University of Zurich[UZH]

Do the residents of Zurich have the Capacity to Eat Less Meat? A Qualitative Analysis of the Shift to a Plant-Based Diet as Proposed by the EAT-Lancet Commission from the Perspective of Ecological Citizenship

GEO 511 Master's Thesis

Author
Giulia Zambelli
16-582-686

Supervised by
Dr. Mollie Chapman

Faculty representative
Prof. Dr. Norman Backhaus

23.08.2022
Department of Geography, University of Zurich

Do the residents of Zurich have the Capacity to Eat Less Meat?

A Qualitative Analysis of the Shift to a Plant-Based Diet as Proposed by the EAT-Lancet Commission from the Perspective of Ecological Citizenship

GEO 511 Master's Thesis

Author
Giulia Zambelli
16-582-686

Supervised by
Dr. Mollie Chapman

Faculty Representative
Prof. Dr. Norman Backhaus

26.08.2022
Department of Geography, University of Zurich

Acknowledgