsgefährdend (The Energy and Resources Institute, 2013). Gleichzeitig lässt sich aber auch ein wachsendes Umweltbewusstsein feststellen, das sich maßgeblich in den Bereichen Ernährung und Gesundheit niederschlägt (Osswald and Dittrich, 2012).

Schätzungen zum Umfang der indischen Mittelschicht sind sehr uneinheitlich und variieren stark zwischen 70 und 200 Mio. Personen. Eine offizielle Definition der Mittelschicht gibt es nicht. Besonders häufig wird in diesem Zusammenhang eine Studie von Ablett et al. (2007)

zitiert. Darin werden Haushalte mit einem Jahreseinkommen zwischen 200 000 und 1 Mio. indische Rupien (entspricht 2850 bis 14 200 €) zur Mittelschicht gezählt. Neuere Berechnungen von Meyer und Birdsall (2012) kommen landesweit auf 70–100 Mio. Personen mit einem entsprechenden Haushaltseinkommen. Das entspricht 5–7,5 % der indischen Bevölkerung. Sie leben zu etwa zwei Dritteln in den Städten. Einen anderen Zugang wählt die Market Research Society of India (The Market Research Society of India, 2011). Sie macht die Zugehörigkeit zur Mittelschicht am Vorhandensein langlebiger Gebrauchsgüter und am Bildungsstand des Haupteinkommensbeziehers fest. Ergebnissen einer Studie zufolge, zählen in den Megastädten Bangalore, Chennai, Delhi, Hyderabad, Mumbai und Kolkata etwa 40 % ihrer Bewohner (das entspricht etwa 21 Mio. Personen) zur mehr oder weniger gesicherten Mittelschicht und 1,7 % zur superreichen Oberschicht. Allein in Bangalore leben mindestens zehn Dollar-Milliardäre und über 10 000 Dollar-Millionäre. In diesen Städten lebt allerdings auch nach wie vor mehr als die Hälfte der Bewohner in Armut.

Dieser Überblick verdeutlicht zweierlei: Erstens erweist sich der Begriff Mittelschicht im indischen Kontext teilweise als irreführend, weil diese Bevölkerung (je nach Berechnungsgrundlage) keineswegs in der „Mitte“ steht, sondern den oberen Teil der indischen Einkommenspyramide einnimmt. Zweitens lässt sich deren Kaufkraft nicht mit der deutschen gleichsetzen, weil das verfügbare Einkommen im Durchschnitt niedriger liegt. In Indien zählt bereits zur unteren Mittelschicht, wer sich drei ausgewogene Mahlzeiten am Tag leisten kann, die Kinder gut gekleidet zur Schule schickt und über einen Stromanschluss, ein Fernsehgerät oder ein Moped verfügt. Am oberen Ende rangieren dann jene wohlhabenden Kreise, die sich neben teuren Wohnungen und westlichen Markenprodukten inzwischen auch Auslandsreisen oder ein Auslandsstudium für die Kinder leisten können. Einigkeit herrscht in allen Studien darüber, dass die Mittelschicht hinsichtlich ihrer Zahl und ihrer Kaufkraft weiter wachsen wird.

6.1 Urbanes Ernährungsgewohnheiten im Wandel

Die südindische High-Tech-Metropole Bangalore steht als indisches „Silicon Valley“ seit Jahren im Zentrum der Aufmerksamkeit, wenn es um die Modernisierung Indiens geht (Dittrich, 2007). Als aufsteigende Global City nimmt sie in der Rangfolge der weltweit dynamischsten Städte beim City Momentum Index 2017 sogar die Spitzenstellung ein (Jason Lang LaSalle, 2017). Bangalore steht auch für eine selbstbewusste und konsumfreudige Mittelschicht, deren Ernährungsgewohnheiten sich seit einigen Jahren auf vielfältige Art und Weise verändern.

Tiefgreifende Veränderungen im Nahrungs- und Ernährungsverhalten lassen sich für alle Schwellenländer feststellen. Als wichtiger Indikator hierfür kann vor allem die signifikante Erhöhung des Fleischkonsums herangezogen werden. Indien unterscheidet sich hierin deutlich: Dort sinkt insbesondere in den Städten zwar auch der Verzehr von Getreideprodukten, dieser wird aber weit weniger durch Fleisch und Milchprodukte ersetzt. Nach wie vor liegt der Pro-Kopf Fleischverbrauch in Indien bei nicht einmal einem Zehntel des Niveaus in China (vgl. Figure 11).

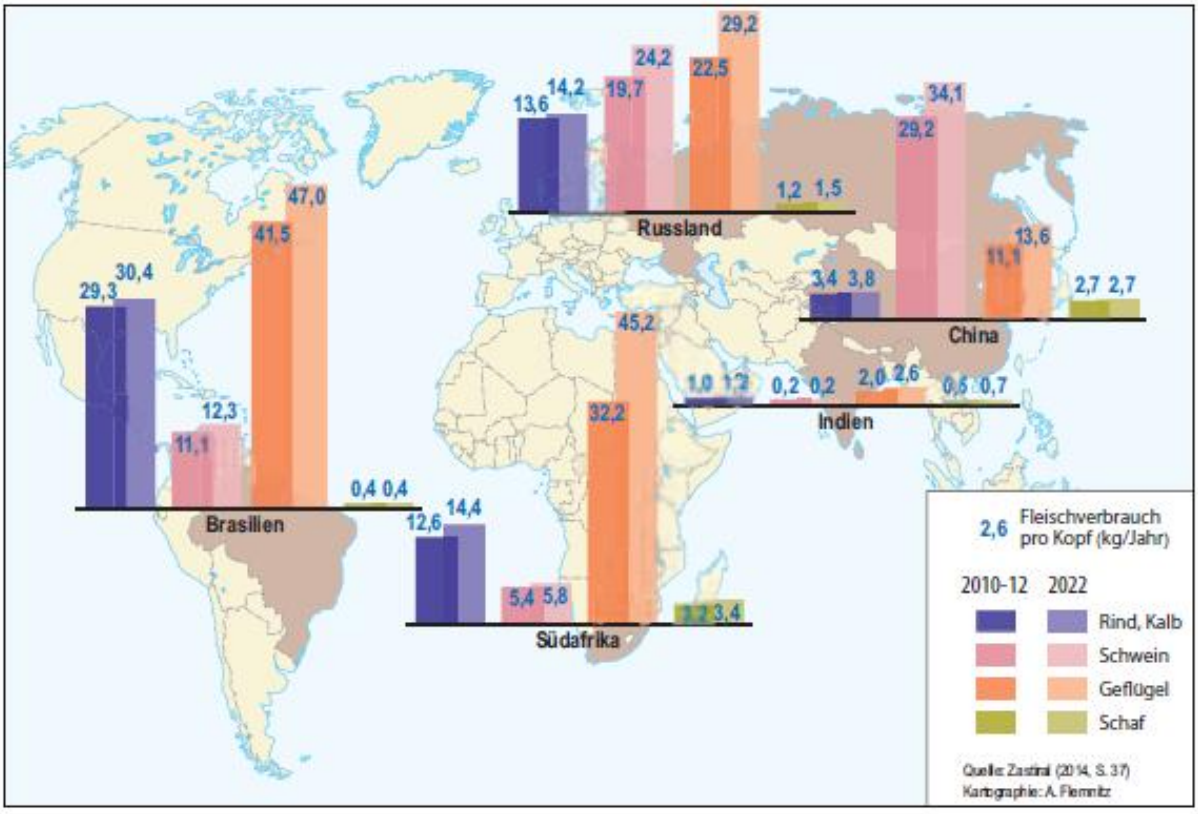

Figure 11: Pro-Kopf-Fleischverbrauch in den BRICS-Staaten

Darüber hinaus lässt sich für Indien insgesamt eine Reduzierung der täglichen Kalorienverfügbarkeit feststellen, ein Zeichen u. a. für die immer noch weit verbreitete Unter- und Mangelernährung. Gleichzeitig lässt sich vor allem im städtischen Indien auch eine ernährungs- und lebensstilinduzierte Fehlernährung in Form von Übergewicht und den damit verbundenen Folgeerkrankungen feststellen (*double burden of malnutrition*, vgl. Keck, 2017; Lohnert, 2017), was auf veränderte Essgewohnheiten und Lebenstile sowie Bewegungsmangel zurückgeführt werden kann (Shetty, 2002; Deaton and Drèze, 2009).

Diese Besonderheiten weisen auf den eigenen Weg des Landes im Ernährungswandel (food transition) hin (Pingali and Khwaja, 2004). Nach Landy (2009) beginnt der Ernährungswandel in Indien mit einer ersten Phase des einkommensinduzierten Nachfrageanstiegs. Im Zuge höherer Einkommen lässt sich ein steigender Nahrungsund Kalorienkonsum in Form einer erhöhten Nachfrage nach Getreide wie Reis, Hirse und Weizen sowie nach Hülsenfrüchten, Zucker und Pflanzenölen feststellen. In einer zweiten Phase der „einkommensinduzierten Ernährungsdiversifizierung" (Pingali and Khwaja, 2004) kommt es mit weiterwachsenden Einkünften zu Verschiebungen innerhalb der Produktpalette. Getreide wird zunehmend durch Milchprodukte (z. B. das geklärte Butterfett *ghee* oder Joghurt), Obst, Gemüse und in moderatem Umfang auch durch Fleisch (vor allem Geflügel) ersetzt (Landy, 2009). In Südindien wird an Stelle von Reis zunehmend Weizen konsumiert. Es werden auch Produkte höherer Qualität eingekauft. Die Zubereitung der nun vielfältigeren Produktpalette findet aber immer noch auf traditionelle Art und Weise statt.

In einer dritten Phase werden traditionelle Ernährungsweisen nach und nach durch globalisierte Ernährungsstile ersetzt (Pingali and Khwaja, 2004). Typische Beispiele hierfür sind der Verzehr von Instant-Nudeln und Pasta-Gerichten, die Hinwendung zu Fertig- und Fast-Food-Produkten, hochkalorischen Softdrinks und Milchmixgetränken, importiertem Olivenöl, Cornflakes oder Weizentoast mit Marmelade als Frühstück (vgl. Figure 12).

Bereits vor über zehn Jahren konnte nachgewiesen werden, dass gut die Hälfte aller befragten weiblichen Jugendlichen Instant-Lebensmittel und Softdrinks mehrmals wöchentlich konsumiert und dies unabhängig vom sozio-ökonomischen Hintergrund (Rao et al., 2007).

Der Ernährungswandel in der zweiten und dritten Phase äußertsich zudem in veränderten Nahrungsbezugsquellen. Der Einkauf in Supermärkten und der Besuch von Fast-Food-Restaurants nehmen zu, wohingegen Stadtteilmärkte und Straßenhändler an Bedeutung verlieren (vgl. Figure 13).

Figure 12: Bangalore: In diesem Stadtteilladen türmen sich hochkalorische Produkte auch westlicher Marken

Figure 13: Ein Restaurantbesuch gehört bei der oberen Mittelschicht zum Wochenendausflug dazu

Eigene Untersuchungen in 300 Mittelschichtshaushalten Bangalores weisen auf eine vierte Phase im indischen Ernährungswandel hin, die parallel zu den drei oben genannten Phasen stattfindet, nämlich jene der gesundheitsbewussten Retraditionalisierung. Im Ernährungsverhalten der urbanen Mittelschicht lässt sich inzwischen eine Rückbesinnung auf lokale Getreidesorten, traditionelle Gewürzmischungen, Ayurveda-Rezepte und Speisefolgen beobachten. In Bangalore äußert sich dies z. B. in einem steigenden Verzehr von Ragi (Fingerhirse, *Eleusine coracana L*), eine Getreideart, die noch vor wenigen Jahren fast vom Markt verschwunden war. Ragi gilt als besonders gesundes, glutenfreies und eisenreiches Getreide, das Bluthochdruck vorbeugt und vorteilhaft für Diabetiker ist (Shobana et al., 2013). Mit der gesundheitsbewussten Retraditionalisierung ist auch eine steigende Nachfrage nach naturnah angebauten bzw. ökologisch zertifizierten Agrarprodukten verbunden. Diese resultiert auch aus dem wachsenden Gesundheits- und Umweltbewusstsein insbesondere in der Gruppe der wohlhabenden, bildungsstarken Kreise (Osswald and Dittrich, 2012). Figure 14 zeigt die Standortverteilung von Gastronomie und Lebensmitteleinzelhandel in Sahakar Nagar, ein Stadtteil in Bangalore, der vorwiegend von der wohlhabenden Mittelschicht bewohnt wird.

Die hier ansässigen Bioläden und Spezialgeschäfte für ayurvedische Ernährung spiegeln die wachsende Nachfrage wider.

Die Untersuchungen in Bangalore zeigen, dass sich das Ernährungsverhalten eines Haushalts nicht immer eindeutig einer der vier Phasen des Ernährungswandels zuordnen lässt. In der Mittelschicht lassen sich vielmehr je nach Wohnort, Bildungsstand, Wohlstandsniveau, Geschlecht, sozio-kulturellem Status und Religionszugehörigkeit alle vier Phasen nachweisen. Teilweise laufen die Phasen parallel zueinander ab.

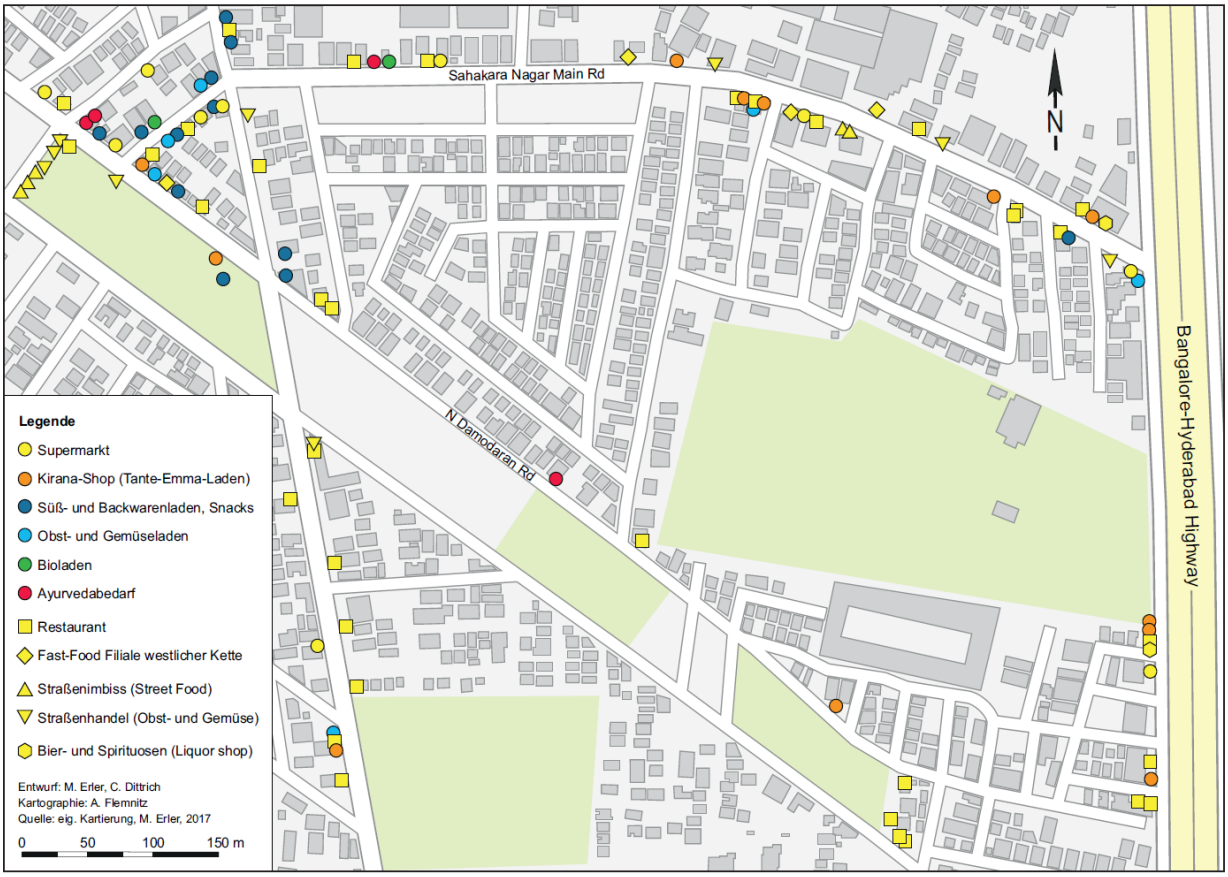

Figure 14: Standorte von Gastronomie und Lebensmitteleinzelhandel in Sahakar Nagar, Bangalore, einem Stadtteil für wohlhabendere Bevölkerungskreise

6.2 Faktoren des Ernährungswandels

Der offensichtlichste Einflussfaktor für den Ernährungswandel ist die ökonomische Situation: Je wohlhabender ein Haushalt ist, desto weiter ist der Ernährungswandel in der Regel fortgeschritten, wobei sich oft mehrere Phasen nachweisen lassen. Während Instant-Nudeln und Softdrinks inzwischen auch Eingang in die untere Mittelschicht gefunden haben, erfordern viele neue Fertigprodukte wie Tiefkühlpizza, Milchmixgetränke oder Käse die Verwendung eines Kühlschranks, der noch nicht überall Einzug gehalten hat. Der Zugang zu diesen Produkten bleibt auch aufgrund ihres hohen Preises vielen Verbrauchern nach wie vor verschlossen. Dasselbe gilt für den Besuch von westlichen Fast-Food-Restaurants, wobei die Häufigkeit des Verzehrs von Fast-Food-Produkten auch mit der Entfernung eines Haushalts vom Restaurantstandort abnimmt. In Saharkar Nagar finden sich neben Kirana-Läden („Tante-Emma- Laden“) auch westliche Fast-Food- Restaurants, die sich großer Beliebtheit erfreuen (vgl. Figure 14).

Neben ökonomischen sind auch soziokulturelle Faktoren sowie die Religionszugehörigkeit von großer Bedeutung: Bei Hindus, Jains und Buddhisten ist die vegetarische Lebensweise nach wie vor tief verwurzelt. Hindus ist der Verzehr von Rindfleisch grundsätzlich verboten, viele Mitglieder der obersten Kaste (Brahmanen) verzichten auch auf Eier. In diesem Fall dienen Milchprodukte und Hülsenfrüchte als wichtige Proteinlieferanten. In muslimischen Haushalten wurde generell ein höherer Fleischkonsum festgestellt. Rindfleisch gehört zum Speiseplan und sein Verzehr Nahrungs- und Ernährungsverhalten urbaner Mittelschichten in Bangalore scheint für einige Muslime eine identitätsstiftende Bedeutung zu besitzen, wobei insgesamt mehr Ziegen und Hühnerfleisch gegessen wird.

Die Schlachtung und der Verzehr von Rind hat sich inzwischen zu einem hochpolitisierten Konflikt entwickelt: Radikale hindunationalistische Kreise treiben eine zunehmend gewaltsam ausgetragene Kampagne zur Kriminalisierung des Rindfleischkonsums voran. Ziel ist es vor allem, die muslimische Minderheit weiter zu marginalisieren und den Verzehr von Rindfleisch grundsätzlich zu verbieten (The Indian Express, 2015). Für die christliche Minderheit liegen bezüglich des Fleischkonsums keine Verzehrverbote vor, es wird in geringen Mengen auch Schweinefleisch gegessen. Die religiösen und kulturellen Ernährungsvorschriften sind vermutlich ein wesentlicher Grund dafür, dass der Ernährungswandel in Indien anders verläuft als in den meisten anderen Schwellenländern (Landy, 2009). Bei eigenen Forschungsaufenthalten konnten immer wieder Verstöße gegen Ernährungsvorschriften beobachtet werden. Dies betrifft insbesondere auch den Alkohol, der zwar überall in der Stadt in lizensierten Verkaufsstellen verfügbar, dessen Konsum in den meisten Familien jedoch tabuisiert ist. Der Missbrauch von Alkohol und anderen Suchtmitteln stellt vor allem auch unter jungen Angestellten der Computerbranche ein großes Problem dar (Raja and Bhasin, 2014).

Geschlecht, Alter und Familienstand sind weitere wichtige Faktoren, die das Ernährungsverhalten der urbanen Mittelschicht beeinflussen. Junge, unverheiratete Frauen können oft noch relativ selbstbestimmt am Ernährungswandel teilhaben und nutzen auch gerne das Angebot westlicher Cafés und Fast-Food-Restaurants. Diese Spielräume schränken sich in der Regel ein, sobald in einen konservativen Mehrgenerationenhaushalt eingeheiratet wird. Nun als Hausfrau, zuständig für die Speisenzubereitung, wird sich die Frau den Präferenzen der Schwiegereltern beugen müssen und in der Tradition der vegetabilen südindischen Küche kochen, was als eine weitere Form der Retraditionalisierung interpretiert werden kann. In Familienkonstellationen, bei denen auch die Ehefrau einer Erwerbstätigkeit nachgeht, hat dies ebenfalls einen direkten

Einfluss auf das Koch- und Ernährungsverhalten. Aus Zeitmangel wird vermehrt auf Fertiggerichte und Teigmischungen zurückgegriffen oder es werden nach der Arbeit bei Straßenhändlern vorgekochte Gemüsegerichte eingekauft, die dann sorgfältig verpackt nach Hause transportiert werden (*plastic bag housewifes*). Dort werden dann lediglich Reis oder Fladenbrote frisch zubereitet. Die Ernährung von Männern ist weit weniger vom Familienstand abhängig. Sie essen öfter außer Haus an Straßenständen oder in „Meal-Restaurants“ genannten Straßenrestaurants, wo sättigende Gerichte (*thali* in Hindi), bestehend aus geschältem Reis mit Gemüsebeilagen und Fladenbrot günstig angeboten werden (vgl. Figure 15).

Figure 15: Die typischen "Meal-Restaurants" werden fast nur von Männern besucht

Über den Wandel in den Ernährungsgewohnheiten eines Mittelschichthaushaltes bestimmt schließlich auch die Erreichbarkeit moderner Läden und sonstiger Verkaufsinfrastrukturen. Raum werden im örtlichen Einzelhandel weniger verarbeitete Lebensmittel angeboten. Entsprechend traditionell ist auch das Ernährungsverhalten vieler dort lebender Mittelschichtshaushalte. Wenn die Familien allerdings in unmittelbarer Nähe von modernen Supermärktenund Gastronomiebetrieben wohnen, steigt auch die Wahrscheinlichkeit, dass dort eingekauft oder gegessen wird und der Ernährungswandel weiter fortgeschritten ist (Gaiha et al., 2013). Der Einkauf auch

frischer Lebensmittel über das Internet (inklusive Lieferservice) bleibt den wohlhabendsten Bevölkerungskreisen vorbehalten.

Änderungen im Ernährungsverhalten werden zudem von zahlreichen Mediendiskursen beeinflusst. In Tageszeiten, Wochenmagazinen und Fernsehsendungen geht es häufig um Fragen der Nahrungsmittelsicherheit (*food safety*) als Resultat von Lebensmittelskandalen, um Gesundheitsthemen und Ernährungstipps. Zudem beeinflusst Werbung zu neuen Fertigprodukten, Softdrinks oder Nahrungsergänzungsmitteln das Kaufverhalten selbst derjenigen, die kaum Geld zum Überleben haben. Vor allem für jüngere Mittelschichtsangehörige spielen Internet und soziale Netzwerke eine große Rolle. Häufig vermischt sich hier die Suche nach einer gesunden Ernährung mit dem Wunsch nach Schönheit und Schlanksein. Studien legen nahe, dass Essstörungen wie Magersucht und Bulimie inzwischen vor allem im städtischen Mittelschichtsmilieu verbreitet sind (Srinivasan et al., 1998).

6.3 Ernährungsbedingte Gesundheitsprobleme

Das sich verändernde Nahrungs- und Ernährungsverhalten in der urbanen Mittelschicht geht einher mit einem Anstieg ernährungsbedingter Krankheiten (Sébastia et al., 2013; Bloom et al., 2014). Exemplarisch hierfür steht die starke Zunahme von Diabetes, Bluthochdruck und koronaren Herzkrankheiten in Folge von Übergewicht oder Fettleibigkeit (Adipositas). Hauptursachen hierfür sind eine immer unregelmäßigere und übermäßige Nahrungszufuhr, der gestiegene Konsum hochkalorischer Fertignahrungsmittel und Getränke bei einem gleichzeitig immer stärker ausgeprägten Bewegungsmangel. Verstärkend wirkt eine spezifische genetische Disposition auf dem Indischen Subkontinent (MC4R Mutationen), welche die Gewichtszunahme noch beschleunigt (Chambers et al., 2008). Bangalore gehört zu jenen indischen Städten mit dem höchsten Anteil übergewichtiger Mittelschichtsangehöriger (etwa 40 %). Besonders betroffen sind neben Beschäftigten der Computerbranche, Frauen in der Altersgruppe über 40 Jahre sowie Heranwachsende beider Geschlechter. Einer Studie von Nahrungs- und Ernährungsverhalten urbaner Mittelschichten in Bangalore Dhanpal et al. (2014) zufolge waren in Bangalore 54 % der untersuchten High-School-Schülerinnen und 45 % der Schüler übergewichtig. Die Stoffwechselerkrankung Diabetes mellitus Typ II ist in ganz Indien ebenfalls auf dem Vormarsch. Laut WHO leiden etwa 60 Mio. Inderinnen und Inder an Diabetes (Typ I und II), das entspricht 17 % der weltweit Betroffenen. Das Durchschnittsalter, in dem Diabetes diagnostiziert wird, liegt in Indien mit 42,5 Jahren wesentlich niedriger als in den EU-Ländern. Bangalore nimmt

mit einer Prävalenzrate von 12,4 % aller Erwachsenen landesweit einen vorderen Rang ein (auf dem ersten Platz liegt Hyderabad mit 16,6 %) (Kaveeshwar, 2014).
Diabetes und Folgeerkrankungen bedeuten für die meisten Mittelschichtshaushalte auch eine große ökonomische Belastung. Die durchschnittlichen Behandlungskosten eines Diabetes-Patienten werden für Bangalore mit 850 US-$ pro Jahr beziffert. Dies entspricht in etwa einem Drittel des Jahresdurchschnittseinkommens eines Haushaltes der unteren Mittelschicht. Viele Krankenversicherungen kommen zudem nicht für die Behandlungskosten auf. Die nicht krankenversicherte Armutsbevölkerung, die aufgrund ihrer ungesunden Ernährung ebenfalls vermehrt unter erhöhtem Blutzucker leidet (1 kg frische Tomaten kosten ungefähr dreimal so viel wie ein Päckchen Instant-Nudeln), kann sich eine dauerhafte qualifizierte Diabetes-Behandlung in der Regel nicht leisten, was die hohe Zahl an Todesfällen vor allem bei älteren Kranken erklärt. Gleichzeitig boomt in der Stadt die Gesundheitsindustrie, deren Werbeanzeigen sich vor allem an die kaufkräftige Mittel- und Oberschicht wenden. Eine Vielzahl privater Kliniken und Arztpraxen haben sich auf die Behandlung von Adipositas, Diabetes und weiteren „Zivilisationskrankheiten“ spezialisiert. Parallel dazu erfahren auch traditionelle ayurvedische Behandlungsformen einen starken Aufschwung.
Staatliche Kampagnen wie das nationale Programm zur Prävention von Krebs, Diabetes, Herz-Kreislauferkrankungen und Schlaganfällen setzen vor allem darauf, die Wahrnehmung und das Bewusstsein der Bevölkerung für chronische Erkrankungen zu schärfen und informieren über gesunde Ernährung, über mehr Bewegung bis hin zur stressfreien Lebensführung (Ministry of Health & Family Welfare Government of India). Darüber hinaus befindet sich ein Gesetz in Arbeit, das den Verkauf ungesunder industriell hergestellter Fertignahrungsmittel und Softdrinks an indischen Schulen und im Umkreis von 50 m um Schulen herum verbietet. In Kantinen soll anhand der „Lebensmittelampel“ gesundes Essen auf den ersten Blick kenntlich gemacht werden. Zivilgesellschaftliche Akteure setzen sich für den verstärkten Anbau unbelasteter bzw. ökologisch angebauter Feldfrüchte im peri-urbanen Raum der Großstädte ein.

6.4 Fazit

In Bangalore lassen sich auf der Grundlage spezifischer wirtschaftlicher und soziokultureller Bedingungen strukturelle Veränderungen im Nahrungs- und Ernährungsverhalten der Mittelschichtsbevölkerung feststellen, was mit einer Zunahme ernährungsbedingter Krankheiten einhergeht. Gleichzeitig erweist sich die traditionelle, überwiegend vegetabile Ernährungsweise

als erstaunlich resistent gegenüber Neuerungen. Sensibilisierungsdiskurse und Gesundheitskampagnen zeigen erste positive Wirkungen, was u. a. die steigende Nachfrage nach kalorienreduzierten oder mit Vitaminen und Mineralien angereicherten Fertignahrungsmitteln zeigt. Besondere Erwähnung verdient auch die wachsende Anzahl Läden, die unter Umgehung globaler Wertschöpfungsketten unbehandelte bzw. ökologisch angebaute Lebensmittel anbieten sowie die Wiederentdeckung traditioneller gesundheitsfördernder Getreide- und Gemüsesorten. Das neue Umwelt- und Gesundheitsbewusstsein sowie die Wiederentdeckung traditioneller Ernährungspraktiken bieten vielversprechende Ansatzpunkte für eine sozial-ökologische Transformation im Sinne der Nachhaltigkeit, wobei darauf zu achten ist, dass auch die Armutsbevölkerung davon profitieren kann.

7 The changing meaning of millets: Organic shops and distinctive consumption practices in Bengaluru, India

7.1 Abstract

The number of organic shops in Bengaluru has increased remarkably in the last few years, with millets being the main products drawing consumers. Yet, organic shops are only attracting middle-class consumers. We observed and interviewed 104 customers in five organic shops in Bengaluru to find out why this is the case. In this article, we follow practice theory to discuss the reported consumption patterns. We show that consumers, influenced by commercials and the advice of medical and nutritional professionals, legitimize their consumption of organic foods as an investment in their future health. We show that the customers of organic shops legitimize their consumption practice with affective engagements; thereby, performing symbolic boundaries that distinguish them from other social classes. This distinction manifests itself in the consumption of millets, which contributes to the change of the meaning of this food from a life-sustaining staple to a lifestyle superfood. In this article, we take a critical look at the role of organic retailers and how they reproduce class-based consumption practices in India.

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8 Facing food transition. Food practices in Bengaluru's rural-urban interface.

8.1 Abstract

Diets in India are changing but not always for the better. Recently, overweight and overweight related diseases are increasing beyond wealthy social classes of urban areas. This is especially the case in rural-urban interfaces, such as the urban periphery of mega cities. Other authors have begun to enrich the discussion on changing diets in India with qualitative inquiries in both rural and urban areas. Yet, they did not focus on the rural-urban interface. Furthermore, it has not been sufficiently answered on how space more general influences changing diets. We conducted semi-structured interviews and group interviews in the rural-urban interface of Benga-

luru, in order to explore the drivers behind changing diets in these areas. In this paper we analyse the gathered data using a practice theoretical approach. Additionally, we apply Poulain's (2017) concept of the food social space to discuss the influence of space on changing food practices in the rural-urban interface. We find that people in Bengaluru's rural-urban interface use dichotomous understandings of food to assess its quality. These understandings are, however, prone to misconceptions and misuse. Furthermore, we suggest to widen the notion of the concept of the food social space, to increase its capability to capture the impact of space on food transition.

8.2 Introduction

Diets worldwide are changing, often showing ostensibly similar patterns such as a shift towards energy dense foods (Popkin, 1994). In India, predominantly wealthier parts of the population adapt their diets to ever increasing offers of energy dense convenience products and cuisines (Pingali and Khwaja, 2004). While overweight has previously been a rather urban phenomenon, in some Indian states[6], the number of overweight and obese individuals has reached the same prevalence in both urban and rural areas (Sengupta et al., 2015).

The aggregate economic drivers behind changing diets in India have been extensively discussed (Pingali and Khwaja, 2004). However, investigation of those aggregate drivers did not lead to a consistent comprehension in the literature of why hunger and malnutrition still exist despite India's continuous economic growth (Deaton and Drèze, 2009; Landy, 2009). Along with other authors (Landy, 2009; Fourat and Lepiller, 2017) we argue that we need to apply qualitative inquiries to enhance our understanding about changing diets in India. In this paper we therefore apply the food transition framework, which connects changing diets to sociocultural changes and investigates changing food practices in their specific (social) environment (Fourat and Lepiller, 2017).

While there is some literature on how sociocultural norms and values influence food transition in India (Finnis, 2007; Ellena and Nongkynrih, 2017; Nichols, 2017), the role of the space or environment has hardly been brought to discussion with regard to food transition. We argue

[6] The study specifically referred to Kerala, Punjab, and Delhi.

that this is a gap of research because eating practices are, amongst others, influenced and restrained by the environment in which they are enacted (Warde, 2016; Fourat and Lepiller, 2017; Poulain, 2017). However, as material space cannot be sharply delineated from social factors, investigating the impact of the material environment on food transition requires a concept which can capture the fuzzy boundary between the material and social space (Warde, 2016). Poulain's (2017) concept of the food social space describes the realm in which food practices are carried out as constrained by material and social factors. In this paper, we argue that the food social space is an appropriate concept to investigate the influence of the material space on food transition as it does not lose sight of the social dimensions of space.

To analyse the question of how the material environment influences food transition, we draw on a qualitative case study conducted in Bengaluru's rural-urban interface. Bengaluru is the capital city of the south Indian state of Karnataka. In the last two decades, the city almost doubled in population from 5.6 million in the year 2000 to 11.4 million in the year 2018, thus making Bengaluru the 4th largest city in India and counting to the group of global megacities[7] (United Nations, 2018). While the term rural-urban interface also denotes smaller cities and towns, in the case of Bengaluru it refers to the megacity's urban periphery. All areas condensed by the term do, however, share the characteristic that rural and urban worlds clash and blur there (Lerner and Eakin, 2011). In terms of trends in food consumption Karnataka does not differ much from overall India: While the intake of cereals decreases, diets become more diversified. However, significant differences can be found between rural and urban areas of the state (Pavithra et al., 2009). Although it has been shown that people in India's rural-urban interfaces are especially prone the negative outcomes of food transition (Sengupta et al., 2015), in Karnataka and elsewhere research on food transition in these particular spaces is scarce.

In this paper, we analyse qualitative interview data gathered in Bengaluru's rural-urban interface from 2016-2017, using a practice theoretical approach. To address the gaps outlined in the last two paragraphs we will answer the following questions: What is the food social space for food practices in Bengaluru's rural-urban interface? How does it influence people's food practices? What role does the food social space play in relation to changing food practices?

This study adds two new spatial foci to the debate about food transition. First, we focus on the rural-urban interface, as an area which has hardly been studied with regard to food transition.

[7] Cities with a population of over 10 million inhabitants (United Nations (2018).

Second, we discuss and frame the role of the material environment for qualitative inquiries on food transition. We find that in Bengaluru's rural urban interface people describe food using dichotomies such as village and city food. While these dichotomies help the people to make putatively healthy food choices in everyday life, they are also prone to misconceptions and misuse. Furthermore, the temporality of eating as a part of the food social space is the most important dimension in order to capture the impact of the material space on food transition. However, to become more applicable, we suggest to augment it by considering not only the rhythm but also the progression of time.

8.3 The rural-urban interface

People in the rural-urban interface are especially prone to the negative outcomes of food transition. This is indicated by the case of India, where, remarkably, the risk of being overweight decreases in urban areas, while it continues to increase in the rural-urban interface (Sengupta et al., 2015).

In this paper the rural-urban interface is regarded as a "new emerging [space] that incorporate[s] a mosaic of urban and rural worlds […]" in the Global South (Lerner and Eakin, 2011). Defying clear-cut boundaries, this space can hardly be defined as either rural or urban, which becomes visible in constant landscape changes, such as the conversion of agricultural land into build-up areas (Dupont, 2007; Soini et al., 2012). In India, the rural-urban interface has been exploited by uncoordinated development interests of both formerly public, and currently foremost private actors. This exploitation leads to an increasing polarization of interests of different social classes (Dupont, 2007; Arabindoo, 2009; Narain and Nischal, 2016). Polarization and exploitation become visible along Bengaluru's rural-urban interface through different dynamics. While there is still a large amount of labour-intensive smallholder agriculture, increasing amounts of formerly agricultural land is being consolidated for construction projects, or as expected development area (Nagendra, 2016). While some villages have almost no retail infrastructure, cafés and restaurants targeting an urban middle class, are spawning rapidly along major traffic roads. This indicates that the rural-urban interface is not just a designation for the fringes of cities. It is also the place where presumably "rural" and "urban" activities and institutions clash and where goods and services stemming from the city or from villages are exchanged (Narain and Nischal, 2016). All of this results in a high heterogeneity among the inhabitants of rural-urban

interfaces (Allen, 2003). However, with regard to food transition or changing food practices there is hardly any literature dealing specifically with the rural-urban interface.

8.4 Food transition

The food transition framework connects changing diets to sociocultural changes, looking at processes in their specific (social) environment allowing for a detailed analysis of changing diets and why changes occur (Fourat and Lepiller, 2017). It questions the purpose of path dependent nutrition transition models, according to which all countries necessarily traverse through more or less the same dietary phases. While aggregate data might allow for an analysis resulting in the classification of diets into consecutive phases (Popkin, 1994; Pingali and Khwaja, 2004), these consecutive phases are not necessarily passed through by every household (Fourat and Lepiller, 2017).

Regarding the specific (social) environment of people, rural and urban environments are one differentiating factor in contemporary India. This is also reflected in studies on food transition. Eating out for example is a practice which is much more prevalent in urban areas, where there are more opportunities to do so. At the same time, eating out also increases with the number of employed people in a household (Gaiha et al., 2013). Studies in urban areas often address the knowledge about healthy eating practices. While knowledge tends to be higher among women with wealthier backgrounds, it is not necessarily translated into healthier eating practices (Griffiths and Bentley, 2005). Beyond health, women in urban areas report to be influenced by for instance the family's preferences, convenience and food safety, when buying food for the family (Bailey et al., 2018). Furthermore, although children in urban areas might be more exposed to convenience food, they continue to have a more positive connotation for homemade food (Staab et al., 2016).

In rural areas, studies emphasize the importance of changing gender roles, due to changing socio-economic conditions, for food transition. For instance, Ellena and Nongkynrih (2017) have shown that when women's position in the household is devaluated this can lead to decreased dietary diversity and food security. Environmental conditions, impeding the cultivation of traditional crops, can lead to a decrease of the variety of staples consumed by agricultural households. In addition, the consumption of white rice is often associated with economic prosperity, which might lead to the abandonment of other staples (Finnis, 2007; Nichols, 2017).

Furthermore, dietary diversity might also be decreased by the opportunity to sell horticultural products which were previously used for own consumption (Nichols, 2017).

In terms of trends in food consumption Karnataka does not differ much from overall India. However, data on the rural-urban interface are scarce and can usually only be obtained for either rural or urban areas. Urban and rural areas in Karnataka differ in the amount of food intake but are moving into similar directions. For example, while the intake of cereals decreases, diets become more diversified. Both observations are, however, more significant in urban areas of the state (Pavithra et al., 2009). While the prevalence of underweight in rural and urban areas of Karnataka decreased in the last decade, the prevalence of overweight increased in both areas, including higher risks for many non-communicable diseases such as diabetes type II. Remarkably, in Ramanagara, one of the districts belonging to Bengaluru's rural-urban interface, the share of overweight men is about 10% higher than in urban Bengaluru (International Institute for Population Sciences, 2007, 2017). This reinforces a study which found that overweight in contemporary India is especially a problem in rural-urban interfaces (Sengupta et al., 2015). However, while in urban Bengaluru the share of overweight individuals is significantly higher than of underweight individuals, the number of underweight individuals in the rural-urban interface (represented by the districts Bengaluru Rural and Ramanagara) remains high. At the same time, the share of overweight individuals has reached more than 20% for both men and women, indicating contradictory developments with regard to food transition (see Table 7).

Table 7: Share of under- and overweight individuals in Bengaluru (represented by the district Benga-luru Urban) and its rural-urban interface (represented by the districts Bengaluru Rural and Ramanagara) (IIPS 2017)

		Bengaluru Urban	Bengaluru Rural	Ramanagara
Underweight (BMI < 18.5 kg/m²) [%]	Women	14.0	21.3	22.4
	Men	8.7	16.7	14.8
Overweight (BMI ≥ 25.0 kg/m²) [%]	Women	32.0	24.5	22.8
	Men	26.1	22.3	37.8

Transition is brought about by changing practices by all stakeholders of a food system. Thus, the next chapter introduces practice theory as a meaningful approach for the study of transitions (Spaargaren et al., 2012).

8.5 Practice theory and the food social space

According to Schatzki, a practice is a "set of […] bodily doings and sayings or actions that these doings and sayings constitute" (Schatzki, 2000, p. 56). These bodily doings and sayings are beyond others connected through understandings. Understandings are the ability to pertain a practice by knowing how to carry out, identify and respond to a practice (Schatzki, 2000). In studies of consumption, practice theory rejects ideas about a sovereign consumer and rather focusses on the conduct of practices in their specific (social) environment. Consequently, social change is not primarily based on conscious decisions, but on routine practices which only change if their (social) environment allows it (Warde, 2005; Halkier and Jensen, 2011; Spaargaren et al., 2012). We find Poulain's (2017) concept of the "food social space" helpful to grasp all aspects of the practitioner's surrounding. Poulain describes the food social space as the realm in which food practices of a certain group are carried out. This realm is constrained by both material and social factors. People adapt their food practices to their material environment, by following social factors which constrain the choice of what the material environment has to

offer. Poulain uses six different dimensions to describe the interplay of material and social factors. These dimensions are not clearly delimitated but their boundaries overlap to varying extents. In this paper we will apply four of the six suggested dimensions[8]:

- The edible space; meaning the choice of edible products made by people from their physical environment. Usually dependent on their social group, which can result in social differentiation from other groups by the choice of foods.
- The social differentiation space; meaning the boundaries drawn between different groups because of their specific edible space.
- The food system; meaning the structures beyond food's way from the place of production to people's mouth. It includes all actors who contribute to the production and consumption of food. Some of these actors act as gatekeepers who define the edible space for others.
- Eating and the rhythm of time; meaning the changes in the edible space with time such as during the life cycle and seasons. Furthermore, the structure of the food day referring to how many meals one eats, for example.

8.6 Data and Methodology

Data were collected during three field stays of eight months in total, from August 2016 to December 2017. Based on advice from our Indian project partners, we interviewed only women, as they usually carry the responsibility for their family's nutrition in Bengaluru's rural-urban interface. Although we attempted to increase comparability of our data by interviewing only middle-class families, we perceived a high socio-economic heterogeneity among our interviewees especially between interviewees in the villages and interviewees in the city. For example, almost all of our interviewees in the city held university degrees, while that was the case for only one interviewee in the village. However, in their respective social environments our interviewees identified themselves as belonging to the middle class, which accorded with our assessment as well.

We conducted 20 semi-structured household interviews in three different villages in the north of Bengaluru, within a 30 to 50 km drive from the city centre. We also conducted three group interviews, with 2-3 participants per group, in a city quarter of Northern Bengaluru. Different

[8] We use only for of the six dimensions as the other two dimensions, namely the culinary space and the space of food habits, could not be discussed based on our data.

interview methods were chosen due to the difficult access to women in the city. While in the villages it was possible to randomly knock on doors and conduct the interview rather spontaneously, this was not possible in the city. We therefore contacted a local women's welfare group who invited us to their group meetings after which we could conduct our group interviews.
During all interviews, we were accompanied by a field assistant who was fluent in the local language of Kannada. The interviews in the city were conducted in English as all participants were fluent in it. In the villages, interviews were conducted in Kannada. The field assistant then provided a short translation, which allowed us to pose possible additional questions. All interviews were audio-recorded, transcribed, and if necessary, translated. The transcripts were then entered into qualitative data coding software and examined for dominant themes, which will be reflected in the following results section.

8.7 Results

8.7.1 Dichotomous understandings

In the presentation of the results, we will begin with depicting dichotomies reported in the interviews. Interviewees reported clear ideas about what was 'rural' or 'village' and 'urban' or 'city'.
Some foods were clearly regarded as village food. When we asked Shashikala[9], a 47-year-old housemaker, living in a village if she thinks that she would be eating differently, if she lived in Bengaluru, she said:

> *"[…]I like to have only village food. [In Bengaluru] whatever you get there you have to adapt to that. We wouldn't get the village food in the city."*

When we asked her what the so called 'village food' was she immediately replied:

> *"Ragiball[10], rice, sambar[11]"*

Repeating this question in other households in the three different villages we visited, we often received the same answer: ragiball, rice and sambar. In our group discussions in the city, we

[9] We use pseudonyms to protect our interviewees' identities.

[10] A lump made of ragi (Kannada for fingermillet) flour.

[11] A soup based on red lentils and tarmarind.

asked the women if they think that they would eat differently, if they lived somewhere else. Shreya, a 21-year-old engineering student living with her parents and her sister replied:

> *"If I go to my native even there it's a three-course meal, but normally in the night we just eat three or four Jowar*[12] *Roti*[13] *and that's it. But here since we can't make the Rotis we just make a few Chapatis and Rice. So, we eat more rice when we are in Bangalore than when we are in our native."*

The higher consumption of rice being considered a city practice is something that women in the villages also expressed.

Another dichotomy was created between homemade foods and eating out. Homemade food was predominantly attributed to be healthy. Eating out, in contrast, was considered to be unhealthy. Ranjita is a 22-year-old housemaker, living with her husband and her child in a village. When we asked her about what food she thinks is unhealthy, she said:

> *"Noodles, gobi, pani puri*[14] *is unhealthy. Eating hotel*[15] *food is also bad but we eat only due to circumstances. Homemade food is always healthy"*

Ranjita here referred to two kinds of eating out: Street food and hotel food. While eating out in general was often regarded to be unhealthy, eating street food was completely detrimental to health. According to our interviewees, street food was prepared with unhealthy amounts of fat, spices, and glutamate. Moreover, they worried about practices such as the reuse of frying fat and the processing of spoiled food. Thus, eating out, especially street food, was often reported to be avoided if possible.

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[12] A sorghum variety

[13] Round flatbread made from wholemeal flour

[14] Noodles refers to fried noodles with vegetables, which are said to contain unhealthy amounts of monosodium glutamate. Gobi and pani puri are common street foods. Gobi refers to "Gobi Manchurian" a Chinese style dish with fried cauliflower in spicy red sauce. Pani puri are small fried wheat breads usually served with a filling of nuts and dry noodles.

[15] A hotel is an Indian fast food restaurant, who sell food to more affordable prices than fancier or air-conditioned restaurants. They usually have a kitchen visible for the guests and an open front to the street.

Most women also agreed with Ranjita's statement that homemade food is always the healthier option. In the interviews, it was frequently emphasised that preparing food at home is practiced less in the city, being therefore interwoven in the dichotomous understanding of city and village food.

Another dichotomous understanding interwoven in the previous understandings exists between Indian and Western food. Put in highly simplified terms (see also Table 8): Indian food was regarded as healthy, usually prepared at home, and rather attributed to the village. Western food, on the contrary, was regarded as unhealthy, mostly eaten out, and attributed to the city. When we asked Lalitha, a 31-year-old housemaker, living with her husband and children in the city, if she would eat differently, if she lived in the village, she said:

> *"We would. In the village it would be more vegetables and fruit. Here it is lots of pizza, doughnuts. These kinds of things. I think it differs a lot. "*

Table 8: Dichotomous understandings of interviewees

Village food	City food
Homemade food	Eating out
Indian food	Western food

8.7.2 Specific understandings and practices

Except for the directly expressed characteristics of village and city, there were also certain practices and underlying understandings which seemed to occur only in the village or in the city.

Eating out was already addressed in the previous section on dichotomous understandings, which were generally shared by interviewees in the village as well as the city. However, the understandings about eating out also entail aspects which seemed to be specific depending on the interviewee's current place of living, implying specific practices.

Women, living in the village, who stated that they would eat out, regarded it as a necessity which could come in handy in certain situations. Lakshmi is a 38-year-old housewife living in the village. She said about eating out:

> *"I wish there was a hotel here so that if we are not able to cook sometimes it would be easier for the children to grab something and eat when they are*

hungry. […] During emergencies like if someone is sick, if we are busy, or if we wake up late then it would be easier to eat in the hotel. […Rich people], they eat a lot of hotel food. They spend too much money for food but for us each rupee is important we will feel guilty to spend so much money for food."

Despite the reluctance to eating out frequently, Lakshmi also points out that it could be useful or even necessary sometimes to have access to a nearby hotel. Like Lakshmi, several women mentioned that eating out would be an option during times of sickness or if situations occur where there is no time for cooking. Therefore, they said that it would be useful to have a hotel within a walking distance. Another popular occasion to eat out was when travelling to other places. Eating out while travelling, however, was also a common practice among interviewees in the city. However, women in the village often mentioning that they would prefer South Indian food when eating out.

Except for the necessity to eat out while travelling, eating out often seemed to have a different meaning for women in the city. When we asked about how they would eat out, Lalitha had the following discussion with Anjali, who is 29 years old and also a housemaker:

A: "It depends on time. If we have more time we are trying different kinds of food. If we are nearby [home] and don't have time we just go to the nearby places."

L: "But we are more searching for Indian food."

A: "Yeah, South Indian food. Other than Domino's and all those things."

L: "Sometimes, we like Andhra style. It should be authentic."

L: "Yes, authentic South Indian style. Like rice and all those things."

I: "So South Indian is preferred but would you sometimes also go and have north Indian?"

A: "Yes, you know we would like to try. Our family likes to try. Sometimes we go for Punjabi, sometimes Jain kind of style food and sometimes Mexican. We just try different things."

Eating out or trying new foods or restaurants together was a popular family activity, which was also mentioned by other women in the city. Contradictory to the statement of Lakshmi, it was

not regarded as a necessity to save time, but rather as a moment of free time enjoyed with the family.

Lalitha and Anjali both state that they prefer Indian or even South Indian food. Over the course of the whole interview, both also stress that they are very health conscious in terms of food. Recalling the understanding that Indian food is healthier than Western food, the expressed preference for Indian food goes along very well with their self-legitimation as health-conscious consumers.

Finally, they also mention that the food consumed when they eat out should be authentic. Anjali further specifies that authentic South Indian, for example, would include rice for her. Shreya also commented on the authenticity of Italian food:

> *"Italian Pizzas, my mom also likes. We go for the authentic Italian ones, not Pizza Hut. We go to some café such as Gweeny and Brico's on Church Streets. The authentic Italian Pizzas and Pastas."*

Her mother, Shreya tells us, is quite strict about food she regards as unhealthy. Shreya questions the authenticity of the food served in an American fast food parlour present in Bengaluru. Lalitha, Anjali, and Shreya describe authenticity as a characteristic which compels their choice of particular restaurants. Therefore, authenticity seems to be a quality characteristic, which can also decrease concerns about eating out and Western food.

According to some women in the village, grocery shopping became more common in the recent years due to water scarcity in agriculture. When we asked Shashikala if they would grow vegetables, she told us:

> *"There is no borewell and no rainfall to grow vegetables. […] When it rains we grow green leafy vegetables, beans, and pulses. […] Before it was better. In the last five years it has been a problem. Hence, we buy vegetables from the market."*

In the villages, the grocery shopping was usually done by men. As men were often working outside the village, either in Bengaluru or in one of the towns nearby, it was considered the most practical option. Some women also reported a street vendor has started coming to the village for a few months. Chaitra, a 21-year-old housewife, who recently got married and lived in a joined family with her husband and her in-laws, told us about buying groceries:

> *I: "Does the street vendor come here too?"*

C: "Yes, but I don't buy it from them. In the morning you get fresh vegetables in the market so I ask my husband to buy it. […] The vegetables are not fresh here. It is cheap but not good. In the market you get fresh ones though they are expensive."

Like Chaitra, other women also said that they would avoid purchasing from the street vendors in the village because it would not be fresh. However, it was common to buy finger millet and, to a lesser extent, also vegetables, which were locally grown from neighbours. When we asked our interviewees in the villages if they would be missing any food retail in the villages, they did not express any discontent over grocery retail.

Interviewees in the city described that the retail situation would be more than comfortable. There were several supermarkets in walking distance. Other popular food retailers, which had to be targeted by car, were wholesale vegetable markets, hypermarkets, and Metro[16]. Street vendors in the city, who came to the residential areas every evening, appeared to have a different meaning from the street vendors who came to the villages. Shreya and Indira, a 42-year-old housemaker living with her two teenaged children and her husband, talked about this:

S: That is leafy vegetables. We get them near the temple at the street vendors.

I: The street vendors are the best place to buy the leafy vegetables. It will be fresh there.

Contrary to the street vendor in the village, the street vendors are praised for their freshness here.

8.7.3 Shared practices

Despite all the dichotomies and particularities, there were certain other practices which were shared by many interviewees, irrespective of the location of their household.

Wholesale markets for fruit and vegetables located in Bengaluru, or the surrounding towns, were a popular place to buy food of high quality at a good price. These markets could best be

[16] A German wholesale market chain. Present in Bengaluru since 2003.

described as a hybrid between farmers' markets and wholesale markets, being targeted by restaurants for instance but also by final consumers. While Shreya and Indira mentioned two markets within Bengaluru (see Figure 16), interviewees living in the village usually targeted a market in one of the surrounding towns (see Figure 17).

Other practices shared by all interviewed women were the reaction towards food scandals. A recent very well-known scandal was the discovery of monosodium glutamate in Maggi noodles. When we asked Ranjita if she had recently heard any bad news about food, she said:

"I have heard about 'Maggi'. We eat 'Yippie' noodles now instead."

Figure 16: A wholesale vegetable market in Yelahanka, a city quarter of Northern Bengaluru

Figure 17: A wholesale vegetable market in Devanahalli, a town in the north of Bengaluru

The practice to change the preferred brand was also reported by women in the city. Another reaction to the scandal was to stop buying these flavoured instant noodles completely. At the same time, these noodles were also described as a quick fix when children were hungry out of meal times, which made it very hard to cut them out completely. Another shared practice in terms of food scandals was to check food such as rice or salt more thoroughly after experiencing or hearing about those foods being involved in a food scandal.

8.8 Discussion

8.8.1 The edible space

The most obvious categories used by the women when defining the edible space was the differentiation between city and village food. The dichotomous understandings about food are not new to the sociological study of food (Poulain, 2017). The women in this study applied the categorisation of food as depicted in (see Table 8) for their food practices. The dichotomies presented a practicable way to assess whether a food was healthy or unhealthy. However, legitimating the refrain from comparatively expensive practices such as eating out and eating Western food with health reasons, could also be a way to obscure that the refrain might primarily be due to financial reasons.

Dichotomous classifications of food can be found in different cultural contexts around the world (Poulain, 2019). Traditionally, a hot/cold dichotomy is used in different parts of India. Different food items are said to be either a hot food or a cold food. Depending on for instance a persons' health condition or gender he or she should eat predominantly hot or cold food. Furthermore,

some food items are recommended depending on climatic conditions. The hot/cold dichotomy was also applied by our interviewees. Finger millet, for instance, was regarded as a hot food which could warm the body in winter. Coconut water was regarded as a cold food, which would cool the body and help digestion. While the hot/cold dichotomy is still used, it might not suffice to categorize the increasing amount of food items offered in Bengaluru's rural urban interface as relatively new food items, such as Maggi noodles, challenge these categories (Nichols, 2017). Additionally, foods are divided differently into the hot/cold dichotomy in different regions of India (Nag, 1994). With an increasing number of people from different states moving to Bengaluru, it becomes difficult to find out whether a food is hot or cold. The dichotomous understandings presented above complement the hot/cold dichotomy to make it applicable to recent changes in the edible space.

In the rural-urban interface of Bengaluru, the idealised understanding of local food[17] could have positive effects on people's health and the identification of healthy food is gaining importance in Bengaluru (Erler and Dittrich, 2017). Dishes such as Ragiball and Sambar, which were mentioned to be an important part of the local cuisine, usually have a low-fat content and contain plenty of vegetables and micronutrients. Moreover, Ganguly (2017) argues that traditional Hindu eating practices in Bengaluru can be beneficial in terms of different aspects of sustainability, such as a low meat consumption.

Positive aspects of such an understanding are certainly considerable, however, they can also be problematic:

First, Born and Purcell (2016) stress that scales, be it the local, the village, the national or the household scale, do not have an inherent value regarding food. The outcome of scaling processes depends on the aims of the actors steering it, rather than on the scale they choose. In the presented case, food which was perceived as local food is not necessarily healthy. For example, South Indian dishes such as Biryanis or Curries can be produced with varying amounts of fat and tea is often prepared with a lot of sugar. Thus, an idealised understanding of local food can be a fallacy, when applied uncritically.

Second, food has often been deployed for nationalist discourses in India (Mannur, 2007; Varman and Belk, 2009). It is not clear whether the idealised understanding of local food, we found in our data, does eventually also contain nationalist tendencies. However, it could be read as an

[17] Which we will use as a synonym for village, Indian, and homemade food

indicator as it includes a simplified delimitation of Indian vs. Western food. Neo-traditionalist approaches to environmental discourses, such as Ganguly's (2017), have been shown to reinforce arguments of Hindu nationalists through a one-dimensional reading of Hindu traditions (Mawdsley, 2006). Therefore, we argue that an idealised understanding of local food should be observed critically.

8.8.2 The social differentiation space

While dichotomous understandings were primarily deployed by the women to define the edible space, they also contained clear indicators for social differentiation. Although both, interviewees in the city as well as in the villages agreed on the superiority of village food, interviewees in the village also used the term to identify with village food, and distance themselves from foods associated with the city. For example, when Manjula speaks about eating out she also mentions that this is something which is done a lot by rich people. This statement reveals that social differentiation in the food social space of Bengaluru's rural-urban interface does not only happen between city and village people, but also between different economic classes.

Social differentiation also played a role regarding discourses of authenticity taken up by interviewees in the city. For the practice of eating out, authenticity was mentioned as a basis of decision-making when choosing a restaurant. Authenticity was important to identify the quality of South Indian restaurants as well as legitimation for eating Western food, which was actually deemed as unhealthy.

Speaking of authenticity, in relation to a South Indian restaurant, is probably an expression for an apprehension of leaving behind treasured culinary traditions. Leaving behind these culinary traditions, however, is the basis for emergence of authenticity. Thus, we concur with Pratt (Pratt, 2007) that authenticity is not preserved in villages and rural places of South India, but created by the operators of "authentic South Indian restaurants" and perpetuated by its consumers. Srinivas (2006) describes authentication in this context as gastro-nostalgia, a practice "that attempts to create a cultural utopia of ethnic Indianness […]" (Srinivas, 2006, p. 193). The distance from traditional cuisine is often perceived as unfortunate, especially for women living in cities, and striving for authenticity can alleviate that perception. In our case, most of the interviewees from the city reported having a rural background. Claims of authenticity or gastro-nostalgia could be an attempt to retrieve what is perceived as traditional eating. As that authenticity was never mentioned by interviewees in the village, Pratt's definition, according to which

distance needs to be perceived before interviewees start striving for authentic food, is reinforced by our findings.

When considering authenticity in terms of Western or other non-South Indian restaurants, it is described by Srinivas (2007) as being part of gastro-adventure, a euphemism for the practice of eating ostensibly foreign food. Being able to make a judgement on the authenticity of foreign food conveys a message of being knowledgeable about such food. By distancing oneself from the consumption of unauthentic Western food, interviewees practiced class distinction by pointing out their advanced knowledge about foreign cuisines.

Although we share Srininvas' (2007) analysis that the declaration of authenticity entails aspects of class distinction, we argue that it is primarily used by our interviewees to legitimate the practice of eating western food when eating out, which is generally regarded to be unhealthy. We base this argument on Shreya's statement that her mother would allow only authentic Western food when eating out with their family. This argumentation is supported by other practice theoretical analyses which generally asses the practical purpose of a practice as more relevant than the representative purpose (Warde, 2005).

8.8.3 The food system

During our field work, polarisations and inequalities of the food social space of Bengaluru's rural-urban interface became obvious. Beside all financial and cultural capital that divide the interviewees in this study, interviewees in the village had to deal with remarkably poorer food provision structures in comparison to the interviewees in the city.

Within the food system, women in our interviews acted as gatekeepers for their families' eating practices. We have argued above, how they used dichotomous understandings about food to make decisions about their family's edible space. These understandings are also linked to the food system through anxieties about food. As in other Asian countries, concerns regarding food quality and food security exist at the same time in India (Poulain, 2019). In the case of Bengaluru's rural-urban interface, anxieties around food occur through concomitant discourses on malnutrition, diet-related diseases, and idealised body images. While women are offered programmes on the importance of breakfast for school-going children to fight undernutrition, other people in the village, or even in the same family, are faced with obesity or diabetes. This is accentuated by a sensational reporting of food scandals in the media (Dixon and Banwell, 2004) and in the case of Bengaluru by discourses of the scandals in social media and messengers. The

women in our interviews were concerned with excessive glutamate contents in instant noodles and the reuse of frying oil at street food stalls. During our field stay, the women expressed to us that they had heard about plastic eggs, plastic rice, and adulterated salt. We can conclude, from our observations that the described anxieties correspond to Poulain's description of food anxieties as being not only based on food safety concerns but also "with food security, food fraud and social controversies." (Poulain, 2019, p. 302)

Similar to invoking on food allergies in Western countries (Warde, 2016), the retreat to dichotomous understandings such as village and city foods could be another reaction to food anxieties. Placing the responsibility of problems in the food system with the Other has been described as a reaction to anxieties about food (Jackson, 2010). In our case, the Other is the food eaten out, non-Indian food or in some cases the city food.

Interviewees in the village, as well as in the city, confronted food scandals in a similar way, through brand boycotts and careful monitoring of potentially adulterated food. This shows that beside all disparities, people in Bengaluru's rural-urban interface still share certain components of the food social space. When including the retreat on dichotomous understandings, it furthermore shows how policies fail to provide the people the required infrastructure to access safe food.

There were minimal complaints about a lack of grocery shops. Street vendors, who sold fresh produce in the villages, had a bad reputation and were reluctantly used in times of need. Most of the interviewees in the village did not seem to mind the effort to go grocery shopping at wholesale markets in the next town. The same wholesale markets were also targeted by interviewees in the city, even if they said that they would have sufficient opportunities for grocery shopping near to their houses. Among the interviewees, these wholesale markets had a reputation of being a good source for fresh, high quality produce sold at low prices. Thus, we suspect that the advantages of these wholesale markets mitigate the insufficient opportunities for buying fresh produce in the village.

Another reason for relatively little complaints about the lack of grocery shops might be the practice to buy vegetables and other agricultural produce from neighbours in the village. This informal trade might complement the purchases made at the wholesale market in a way, making a grocery shop in the village potentially unnecessary. The practice to buy groceries in a village was also reported by interviewees in the city, who often had relatives in rural areas.

Wholesale markets contribute to the function of Bengaluru's rural-urban interface as an exchange point for agricultural products (Narain and Nischal, 2016). By choosing the rural-urban

interface as a location of our research, it becomes clear that this function, however popular it might be, is endangered. Wholesale markets receive massive concurrence from super- and hypermarkets as well as conventional wholesale retailers such as Metro. At the same time, water scarcity and the decrease of agricultural land in favour of building projects will complicate the supply of these markets, because larger distances have to be covered between producers and the market place. While the provision with fresh produce of urban households might be secured by other retailers, it is questionable how households in the villages around Bengaluru would satisfy their demands in terms of the access to fresh produce, if the wholesale markets would not exist.

8.8.4 Eating and the rhythm of time

The relevance of temporality for the study of practices in transition has previously been emphasized in the literature (Ellegård, 1999; Shove, 2009). We begin this section with a critique of Poulain's conception of time in the food social space, which is mainly based on the conception itself but is aggravated by the translation of this dimension. For the dimension of time, Poulain mentions three different categories: the life cycle, temporal cycles such as seasons and the daily temporal rhythm. This conception of time is also used in other studies which empirically study food practices in relation to time (Warde et al., 2007; Southerton et al., 2012). However, to look on the dimension of time in this way leaves the impression that the food social space is indeed changing, but in an infinite loop, where it is just a matter of time until the status quo is restored. This is because Poulain's category disregards one-time events or irreversible changes occurring with time, which have always impacted and will continue to influence other dimensions of the food social space. An example for such a change in the past is India's Green Revolution, which led beyond others to an increased consumption of wheat and rice due to its high abundance all over India. In the future, the impact of climate change on agriculture is also likely to influence food social spaces worldwide (Gregory et al., 2005). Therefore, we suggest adding the proceeding of time as an important category and naming it "the temporality of eating", which is closer to Poulain's original title "la temporalité alimentaire". This way, the concept of the food social space will be more open to capture food transition.

In our data, the temporality of eating becomes most visible in Chaitra's statement on water scarcity. She claims that they would buy vegetables from the market because they cannot grow vegetables themselves due to a lack of rain and irrigation water. According to her, it was still

possible to do so five years ago, showing us a change in Chaitra's food system over the last few years. Irrespective of whether her claims about water scarcity are based on an actual decrease of water availability, perceived changes in her environment make it necessary for her to buy vegetables from the market.

Bengaluru's rural-urban interface is a highly dynamic space which will continue to change remarkably in the next years. Considering the temporality of eating not only in a circular but also in a linear way will compel us to take into consideration that food social spaces are dimensions sensitive to changes in the overall social space.

8.9 Conclusion

Peoples' environments have long been acknowledged as influential as well for their food practices as for food transition. In this paper we discussed how space influences food transition in Bengaluru's rural-urban interface.

We found that dichotomous understandings about city and village food were used by our interviewees to define edible foods or, practically speaking, foods which are conducive to their family's health. While primarily serving practical reasons, those dichotomous understandings were also deployed for social differentiation towards other classes or nationalities. While we have argued that dichotomous understandings about food are used by the interviewees to make practicable, healthy decisions about food to overcome food related anxieties, they also represent an illusionary over-simplification of the food system. These oversimplifications are prone to be used in food marketing to advertise foods which counteract our interviewees' ascriptions to either homemade or rural food.

Furthermore, we found that new events such as water scarcity in agriculture, but also new information about food influence people's understandings about eating. These new events continue to occur with the proceeding of time and are sometimes manifested in different dimensions of the food social space. Thus, we suggest to widen the notion of temporality in theories applied to the study of food and instead of regarding only on time rhythms and cycles, taking the proceeding of time into account. This will increase the capability of those theories to explain the influence of people's environment on food transition.

9 Middle class, tradition and the Desi-realm—discourses of Alternative Food Networks in Bengaluru, India

9.1 Abstract

It has repeatedly been claimed that persistent traditional agriculture and marketing in countries of the Global South, such as India, are a fruitful basis for the foundation of alternative food networks (AFNs). However, literature on AFNs in the Global South is scarce and it thus remains uncertain how the appropriation of traditional agri-food practices plays out. We conducted semi-structured expert interviews with representatives of 14 AFNs in Bengaluru, India, in order to explore their aims and approaches. We found that there is a high variety of different AFNs in the city. One salient discourse among the representatives was that the agri-food system can be improved by a revitalization of tradition. In this paper we discuss the implications of this conviction in AFNs. Traditionalism, we argue, does rather represent a deflection from achieving the stated goals of the AFN, namely the improvement of the livelihood of Indian farmers.

9.2 Introduction

While Alternative Food Networks (AFNs) in the Global North have been discussed broadly in scientific publications, AFNs in the Global South including India have been studied only rarely (Rosol, 2018). As a consequence, academics miss out on insights that could help AFNs worldwide to encourage conventional food systems to become more socially just and environmentally sustainable (Ilieva and Hernandez, 2018). Furthermore, disregarding AFNs in the Global South (in scientific publications as well as other media) suggests that they do not exist or are impossible to establish in countries like India. In this paper, we challenge these assumptions and seek to redress the North-South imbalance in the AFNs literature by drawing on our in-depth study of AFNs in Bengaluru, India.

Goodman and Goodman define AFNs as networks that claim to tie "the production and consumption of food […] more closely […] together spatially, economically, and socially" (Goodman and Goodman, 2009, p. 1). These networks try to achieve this end by opening new spaces in the food economy which draw on alternative production principles such as organic, Fairtrade or local production. Examples of AFNs are farmers' markets (Fendrychová and Jehlička, 2018), community supported agriculture (CSA) or organic retail trade (Doernberg et al., 2016).

In the last decade, Bengaluru, the capital of Karnataka in South India, has experienced the rise of an organic food movement led mainly by middle-class activists and entrepreneurs, who are unsatisfied with India's agri-food system. This movement is, among other things, based on an increasing number of AFNs establishing in and around the city. These AFNs range from companies developing organically labeled food product lines, which are sold in organic shops burgeoning all over Bengaluru, to CSA initiatives. In order to avoid missing out on important developments in this relatively recent landscape of AFN, we decided to apply Goodmann and Goodman's (2009) relatively broad definition of AFN.

The AFNs in this paper are mostly businesses and initiatives dealing with the production and distribution of alternatively produced food. In most cases, we found that 'alternative' was interpreted as organic production. One aspect which, remarkably, almost all AFNs shared, was the passion to revitalize traditional Indian agriculture and food culture. In this paper we will, therefore, pay particular attention to how this discourse unfolds in Bengaluru's AFNs and discuss possible consequences.

More precisely, we will look at an organizers' discourse of AFNs in Bengaluru. This discourse consisted of statements which claimed that India's agri-food system could be improved through a revitalization of tradition. We conceptualized this discourse predominantly by building on Sinha etal.'s (1997) work on new traditionalism. In new traditionalism, traditional India is perceived as inherently sustainable. However, this is based on romanticizing or even false claims and can often be traced back to elitist and nationalist endeavors. By connecting the organizers' discourse to new traditionalism, we aim to show how the traditionalist discourse of Bengaluru's AFNs is connected to wider societal discourses and why a traditionalist orientation of AFNs is problematic. In order to provide a conceptual basis to distinguish between different kinds of traditionalism, we merge new traditionalism with the concepts of unreflexive and defensive localism from previous academic contributions on AFNs. Furthermore, in order to capture all cases of traditionalism found in our data, we aim to widen the notion of unreflexiveness and defensiveness.

We will start this paper by providing more context on how AFNs are discussed in research generally and present the rare but nascent literature on Southern AFN. In section 2 we will present our methodology and also comment on the study's limitations. Our findings will be presented in section 3. We will discuss these findings and how we distinguish between cases of unreflexive and defensive traditionalism in section 4. In the conclusion we will point out the contributions of our paper to academic literature on AFN, but also to AFNs' discursive practices.

9.3 AFN in research

The first AFNs in Europe and North America started as rather small-scale initiatives with the aim of producing and consuming food with, for example, a less negative environmental impact or better working conditions for the producers. This was followed by a phase of conventionalization in which alternative (e.g. organic) food became increasingly available in the conventional retail sector. Thereby, initially high environmental and social standards of many AFNs became somewhat blurred behind labels such as organic or fair trade (Goodman and Goodman, 2009). In a third phase, this conventionalization and the resulting decrease of standards, in particular the alienation between production and consumption, recently resulted in a resurgence of AFNs with direct marketing models such as CSA. Direct marketing is often supported by internet platforms. This rapprochement between production and consumption is deemed to lead to high standards regarding working conditions and product quality. Although these four phases occurred more or less in historic sequence, the occurrence of new phases did not mark the end of the previous phase. Instead, the different phases contributed to a range of AFNs which, as networks, epitomize either one or several phases at the same time. Roughly, there are three distinguishing characteristics for AFNs: alternative food, such as organic or Fairtrade; alternative networks, offering alternative retail or distribution channels; and alternative economies, which aim to go beyond economic livelihood security such as cooperative models (Rosol, 2018). One AFN can either incorporate just one, or several different characteristics of alternativeness and the rigorousness with which they are pursued also varies (Goodman and Goodman, 2009; Rosol, 2018).

Countries in the Global South, such as India, have not been completely excluded from the development of AFNs in the Global North. For example, food products labeled as fair trade are often produced in the Global South. However, the management and the consumers of the AFNs, which are regarded in the studies reviewed above, are often in the Global North. Therefore, the question arises if and how AFNs in the Global South incorporate certain distinguishing characteristics of AFNs, if they add new characteristics, and what aims they have with regard to changing the agri-food system. In this, paper we will analyze AFNs in Bengaluru, India as representatives of Southern AFNs.

9.4 Southern AFN in research

Despite the limited extent of literature on Southern AFNs they have, like their Northern counterparts, been criticized for reproducing existing societal power relations as well as conventional market mechanisms (Bellante, 2017; Lundström, 2019). However, research on AFNs in the Global South also deliver findings, which can clearly be delimited from findings in the Global North (Wills and Arundel, 2017). Abrahams (2007) goes as far as to say that farmers' markets and street vendors, which have never ceased to exist in many countries of the Global South, could be regarded as AFNs because "in part or fully, [they contest or oppose] the dominance of conventional food networks within urban areas of the developing south" (Abrahams, 2007, p. 97). However, resisting the conventional food system does not generally mean that they are a socially and environmentally progressive alternative.

The persistence of peasant structures in the Global South could give an advantage when creating or promoting AFNs there (Bellante, 2017; Fadaee, 2019). According to Krul and Ho (Krul and Ho, 2017), peasants often still cultivate without the use of chemical pesticides and fertilizers. However, they are frequently marginalized and their livelihoods are endangered by such issues as the disappearance of marketing channels for smaller scale harvest, or the threat of landloss to expanding urban construction. The foundation of AFNs in the Global South could therefore also contribute to the protection of agricultural land, if it is cultivated in ways more beneficial to biodiversity than conventional agriculture.

Emphasizing peasant's capacities may run the risk of romanticizing their livelihoods. This is problematic for two reasons: First, this frequently does not depict farmers' realities, such as the fact that smallholder farmers might use high amounts of chemical pesticides and fertilizers (Soper, 2019). Second, the correlation claimed between their peasantry identity and ecological sustainability might pressure them to accept hardships (such as the renunciation of labor-saving agricultural machines) which they would not otherwise be willing to accept. Therefore, organizations who speak for farmers would be well advised to at least take heed of the contemporary realities of farmers and what they regard as improvements for their livelihoods (Brown, 2013; Soper, 2019). This discussion reveals that the integration of peasantry structures in Southern AFNs (Krul and Ho, 2017), might result in farmers' opinions being disregarded in favor of environmental considerations.

Regarding the consumption side in Southern AFN, two aspects have been discussed in the literature so far: one, the role of AFNs' consumers and two, their relationship to the AFNs' producers. Newly developed Southern AFNs in particular are at risk of remaining a niche development as their consumers are often part of very specific middle- to upper-class groups (Krul and Ho, 2017; Erler et al., 2020). The neglect of consumer-producer relationships in favor of pooling AFNs forces to improve farmers' livelihoods, might be a necessary evil in Southern AFNs (Liu et al., 2017). However, strengthening these relationships could be particularly important to gain trust especially on the consumers' side. In many countries of the Global South this trust is eroded due to repeated food-scandals in the industrial food system. A close producer-consumer relationship could be the decisive argument for consumers to join an AFN (Si et al., 2015; Krul and Ho, 2017). Thus, in order to disseminate AFNs, more research is needed about how different networks affect the consumption side. For Bengaluru we have discussed this elsewhere in more detail (Erler et al., 2020).

Another argument endorsing a trusted relationship is that third party certification can often be problematic, especially for peasants, who are frequently unable to afford the certification process. Alternative certification systems such as Participatory Guarantee Systems provide a more affordable choice, inter alia because they do not have to be paid by the farmers. Furthermore, they might also include progress towards sustainability beyond organic certification (Nelson et al., 2010; Krul and Ho, 2017). However, consumers' knowledge and trust in these systems is essential for AFNs to thrive (van Hoi et al., 2009; Sacchi et al., 2015). Irrespective of the certification process, AFNs can make an important contribution to creating a market for alternatively produced food (Bellante, 2017). According to Glin et al. (Glin et al., 2013) these markets are important because if there is no market found with consumers willing to pay a premium price for alternatively produced food, this food percolates into the conventional system and farmers might not be able to continue organic or other alternative farming (Glin et al., 2013).

Overall, these contributions reveal that smallholder structures as well as persisting traditional agriculture and marketing are regarded as resourceful characteristics of countries of the Global South for the foundation of AFNs. This paper explores how the appropriation of these discourses plays out for AFNs in Bengaluru, India.

9.5 Unreflexive and defensive traditionalism

Sinha et al.'s (Sinha et al., 1997) notion of new traditionalism is the main conceptual basis for this paper. In new-traditionalist representations traditional Indian agriculture and human-nature relationships are claimed to be inherently ecologically and socially sustainable. Furthermore, such representations romanticize traditional gender- and caste-roles and their relationship with nature. This supposed tradition is then opposed to times of colonial rule, development and modern science. The authors caution that this unidimensional view of India's past is a way of glorifying India's past and benefits rural elites rather than establishing increased social and environmental sustainability.

In order to distinguish between different outcomes of traditionalism, we merge new traditionalism with the concept of unreflexive and defensive localism, which has been developed from research on AFNs in the Global North. Unreflexive localism refers to the process of obstruct problematic conditions of food production behind the localization or regionalization of food systems. While the spatial localization of food systems might result in lower environmental impacts in the transportation of food, it does not necessarily have an impact on, for example, working conditions of producers or cultivation methods. The latter is however suggested by representatives of unreflexive localism (Hinrichs, 2003; DuPuis and Goodman, 2005; Harris, 2010).

Defensive localism refers to a process in which the localization of food systems is imparted as a necessity to defend the AFN's locality from others (Allen, 1999; Winter, 2003). This defensive localism can eventually become more important to the final consumer than such elements as the organic or ethical quality of the food (Winter, 2003). Both unreflexive and defensive localism can be appropriated by undemocratic elites, who inject a meaning into it which obscures actual local power relations and makes alternative production vulnerable to appropriation for marketing purposes (DuPuis and Goodman, 2005; Fendrychová and Jehlička, 2018).

In this paper unreflexiveness and defensiveness are primarily used as differentiators for different kinds of traditionalism, an aspect which we will take up in the discussion in more detail. Thereby, we also extend the notion of unreflexiveness and defensiveness based on our findings. Traditionalism, on the other hand, is applied more closely to its original notion (Sinha et al., 1997). As such, traditionalism becomes our main conceptual framework, which we refine through the concepts of unreflexiveness and defensiveness.

9.6 Materials and Methods

Data were collected during two periods of fieldwork from April to December 2017. The first period took place during three months, from April until July 2017. The second period was conducted over two months, from November till December 2017. During these time periods the first author lived in Bengaluru and as part of her research work contacted and interviewed managers of Bengaluru's AFNs.

Using e-mail, we contacted all the Bengaluru-based AFNs we had identified in our own online research for alternative food producers in Bengaluru. This was supplemented with a list provided by the International Competence Centre for Organic Agriculture (ICCOA), which is based in Bengaluru. We only considered businesses and initiatives involved with the production and/or processing, and the marketing or distribution of alternatively produced food. We conducted 17 semi-structured expert interviews. As our initial question regarding the interviews was whether the AFNs would make the agri-food system more sustainable, the guidelines for the interviews were based on IFOAM's organic 3.0 concept (Arbenz et al., 2016). Appendix D: Questions for interview guideline with representatives of AFNs in Bengaluru comprises a table of the six points from the organic 3.0 concept and the questions we derived from it. Based on the advice from animal scientists, working in our research unit, a few additional questions for dairy-processing AFNs were added in order to provide the basis for future collaboration with them. However, the answers to these questions also informed the results of this manuscript.

All interviews were audio-recorded and transcribed, resulting in a total of 14 interviews (see also Appendix F: Interviewed experts) applicable for further analysis. Except for one interview, all interviews were conducted in English. In one case the interview was conducted in the local language of Kannada. In that case, we were accompanied by an interpreter, who was also responsible for transcribing the complete audio-recording into English. The transcripts were then entered into qualitative data coding software and examined by the first author for dominant themes. 'Dominant themes' refers to topics that were raised repeatedly by more than one respondent.

The themes presented in this paper represent a very selective choice of the overall themes, which were interpreted by the first author using a set of theoretical concepts. The respondents had equivocal opinions regarding these themes, which we will elaborate in the discussion section. Due to the selectivity of the presented themes, this paper should be regarded as an extract

rather than a comprehensive overview over Bengaluru's AFN. This, and the fact that the analysis was done by only one author, is a clear limitation of this paper. However, by making our case from the selected themes we aspire to untangle the dynamics of unreflexiveness and defensiveness, that we argue are common drawback in AFNs. This analysiscan be useful for AFNs worldwide.

9.7 Findings

Most of the AFNs considered in this study had direct contact with farmers and helped them to convert to alternative agriculture, which often meant organic agriculture. While some of the AFNs developed an organic brand, which was sold to organic shops, others also marketed their produce directly to the final consumer. Some AFNs emphasized their personal contact with the final consumer, while others only had contact with their consumers online. While some AFNs provided homedeliveries, others invested in their own shops or collection points in the city. While some of the respondents declared that they only wanted to grow to the extent that they could continue working with smallholder farmers, others seemed to aim towards conventionalization by, for instance, setting up modern organic supermarkets. Finally, unlike most AFNs, there were also some who only handled food processing and marketing and did not have direct contact with the producers of their raw materials. Therefore, it is not possible to make a statement about what phase of AFN-development was dominant among the AFNs in this study. Instead, there was a high variety of different AFNs, most of which had elements of all four phases. These were: small-scale initiatives, conventionalization, direct marketing models, and online platforms. A remarkable similarity, however, was that many of them shared the conviction that the answer to many problems of India's food system today could be solved by revitalizing tradition.

9.7.1 Revitalizing tradition

Most of the AFNs were very unsatisfied with the conventional agri-food system in India, especially those changes which had been introduced during the previous decades. This was often put forward as a major motivation to start an AFN.

Several representatives were particularly concerned with how the situation of the farmers had changed in the decades after Indian independence. R13 (Representative 13) said about this:

> *"[…] 40 years ago, the entire district was sustainable. So most of the villages, almost all the villages […], each and every farmer was self-sustainable. They led a self-sustainable life. They never bought anything from outside. They produced everything within the farm. After that green revolution, it brought misery and the model education has brought the misery to our country, the entire country. So now for farmers are not producing everything. They started buying for example toothpaste. Toothpaste, they used to brush their teeth using the neem sticks or chalk. So now we made them to buy Colgate toothpaste. So, money started going out of the houses. The business started bundling and on top of it putting fertilizers pesticides and all. Again, money started going out of the houses. They started eating the same food. Health got bad. And from health and wealth they started suffering. Today the life span is 60 years. In one generation 30 years were lost."*

This citation reflects that, according to R13, the current agri-food system in India means a deterioration in quality of life for farmers. In particular, two points are addressed by the representative, which cause this deterioration: increased expenses for durables and consumables and the decline of subsistence cultivation. The green revolution and the model education loan scheme are mentioned as the two major causes of the misery. He claims that before the start of these factors, farmers were entirely subsistence based and that they had a significantly higher quality of life. According to him this life might have been simple, but it was also healthier.
However, according to the representatives it was not only subsistence cultivation which contributed to the benefits of traditional Indian agriculture. They also mentioned other issues such as traditional practices to prepare fertilizers and pesticides based on natural ingredients. R4 went even further, claiming:

> *"It is an ancient philosophy of Indian culture that the farmer should get maximum benefit of every rupee for his produce."*

R4 refers to a claim here that is often raised regarding the improvement of Indian farmers' situations, namely that most of the price paid for an agricultural product by the consumer goes to the middlemen and not the farmer. He then claims that this would contradict Indian culture. Although we will not explore the historic accuracy of this statement, we nonetheless point out that in this statement Indian culture as it has been in the past is referred to as a normative goal

for the AFN of R4. In other words, agricultural practices are regarded as inherently good if they comply with Indian tradition.

According to some of the representatives, another problem with India's Green Revolution was the lopsided focus on rice and wheat while millets were neglected as a staple food. Others claimed that this neglect of millets had already started under British rule. R14 said:

> *„Millets have been in the tradition. We used millets. It's been grown aside [sic] the different crop, like for example you grow rice as the main crop. Subsidy will be the millet crop [sic]. […] Just after the revolution, [...] when the British conquered they started using rice and we did all that [...] was introduced here. And people just turn[ed] their lifestyles around you know they all went to rice and wheat and they forgot about millets."*

While R14 does also mention subsistence cultivation, her concern is mostly how to take millets out of that niche and back to being a commonly consumed staple. Despite mentioning the foreign influence, which stimulated the transition to rice and wheat as staple foods, she acknowledges that this lifestyle change was easily accepted by consumers. During the fieldwork (conducted by the first author) it was noted that millets were marketed at high prices by the AFNs to an urban (upper-) middle class [12]. In contrast to that observation, the AFN of R8 highlighted that the promotion of millet consumption has to target people beyond the urban middle class. To move away from this niche market, they ran a small lunch restaurant where they offered dishes mainly based on millets at reduced rates in order to make the grains palatable beyond the middle class.

Several representatives made the criticism that in the course of the Green Revolution, a lot of knowledge about traditional agriculture was lost. They stressed the importance of knowledge held by the farmers in establishing a more sustainable form of agriculture. R12 reported:

> *"We don't have people working in agriculture simply because all of them go to school and study. What do they study? God knows. […] You don't need to study agriculture. Agriculture requires wisdom. Wisdom of observation, understanding… "*

While this statement could be read as an expression of respect towards some kind indigenous knowledge of farmers, it also questions any education of farmers beyond what can be learned within the family. Furthermore, R12 expresses a vigorous rejection of agricultural sciences here.

The fact that the AFN of R12 requires the farmers to adopt certain agricultural practices in order to join the network, also contradicts the last statement. It seems that rather than relying on farmers' indigenous knowledge, she questions who should be in charge of conveying the "wisdom of observation" and "understanding". Similarly, R13's vigorous rejection of the model education loan scheme could also be read as a rejection of an education of not only higher education in agriculture but higher education for agricultural families in general. Thus, some of the respondents seemed be uncomfortable with rural people entering the higher education system. To us this seemed like a question of belonging.

9.7.2 Belonging

Questions of belonging were discussed by several representatives. While most of them were concerned with people belonging in rural areas migrating into the city, especially some of the AFN, who inter alia dealt with dairy production, were concerned with which people and cows belonged in and therefore had the right to be in India and/or Bengaluru.

Partly because of university education, children from agricultural families would often migrate to find better paid jobs outside of agriculture. Even former farmers would migrate from their village or their traditional agricultural occupations to find better paid jobs in the city, specifically Bengaluru. According to several representatives this migration had got out of hand. R1 was convinced that it required well-paid, non-agricultural jobs in rural areas to prevent further migration to the cities, therefore he planned:

> *"to set up […] operation to be done from that place, from my farm itself. There are local people who have studied. Not everybody has to come to the city."*

Similar to R1, several other representatives declared that decreasing the rural outward migration was one of their network's objectives and they also marketed their products by mentioning that objective to their customers. Some of the AFNs' homepages and Facebook presences included stories about former migrants who returned to their traditional agricultural occupation with the AFNs' help, leading a happier, healthier life than ever before. Often, this was combined with the idea of supporting and maintaining smallholder structures. While R2, for example, states that they supported former farmers to become farmers again, he also insisted that land consolidation was no solution and that farms should only grow to a certain extent. Therefore, although

the representatives did not agree on how this could be achieved, they agreed that the migration of farmers to the city should be prevented. In other words, farmers belonged in rural areas and not in the city.

According to some representatives of dairy-processing AFNs the introduction of Western high-yielding cow breeds was regarded as another drawback of British rule and the Green Revolution. The AFNs stressed the advantages of Indian or local cow breeds. Of those representatives, R12 had the most straightforward, yet polarizing position:

> *"The cows which we are talking about are the cows which belong in this local place from probably 5000-10.000 years. The advantages of their bio-climatic system, they have got used to their bioclimatic system as their DNA is completely in line with the human beings who live here."*

In this statement R12 stresses that local cow breeds have been found in South India for thousands of years. Supposedly, this led to an alignment of their milk with the digestive system of the local human population. Again, we will not explore the scientific accuracy of this statement. However, we would like to point out that a statement like this can have implications not only for the choice of cow breeds for agricultural purposes but following this line of argumentation one could also draw conclusions with regard to what human beings belong in this area, namely, those who can digest this kind of milk.

Furthermore, these cows were usually referred to as Desi cows, 'Desi' meaning of South Asian descent. Most dairy processing AFNs pointed out that they were working only with Desi or Indian cow breeds. R12 also elaborated on the meaning of the word Desi for her AFN:

> *"Desi means native. […] So, we are talking about everything which has been part of this nature 50 years ago, which has in the course of five decades been spoiled by huge technology intervention, huge chemical intervention and a mindless system dominated of [sic] trade and policy. There is a lot of damage which has been done to the earth. Today the topsoil is completely barren and the water table has gone really bad."*

In this statement R12 clearly prefers Desi to processes in Indian agriculture in the last 5 decades. As this interview was conducted in 2017, she roughly refers to the time between 1967 until today, which is more or less the time of the Green Revolution. During the course of the interview she repeatedly circumscribed 'Desi' as a normative goal for her AFN.

9.8 Discussion – Unreflexive and defensive traditionalism in Begnaluru's AFNs

In this section we will elaborate on how we conceptualize the findings presented above as unreflexive and defensive traditionalism. We will begin by addressing the three main topics which represent the cases of unreflexive or defensive traditionalism in our data: preventing rural migration to Bengaluru, a negative attitude towards university education of agricultural households, and constructing dichotomies between traditional India and rather modern phenomena. Furthermore, we will discuss how similar tendencies are discussed in other academic contributions and why we think that they are a reason for concern. In a second section, we will show how the application of the word Desi is used to justify particularly defensive traditionalism. In a third section, we will then discuss why we find it necessary to distinguish between unreflexive and defensive traditionalism.

9.8.1 Tradition and the middle class

The aim of several of the AFNs, that migration to the city should be prevented by providing decent employment in rural areas within the AFN, can be connected to discourses of reactions of urban middle classes in India towards rural migrants. Urban middle classes in India might feel threatened in their access to social, cultural and economic capital by the growing number of rural populations migrating into the city. While this led to a hostility of urban middle classes towards rural population elsewhere (Brown et al., 2016), in our case this is reflected in the respondents' declared aim to prevent further migration into the city. According to them, farmers are supposed to remain in or return to their traditional occupation, in their traditional role. This opinion was, furthermore, evident in statements about university education in agricultural families: while one respondent said that farmers would need specific agricultural education, others completely rejected the purpose of university education for agricultural families. We argue that these endeavors are an example of defensive traditionalism. Firstly, they are defensive in the sense that a dichotomy between the rural and the urban is shaped. In contrast to the original concept, where the AFN's locality is depicted as needing defense from other localities, in our case the line of defense is drawn within the AFN. Secondly, within the AFNs this discussion around migration clearly transcends the discussion of where (localism) rural people should live,

into the discussion on what their traditional role is (traditionalism). This way, the traditionalization of the food system regarding traditional roles is imparted as a necessity to defend groups of rural and urban population from each other.

A more rigorous example of how urban middle classes seek to determine the role of farmers was the rejection of agricultural or higher education, which was expressed in different ways by two of the respondents. A similar rejection was also reflected in a study by Khadse et al. (2018) on the Zero Budget Natural farming movement in Karnataka. We argue that in our case these findings represent two aspects: First, a presumptuous endeavor to influence farmers' livelihoods. Second, a manifestation of new-traditionalist writings in alternative farming movements (Sinha et al., 1997): Instead of criticizing agricultural education for any particular characteristics it is depicted as a scapegoat in opposition to supposedly superior traditional wisdom. Although there might be reasons to criticize the curriculum of agricultural schools and universities, we regard the vigorous rejection of agricultural education as overblown. We argue that fostering the return of farmers to a supposedly traditional agriculture without any formal agricultural education, conceals other possible consequences of a lack of such education. R2 for example said that farmers would not be able to value their own work as labor because they would lack skills in bookkeeping. Knowledge gaps would make farmers more vulnerable to (self-)exploitation. Thus, parallel to unreflexive localism (Hinrichs, 2003; DuPuis and Goodman, 2005; Harris, 2010), we suggest that while the application of traditional agricultural techniques, such as the application of plant-based pesticides, might result in fewer negative environmental impacts, it does not necessarily mean an improvement regarding farmers' livelihoods. As our example above illustrates, unreflexive traditionalism regarding farmer education may have negative impacts on the farmers' autonomy.

However, modern education versus traditional knowledge was not the only dichotomy drawn by the respondents. Also, they presented the current agri-food system, the Green Revolution and Colonial Power as diametrically contrary to the agricultural system of the. They associated adequate food supply through subsistence cultivation (R13), reasonable payment of farmers (R4) and the cultivation of millets (R14) with the agricultural system of the past. These dichotomies are very similar to those drawn by new traditionalism. They are criticized for oversimplifying the situation and, despite opposite claims made by new traditionalists, not being conducive to making the agricultural system any more ecologically or socially sustainable. Particular practices from the past can help make agriculture more sustainable, for example the cultivation of drought resistant crops such as millets or the application of local herbs for pest control,

as reported to be practiced by some of the AFNs. However, it has been shown that India's pre-colonial past is full of examples of ecological exploitation and injustice. Neither the current situation, nor the past should therefore be discussed uncritically (Sinha et al., 1997; Subramaniam, 2019). We classify these statements as unreflexive, as they imply that the application of traditional agricultural practices would necessarily result in more sustainable agri-food systems (Hinrichs, 2003; DuPuis and Goodman, 2005; Harris, 2010). Unlike unreflexive localism, unreflexive traditionalism is not only the concealment of other problems which cannot be solved by traditionalism, but some of the traditions the respondents referred to can be regarded as inherently diametric to that goal. For instance, the argument that fair payment of farmers is inherently Indian becomes questionable, considering that the property of agricultural land in the country was very uneven even before colonial times (Sinha et al., 1997).

Farmers in India do not often share this strong conviction regarding traditional agriculture (Brown, 2013). This is also reinforced by our data. In contrast to other AFNs the representative who was also a farmer did not mention tradition at all. His concern was predominantly the negative health impacts of chemical fertilizers and pesticides for farmers. He also stressed that in order to establish his AFN he had worked closely together with agricultural scientists to develop suitable methods to cultivate chemical-free. This indicates that the endeavor for traditional practices in AFN has probably been introduced by the urban middle-class organizers.

We are concerned that unreflexive traditionalism might be used by middle-class organizers to obscure a shift of power relations in the food system. While proclaiming the revival of traditional agriculture, an urban middle class seizes some of the power, previously held by middlemen and the industrial food system, in order to establish middle-class interests. Based on our findings these interests include the production of chemical free food (Erler et al., 2020) and the repatriation of rural migrants. Thus, contrary to what the representatives suggest, we argue that the revival of traditional agriculture as proclaimed by the AFNs in this study does not result in the empowerment of farmers in order to improve their livelihoods, but rather in securing middle-class interests in the agri-food system.

The tendency of middle-class organizers of sustainable farming initiatives to defer their initial aims of supporting the interests of rural populations in favor of the agenda of middle-class stakeholders has been described by Brown (Brown, 2013). He describes this as a deferment of aims which is partly inevitable: in order to establish AFNs, organizers have to spend significant amounts of time with middle-class stakeholders which leverage initiatives with resources such as money and political influence. As a consequence of those relations, middle-class organizers

become more attentive to the needs of those stakeholders than those of rural populations. Thus, in order focus more on their initial aims of improving farmers' livelihoods, the representatives of Bengaluru's AFNs would be well advised to become more attentive to the needs of their farmers.

9.8.2 The Desi-realm

Statements regarding native cow breeds and the notion of 'Desi' contain, as we argue, a particularly defensive character. In section 4.2 we described how a dichotomy is drawn between Desi cows together with the local people, who are claimed to be genetically adapted to each other, and everything which has been introduced to the country since India's independence. In order to continue to benefit the local people, these Desi cows have to be defended from other cow species. This rhetoric of genetic adeptness is clearly in line with the appropriation of genetics for Hindutva argumentation (Subramaniam, 2019). Hindutva is a political project that aims to conflate the Indian state with Hindu religion, declaring Hinduism as hegemonic and thus conveying the superiority of members of Hindu religions. Representatives of Hindutva have in the past expressed hostility towards other religions as well as xenophobia (Siddiqui, 2017). The rhetoric of genetic adeptness has a predominantly defensive character because it excludes not only other cow breeds but also all people who are not particularly adapted to the milk of these cows and (by definition) who came to the area after India's independence. Therefore, we concur with Narayan who argues that "[t]he native-bred cows are invoked as representatives of Hindu purity [...] The Jersey crossbreds and buffalo are correspondingly regarded as the antithesis of such sociocultural purity, occupying a status similar to that of the former low/untouchable castes." (Narayanan, 2018, p. 351). She shows that this kind of argumentation provides the basis to exclude lower castes. Similarly, we argue that R12 is defining a certain territory and a group of people and animals as Desi. This 'Desi'-realm then has to be defended from other influences - or as in our case non-desi beings.

The argumentation of alternative food actors in Karnataka as well as of other sustainable agriculture proponents in India often resembles argumentation structures of Hindutva [15,33]. We find that the defensive statements expressed by some of our respondents, particularly those regarding native cow breeds, can be attributed to Hindutva's argumentation structure as well. As a discourse prevalent in the Indian middle class (Brown, 2013; Subramaniam, 2019), specifically also in Bengaluru's middle class (Dasgupta, 2015), this argumentation structure might

be another example of how middle-class interests come to prevail in Indian AFNs. Because of the vigor with which a few of the respondents presented such arguments we believe, however, that they can be regarded as active proponents of Hindutva. This is also the reason why it is necessary to distinguish between different kinds of traditionalism.

9.8.3 The subtle differences between unreflexive and defensive traditionalism

It should be considered whether unreflexive and defensive notions of traditionalism might lead to the same outcome. As Dasgupta has argued, even lighter and less aggressive notions of Hindutva leave "little space for the 'other', the 'other' being Muslims or the lower classes" (Dasgupta, 2015, p. 22). However, in some of the transcribed interviews as well as on some of the homepages of AFNs included in this study, we found statements clearly endorsing the inclusion of marginalized groups such as sexual minorities, which contrasts with argumentation structures of Hindutva. Furthermore, including the groups mentioned above, would mean a clear distinction from the defensive traditionalism we found in the statements of other respondents. Although those inclusive statements were rare, they nevertheless make us doubt whether both notions of traditionalism should be judged equally.

We suggest the following differentiation of unreflexive and defensive traditionalism: unreflexive traditionalism obscures many facets of the agri-food system relevant to improved farmer livelihoods or, more ambitiously, sustainability transition, and represents a reduced argumentation of product qualities to increase the influence of the middle class on agri-food systems. Defensive traditionalism goes beyond that by aggravating the divide between rural and urban populations and by actively contributing to the exclusion of foreigners and marginalized groups. Similar to marketing purposes described for unreflexive and defensive localism (DuPuis and Goodman, 2005; Fendrychová and Jehlička, 2018), traditionalist arguments are used to marketing the AFNs' products to an urban (upper) middle class.

Similar unreflexive and defensive endeavors have also recently been described by Fendrychová and Jehlička (2018), for farmers' markets in the Czech Republic. This highlights the attention which should be payed to the possible emergence of such endeavors in AFNs worldwide.

9.9 Conclusions

In this paper we examined thediscourses of AFNs in Bengaluru, while problematizing an unreflexive and defensive traditionalism. Traditionalism refers to a romanticized and sometimes exclusionary way of understanding practices of the past, which seems to gain ground in AFNs in Bengaluru.

More than 20 years after the paper of Sinha et al. (Sinha et al., 1997) on new traditionalism in India, our paper shows that unreflexive and defensive notions of tradition have come to affect discourses of AFN organizers. Unreflexive traditionalism, we have argued, represents an obfuscation of important factors for the improvement of farmers' livelihoods, in order to increase middle-class influence on agri-food systems. Defensive traditionalism, in addition, aggravates the divide between rural and urban populations and contributes to the exclusion of foreigners and marginalized groups. Both kinds of traditionalism are used to market products to an urban (upper) middle class. This way, both expressions of traditionalism jeopardize the AFNs' goal of improving the livelihood of farmers by shifting the attention of the networks' participants, both producers and consumers, away from the improvement of the agri-food-system to an unconditional acceptance of supposed traditional practices.

We cannot answer whether the improvement of farmers' livelihoods really was the initial goal of the AFNs, or was always only purported. As the vehemence in which unreflexive and defensive traditionalism was expressed differed remarkably among the respondents, we find it likely that the truthfulness regarding the aim of farmers' livelihood-improvement varies among the different AFNs. The different vehemence should also be highlighted as certainly the majority of respondents did not actively seek to exclude foreigners and marginalized groups. However, we have argued that even unreflexive traditionalism as the more moderate form will hamper any improvement of India's agri-food-system towards social justice.

This paper also refocuses concepts of unreflexiveness and defensiveness in AFNs, first, by connecting them not only to localism but also to traditionalism; second, by extending their notion based on our empirical findings. In this paper, unreflexiveness describes all attempts to conceal important facets of the agri-food system, in order to present tradition as the solution for improving farmers' livelihoods. Defensiveness does not only delimit an AFN or a region against others, but also serves to define boundaries within the AFN. If this is a phenomenon particularly relevant to countries of the Global South, where tensions between urban and rural populations arise because of rural migration, is a question which should be addressed in future research.

Concurring with Sinha et al. we would like to close this paper by stating that India's agricultural traditions certainly have something to offer in improving agricultural sustainability. However, an unreflexive and defensive traditionalism will, if anything, only shift the problems to another dimension. We conclude with the recommendation that the managers and participants of AFNs reflect on practices of unreflexive and defensive traditionalism and try to avoid them as much as possible. A more serious engagement of managers and initiators of AFNs with opinions and realities of farmers could help to pursue the aim of improving farmers' livelihoods in a more straightforward manner.

10 Conclusion

The final chapter draws conclusions regarding the three main themes which accompanied me during my PhD-research and the conception of the three manuscripts which comprise the core of this thesis: the Indian middle class, food transition and practice theory. Each of the three concluding subchapters summarizes the contribution of each single manuscript on each of the three topics. I will elaborate on the overall implications to the respective concept or theory, also considering further research implications arising from my conclusions. Finally, I use *site*, as the ontology of the social suggested by Schatzki, to summarize my findings' contribution to human geography.

10.1 The Indian middle class

The first manuscript allows three conclusions regarding Indian middle class: firstly, in a country as big and diverse as India, the middle class is extremely complicated to conceptualize. Secondly, Bengaluru and its rural-urban interface are particularly suited to study this class. Thirdly, especially the upper sections of the middle class try to elude from societal issues, such as food adulteration, by using different and more expensive spaces of consumption, such as online shopping for food.

The second manuscript shows that eating and food practices continue to be class-constituent. Until today, food practices can often be connected to caste (Baviskar, 2018). In the second manuscript, I argue, however, that the way how food contributes to class differentiation has changed. While the caste-constituent differentiation happened via different interpretations of vegetarianism and carnism prescribed by religious rules, e.g. many high castes would abstain from meat and eggs completely, today especially wealthy segments of the Indian middle class, practice class distinction via food according to their own rules (Ganguly, 2017). In the case presented in the second manuscript this is exemplified by Bengaluru's new middle class, who purchase food in organic shops and thereby perform symbolic boundaries that distinguish them from other social classes. However, it is probably not a coincidence that most of these shops did not offer any meat to their customers. Thus, these new ways of social distinction do not override caste-based society.

Another finding regarding the Indian new middle class from this manuscript is that despite the class-distinctive aspects of their food practices, they also try to overcome their anxieties regarding India's agri-food system by buying their food in organic shops. Anxieties concerned for example high residues of chemical pesticides and fertilizers in fruit and vegetables. Although during the interviews I often had the impression that these anxieties are honest, the way the customers were dealing with these anxieties can also be regarded as problematic. Firstly, because they were fuelled by commercials of actors primarily interested in an economic product rent of alternatively produced food. Secondly, instead of taking political action against the drawbacks of the India's conventional agri-food system which caused their anxieties, the middle-class customers chose to use their financial wealth to supposedly elude from this problem.
The manuscript is also another example for the discussion how abroad experiences influence consumption practices of India's new middle class. In contrast to previous publications (Srinivas, 2006a), the manuscript highlights that new middle-class consumers do not primarily refer to living in the USA but also to Europe, particularly Germany. The consumers stated to continue practices they became acquainted with abroad (in the presented case shopping organic groceries), however, Bengaluru's organic shops helped them to give these practices an Indian twist. This can be regarded as one way to communicate their cosmopolitan identity to me as a researcher, but also to strengthen their affiliation to the new middle class.
The manuscript could also be read as an indicator that within India's middle class or even within the new middle class there is a tendency towards intra-class differentiation. While the distinctive aspects of the consumers' practices distinguished them from lower classes, it also became clear that they seek to distinguish themselves from people with the same financial means. This can be argued based on two findings: First, the consumers acknowledged that organic food is not affordable for everyone. Second, they insisted that because they could afford to buy organic food they felt responsibility to do so. Otherwise, they would have to blame themselves for health problems which could be related to food. Thus, rather than distinguishing themselves from all other societal classes in the manuscript we argue that they rather aimed to distinguish from other new middle-class people, who did not buy organic food.

The most salient finding regarding the Indian middle class from the third manuscript is the lacking theorization of the rural middle class. While the rural middle class does neither reach the financial means of the urban new middle class, nor with the old urban middle class in terms

of financial capital, there is a social stratification within rural societies which makes it impossible to claim that most rural residents can be regarded as lower class. Landownership and caste do certainly still play important roles for the constitution of social stratification in rural India. However, education and consumption contribute to class formation in a way which is more complex than merely counting the number of durables and diploma, like it is done in the MRSI-index (The Market Research Society of India, 2011). More research is needed to explore class relations in rural, modern India.

Furthermore, the manuscript shows that food and food practices are used for social differentiation in many ways and it would therefore be imprudent to assume that it does not contribute to class differentiation. Via food practices respondents were able to show their frugality, as compared with the rich, fast-food consuming urban rich. At the same time, they could show their cosmopolitanism, by commenting on the authenticity of foreign cuisines. While the relevance of food for class differentiation is not new, the manuscript is another documentation on how this is deployed in contemporary India.

Conclusions drawn from the fourth manuscript regarding the middle class are, like those from the second manuscript, rather directed towards the urban new middle class. Regarding the middle class the manuscript shows how this class is translating their own anxieties with regard to food into attempts to transform the food system. Despite the interviewed representative's own legitimization to start AFNs to improve the livelihood of Indian farmers, which was probably genuine to large extends, they could not help but include their own agenda in the AFNs. A phenomenon previously described for middle-class sustainable food activists in other contexts in India (Brown, 2013). This was most evident in their traditionalist endeavours which were gaining momentum in Bengaluru's AFN at the time of research. Briefly summarized, traditionalist endeavours refers to the respondent's claim that a retraditionalization of the agri-food system would improve farmers' livelihoods. However, instead of improving farmers' livelihoods we showed these traditionalist endeavours are likely to transform the agri-food system towards the needs of an urban (upper) middle class.

Together, the second and the fourth manuscript contribute to the ongoing discussion about the role of the new middle class in (un-)sustainable consumption. In their privileged position India's new middle class does often make use of consumption practices which allow them to

evade from cities' deteriorating environments, such as air conditioning and private car ownership. At the same time those practices further exacerbate the situations, the consumers attempt to evade from (Frazier, 2019). Even practices, perceived as particularly sustainable by new middle-class consumers, might be based on the exploitation and stigmatization of lower classes (Anantharaman, 2018). Both aspects are evident in manuscripts two and four as well: Parts of the sustainability claims of AFN's in manuscript four are based on traditional peasantry statuses of farmers and consumers in manuscript two consumed millets in a way clearly distinguished from the stigmatized millet consumption of the rural poor. On more optimistic notes, authors have also stressed the possibility and instances of cross-class alliances between urban rich and poor (Anantharaman, 2017, 2018; Doshi, 2019). The wholesale markets, popular among different societal classes, mentioned in manuscript three could provide the basis for such a cross-class alliance in Bengaluru's agri-food system. However, as shown in manuscript two, distinctive practices such as shopping in the organic shop do not leave much hope for such alliances. Thus, additional efforts are needed in order to avoid a further divide of consumers in India's agri-food system and to raise attention for cross-class interests and how to pursue these interests to benefit all.

10.2 Food transition

The first manuscript shows that traditional foods and food practices seem to become increasingly popular among Bengaluru's middle class. This new popularity does explicitly happen as a reaction to health impacts of contemporary diets, which are often high in refined sugar and fats which can be related to developments such as the increased consumption of convenience products. This orientation towards traditional foods can also be found in an increasing number of organic shops which are opened all over Bengaluru. A lot of traditional foods can be found in those shops. However, they also offer allegedly safer and healthier food than conventional markets and supermarkets.

Food habits can furthermore differ remarkably within one family. Spending significant amounts of time outside the household and having the opportunity to eat out, can contribute to food habits that are different from other household members. The same accounts for convenience food products which have to be stored in a fridge, which is for several reasons not necessarily owned by many rural middle-class households. Thus, income is an important factor regarding

food transition but there are many other factors influencing how an increased income will influence food transition, such as gender and access to street food or restaurants.

The second manuscript shows that at least for the wealthier parts of Indian society considerations about health seem to impact food practices. This could be regarded as a confirmation of the 5th phase of Popkin's nutrition transition model (Popkin, 1994). Unlike Popkin, I do not endorse behavioural change as the primary concept to achieve a transition towards healthier diets. The study of organic shop-customers showed that beside the aspiration for a good health, the new practices were also induced by the tendency for class distinction. While behavioural change might lead to positive outcome, like I would assume it for the consumers of this study, the motivations for that behavioural change might not always be as clear. Thus, if it is the aim to induce a transition towards more sustainable or healthy food practices, we should think about all societal classes rather than praising the behavioural change of a special group and assuming that this proves that these changes can easily be adopted by others. According to the notion of (Spaargaren et al., 2012).
Especially regarding the changed meaning of millets from a cheap staple to a superfood, questions arise whether this new definition might result in increased prices for those staples like previously reported for superfoods such as quinoa (Tschopp, 2019). While the consumption of millets might improve the health of the wealthier parts of the population, increasing prices of millets might also result in a decreased consumption by the poor, who at the same time will be deprived of the staple's health qualities. This scenario becomes even more likely with regard to rural households that cultivate millets and who might be attracted by the high prices they can achieve by selling those crops. The previous subsistence farming of millets is substituted by staples from the PDS (Finnis, 2007). Whether rural populations will be able to benefit from possible price increases, while continuing a high level of millet-consumption themselves will probably depend on their political ability to make use of a millet-boom due to its declaration as superfood.

The third manuscript shows how food transition does not only affect the material aspects of eating but also the underlying understandings. The case of the replacing of hot and cold food with new dichotomies is one example of such a changing understanding. In the paper we argue that these changed understandings to assess the quality of foods which are relatively new to the people. However, these new dichotomies oversimplify the situation. The old dichotomies of hot

and cold food did not define good or bad foods but instead define what food is appropriate to the eater with regard to gender, health, or outside temperature. In contrast, the new dichotomies simply tell if a food or a food practice is good or bad. Similarly, the categories of authentic and inauthentic food, mainly reported by respondents in the city, do provide only simplistic and vague assessments. These oversimplifications might be based on previous experiences and have a certain practicability. However, their simplicity can result in misjudgement and misuse. For example, food products with e.g. high sugar contents are already marketed with claims about their authentic Indianness. As this is apparently associated with healthy food for many consumers, they might be tempted to buy a product which does not keep its putative promise to be healthy. Therefore, I conclude that simplifying dichotomies about food eventually hamper a sustainable food transition.

From the manuscript it is also evident that anxieties about food adulteration change the way people are eating. Respondents in the study reported for instance to avoid street food and to eat more homemade food. Regarding food transition these practices could have two important implications: One, they could accelerate the food system to industrialize more quickly, for instance by avoiding street food and instead opting for putatively safer fast-food chains. Two, the orientation towards homemade food raises wider societal questions regarding the allocation and valuation of reproductive labor. For example, whether such claims could impact female participation in wage labor.

The manuscript also shows that location matters regarding the access to food and that it can be an impediment to both negative and positive developments in food transition. For example, most of the people living in the villages around Bengaluru have no or only rarely access to supermarkets, which could be one source of unhealthy processed foods. However, even without the access to supermarkets, people reported to be diagnosed with high blood pressure or diabetes. Often, they also did not have markets selling fresh vegetables or other unprocessed food products in walking distance. While some of them had a vehicle with which they could access wet markets in the next town or could buy food from neighbouring farms, others had to rely mostly on street vendors for fresh vegetables, which were actually unpopular because of a lack of freshness of their products. As people did not express to be unsatisfied with that situation there might not be a salient need for action. Nevertheless, the question arises if it can be avoided that the food industry further unfolds its transformative potential in these villages by selling refined and highly processed food. This analysis can also be read as another critique to models of nutrition transition: The assumption that people necessarily have to traverse certain phases

before they finally turn to healthy and nutritious diets, which is somehow created by those models, should be questioned. Political action, aiming to provide good access to healthy and nutritious food could mean a more healthy and sustainable food transition in Bengaluru's rural-urban interface than nutrition transition predicts. The popularity of wet markets as well as direct sales reported by rural-urban respondents could be promising leads, in order to provide for viable concepts enabling a sustainable food transition.

The last point regarding food transition from the third manuscript is the predictable changes some of which do not only concern Bengaluru's rural-urban interface but also global food systems. Regarding Bengaluru's rural-urban interface, rural households already reported that they changed their food practices because of the lack of water for subsistence cultivation. Other changes which could in the near future impact people's food practices through structural changes are imaginable such as the decrease of agricultural land. On a global level the impact of climate change on agriculture will sooner or later lead to changing food practices. The question here is whether it will be changes which could mitigate climate change, such as decreased or continued low meat consumption, or changes which become necessary due to a climate change-induced food shortage.

The fourth manuscript is more focussed on the food supply side. However, to this conclusion it speaks in a similar way as the third manuscript: Similar to the new dichotomies to assess the quality of food, in this paper we argue that unreflexive and defensive traditionalism are unsuitable to forward a food transition towards a sustainable future. This manuscript shows that food transition can also be impacted by larger socio-political discourses, such as Hindutva.

It also adds new insights to the suggestion of looking at alternative food movements to develop pathways for sustainability transitions (Fourat and Lepiller, 2017; Vivero-Pol, 2017; El Bilali, 2019). I still agree with that suggestion and can confirm that the AFN interviewed for the fourth manuscript had some promising ideas. However, the manuscript also shows that alternative food movements do not always act in a way which will lead to increased sustainability. Some of them might even induce transitions, which might make food systems more exclusive and unjust than they are today.

10.3 Practice theory

While the first manuscript does not work explicitly with practice theories, it can be stated that human practice with regard to food has manifold triggers and motivations. Furthermore, there is a spatial relevance to these triggers and motivations: People are more likely to eat out when they have a spatial nearness to restaurants or street food at some point of the day, either at a point where they spend some of their time (such as at home or at work) or on their ways (such as the way back home from work).

The second manuscript shows how practices change the meaning of a material. Millets, which were previously regarded as a poor-people's food have recently become a superfood made-in-India. In the manuscript we argue that this change of meaning is done by the practice bundles of replacing and integrating. Instead of preparing particular dishes such as Ragiball out of millets, they are used as a replacement for rice and wheat in dishes such as Dosa or Chapatis. Instead of being a natural part of a household's everyday food practices millets have to be complexly integrated regarding their purchase and their palatability. These practices emphasize that this staple is something special, which is not just consumed but requires additional deliberation from its consumers to reward them with its health benefits.

The practices of replacing and integrating, however, provide some interesting findings regarding routine and deliberation in practices. While it has previously been stressed that practices, in particular consumption practices, are routinized, our findings seem to suggest otherwise. On the one hand, they are routinized in the sense that consumers might not be deliberate about the distinctive aspects of them. On the other hand, they require a certain degree of deliberation because of the additional efforts they mean to the respondents' everyday life. This does not mean that they might not become routinized in the future, for instance, consumers reported to try to integrate they purchase on their day-to-day routes. However, something must have triggered this change of practices. I assume that the answer to this trigger will be found in the teleoaffective aspects of the practices such as the aspiration for (continued) health. Irrespective of the expedience of their practices to reach that goal, this would suggest that to grasp something on an emotional basis could be the key to changing routinized practices. Further research is needed to explore this assumption in more detail.

Regarding the teleoaffective aspects, the manuscript is another example of how affect and emotions of people are susceptible to their material surrounding. With Welch's concept of teleoaffective formations (Welch, 2017) we showed how commercial communications and the advice of nutritional professional impacted the consumers' affective engagements with the practice of shopping in the organic shop. By consulting e.g. nutritionists and regularly visiting organic shops, the consumers moved in a spatial arrangement which triggered and then perpetuated their affective engagements regarding the consumption or organic food. Thus, the manuscript provides a link between space, teleoaffectivity and practices.

The first conclusion from the third manuscript with regard to practice theory is that Poulain's concept of the food social space (2017) proves to be a useful conceptual companion when analysing the spatial implications on food transition. It allowed us to conceptualise the material space without losing track on the social aspects of space. This way, like practice theories suggest it makes spatial implications visible without conceding them a deterministic role.
The structural limitations regarding food access, which I already discussed for this manuscript in chapter 10.2, also have some implications for practice theory. Especially the people's little complains about this situation show how even difficult situations, like the fragile access to fresh vegetables, do easily become routinized and thus accepted by people.
The manuscript also shows how by dispersing the elements of practices can bring forth similarities which might be occluded without applying practice theory as theoretical framework. In our case, these similarities could be found in the respondents' understandings about food practices. By looking at these similarities it became clear that the food social space of different localities and social classes in Bengaluru's rural-urban interface does at least overlap to a certain extend. Thus, I would like to stress practice theories capacities to advance researchers to draw make out similarities of groups which might seem far apart by e.g. societal class or space.

10.4 The site of food transition

A strong deductive approach in research might lead us to reproduce the central findings of the theory applied. In order to avoid this, Lund (2014) suggests to go back and forth between concepts and data and to track this movement. The frame I wrote around the four manuscripts of this thesis documents this process. I started the work for this dissertation with a focus on nutrition transition as a theoretical framework and a quantitative approach to define the middle class.

In the course of the research both concepts proved to be less applicable and useful than expected. However, as they represented the starting point for my research work I spend the introduction of this thesis introducing these concepts and discussing their advantages and disadvantages in comparison to the concepts with which I replaced them: Food transition and qualitative conceptions of the Indian middle class, which turned out to be more applicable with my data.

Despite being more applicable, both concepts were also far from exhaustive in explaining my data. Furthermore, especially food transition lacked some conceptional conciseness. In order to fill the void between those concepts and my data I applied practice theory. On the one hand, practice theory helped me to draw quite a few missing links between food transition, the Indian middle class, and my data. On the other hand, it also helped me to generalize and abstract my data to amend those concepts. Finally, I could also suggest some theorization regarding the importance of teleoaffectivity to change practices.

As the title of this chapter suggests I will conclude this thesis by describing the site of food transition. According to Schatzki (2005), a site is the arena in which the social occurs, through the nexus of practices and material arrangements (more extensive elaborations on Schatzki's notion of site can be found in chapter 2.5). The arena of food transition, which I can describe based on my research can best be imagined like a puzzle, with some pieces being directly connected to one another, whilst others are connected through certain pieces. However, it is a puzzle with missing pieces: Some pieces are missing within it and certainly no margin pieces exist at all. In the case of my research, this means that the knowledge I generated on the site of food transition in Bengaluru is still fragmentary and that this site is not delimited. For example, Bengaluru is influenced by other places or external dynamics, some of which I have no knowledge about. At the same time, I cannot tell where food transition in Bengaluru ends: is it the city's municipal boundaries or is a commuter bringing food habits acquired in the city to more remote locations of Karnataka still part of the site?

However, by giving food transition a site, I am able to make some more specific remarks on how the environment, or put in practice theory's vocabulary, material arrangements, influence food transition without getting carried away with spatial determinism. One example is the increasing popularity of millets in the new middle class: although locally grown and consumed for centuries in the region, the staple only regained popularity when being rearranged from common markets into fancy organic shops. While the material rearrangement certainly contributed to the phenomenon, it was also accompanied by discursive re-arrangements which changed understandings and affective engagements of new middle-class consumers. Another example

would be the (perceived) interrelation between water shortage and changes in food shopping behaviour described in the second manuscript. Site ontologies can help us to understand that, irrespective of how strong this interrelation actually is, that a changed arrangement of water in the landscape will lead to a transformation of practices in manifold ways. The thereby generated insight that food transition is a local phenomenon confirms the work of Fourat and Lepiller (2017). However, through the application of practice theory their rather loose notion of how the local becomes manifested in changing food practices becomes more palpable.

As Everts et al. (2011) stress in practice theories material arrangements and practices are influenced by peoples' knowledge and emotions. It is a crucial insight from the second and third manuscript of this thesis that both aspects are important drivers of dietary change. While the second manuscript shows how affective engagements of consumers have significantly contributed to start consuming organic food, the third manuscript shows how knowledge needs to become graspable and workable in the form of simplified understandings about food in order to decide what can be consumed and what not. The most interesting finding here is not that people need information to change their behaviour but that this information needs to become palpable and workable. In order to induce changing diets, it is, therefore, not sufficient to provide people with information and providing necessary material arrangements. Instead, more research is needed on how information is processed by people. For example, although it is technically clear what a vegetarian diets means, very different personal interpretations exist and are practiced by different people (Fourat and Lepiller, 2017).

Finally, the combined manuscripts show that the site of food transition is one where the hegemony over the normative goals of this transition does also play a role. In manuscripts two and four, it is the new middle class who seems to prevail in discourses on how diets need to change in the future. Unfortunately, as I have shown in chapter 10.2 this might not always be the most sustainable goals. Thus, it is important to understand that not all transitions might necessarily lead to increased sustainability (Shove and Walker, 2007). We have to speak more about the goals of transitions and instead of uncritically endorsing everyone who claims to aim at sustainability, show support by telling them if the measures they take are unlikely to lead to the purported outcome. However, I would also like to point out that not every detour in transitions happens with malicious intent of its initiators. Applying site ontology as a flat ontology, and thereby avoiding a reification of hegemony, revealed that the definition of these goals is connected to two important assumptions of middle-class people: the assumption that shopping in the organic shop will improve their family's health and that the rigorous return to traditional

agriculture will lead to ecological sustainability. Therefore, it might be a fruitful approach to address these assumptions. These insights could be crucial to resolve influences which hamper sustainability transitions in the food system.

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Appendices

Appendix A: Village and household selection survey

Northern transect			Southern transect		
SSI	Village	Number of interviews	SSI	Village	Number of interviews
	Gadarajapura	8		Siddhanahalli	13
	Tankashahosahalli	8	6	Gollahalli_1	11
6	Karanalu	9		Permunpalya	13
	Sunaghatta	8		Muninagara	6
	Devarahalli	4	5	Kaggalhalli	6
5	Sulakunte	13		Tattaguppe/Maria-pura	12
	Tarahunase	7	4	Obichudahalli	13
	Maragondanahalli	4		Chikkegaudanpalya	14
	Kamenahalli	6		Rachanamadu	5
4	Bettanahalli	9	3	Udipalya	8
	Harohalli	14		Alhalli	13
3	Bettahalasur	10	2	Vajarhalli	12
	Atturu	13		Chuchgatta	4
2	Puttanahalli	12		Doddakallasandra	15
1	Sahakar Nagar	25	1	Gaudanapalya	6

Appendix B: Questionnaire survey

Due to its length the questionnaire can be found on the CD attached to the dissertation.

Appendix C: Guideline for semi-structured household interviews

Block 1: Location

- How do you think does the place where you live affect your diet? /Would you eat differently if you would be living in a different place in Bangalore or in a village?
- Did your nutrition change after your wedding?
    - How?
    - Did you have to learn any new dishes? Why?
- How is your family different from your family in law? In terms of location, occupation, tradition…?
- At what retailers do you buy your food? Why?
    - Are you missing any particular food retailer around your place?
- What food do you have when you are not at home?
    - Which places (hotel, mall, street/fast food)?
    - What kind of cuisines do you have when you eat out?
        - North or South Indian
        - Chinese, Thai, Western?
        - Veg or non-veg?

Block 2: Education

- Who taught you what food is healthy?
    - What did they teach you?
- Does your opinion differ from the person who taught you about healthy eating? In what sense?
- What is unhealthy/bad food in your opinion?
    - Why is that?

Block 3: Gender

- In your opinion: Are there any foods which are especially healthy for men/women?
    - Which?
    - Do you apply that in your family?
- Who is responsible for what part of food in your family?
    - Planning of meals? Why?

        - *Who is responsible of what is cooked and which ingredients to be purchased?*
    - Buying parcel food?
    - Purchase? Why?
    - Cooking? Why?

Block 4: Socio-cultural

- Is there any food or drink that is considered taboo? Why?
    - What about beef, pork, alcohol?
- What is **your** favorite food?
- What do you eat/where do you go to eat out to treat yourself? Your children? Your guests?

Block 5: Socio-economic

- Did you ever experience that you had to adapt your food habits to economic shortcomings?
- In your opinion: How does income influence diets in Karnataka?
- Are there food products you only rarely have because you feel they are more expensive?

Block 6: Media

- Do you keep yourself informed about cooking and/or healthy food?
    - What media do you use for that?
- Have you heard any bad news about some food items because of which you stopped buying that food?
    - What do/did you buy instead?
- What influence do you think commercials have on your eating behavior?

Block 7: Environment

- Do you think your eating behavior has an effect on the environment? In what sense?
- Did the drought in the last years affect your nutrition?

Please indicate how much you agree with the following statements. *(1) Strongly disagree, (2) Somewhat disagree, (3) Indifferent, (4) Somewhat agree, (5) Strongly agree*

Statement	**1**	**2**	**3**	**4**	**5**
Humans are becoming too many.	□	□	□	□	□
Humans are allowed to change the natural environment so their life becomes more comfortable.	□	□	□	□	□
It is possible that humans will understand the way nature works so well one day that they can even control the way it works.	□	□	□	□	□
Humans are severly abusing the environment.	□	□	□	□	□
When humans interfer with nature it often produces disastrous consequences.	□	□	□	□	□
Water situation in and around Bangalore has deteriorated in the last 10 years	□	□	□	□	□
It is easy for me to separate rubbish	□	□	□	□	□
If I take shorter showers water situation might actually improve in Bangalore	□	□	□	□	□

How many causes of climate change can you name?

Appendix D: Questions for interview guideline with representatives of AFNs in Bengaluru

Questions 1-6 are based on the features of IFOAM's Organic 3.0 concept (Arbenz et al., 2016)

Feature	Aspects of feature	Questions
	Introduction	Please introduce yourself and how you came up with the foundation of your AFN.
1 A culture of innovation	Societal and economic transformation through increased consciousness e.g. reduced meat consumption, promotion of organic lifestyles, fostering spiritual health; Use of Internet technology, CSA etc. to democratize value chain	How do you want to change the food culture of Bangalore? What kinds of technology, methods, and social innovations do you use to spread your business?
2 Continuous improvement towards best practice	Participatory certification; Address neglected areas of sustainability; Individual tool to benchmark own operations, outstrip minimum standards	Since the foundation of your company: Were there any improvements? Please elaborate. What improvements do you plan for the future?
3 Diverse ways to ensure transparency and integrity	concomitantly: Self-claims, PGS, third-party certification, brand value; short chain markets, CSA, consumer cooperatives; technology-based verification; transparency	In what sense is your AFN organic or do you use other certification? How do you explain the specific quality of your food to the customers?
4 Inclusive of wider sustainability interests	Inclusion of likeminded movements; clear positioning against unsustainable practices; positioning against greenwashing or misuse of term organic	Beyond the production of organic food: What other improvements does your project bring to society? Do you collaborate with other companies or organizations?
5 Empowerment from farm to the final consumer	transparency of prices; empowerment of women; supporting healthy consumption patterns opposing NCDs	In what way does your AFN bring benefits to the people?
6 True value & cost accounting	viable prices for better choices; labelling of unsustainable practices; awareness raising	How do you come up with prices?
	Additional questions for diary-producing AFN	Do you have a breeding program? What do you think about the A1/A2-milk discussion?

Appendix E: Guideline for semi-structured interviews with customers of organic shops

- Why do you buy at this shop and not at a normal market or supermarket?
- Do you come here for specific products?
- Do you also go to other shops or do you do all your grocery shopping here?
- Have you heard about the expression sustainable food? If yes, what does it mean to you?

Appendix F: Interviewed experts

Interviewed experts. The ones who are cited in this paper are highlighted in italics.

Representative	Sex	Function	Background	Alternative characteristics	Motivation
R1	*M*	*Founder, manager*	*IT engineer*	*Food; network*	*Not satisfied with previous job, personal and own family's health*
R2	*M*	*Co-founder, manager*	*IT engineer*	*Food; network*	*Bring people back into agriculture*
R3	M	Founder	Lawyer	Food; network	Increasing awareness on organic food
R4	*M*	*Founder*	*Engineer*	*Food; network*	*Doing something good for the country*
R5	*M*	*Founder*	*Farmer*	*Food; economy*	*Improving farmer's health*
R6	M	Founder	Business man	Food; network	Do something for the environment
R7	M	Founder	IT engineer	Food	Contributing to sustainable ecosystem
R8	*M*	*Managers*	*-*	*Network*	*End agrarian crisis*
R9	M	Founder	IT engineer	Food; network	Helping the farmers
R10	F	Founder	-	Food; network	Protection of Indian cow breeds
R11	M	Founder	Engineer	Food; network	Make Bengaluru greener
R12	*F*	*Founder*	*-*	*Food; network*	*Modern society destroys nature*
R13	*M*	*Founder*	*Engineer*	*Food; network; economy*	*Improve living standard for farmers in native area*
R14	*F*	*Founder*	*Business consultant*	*Food; network*	*Increase vegan alternatives in the market*

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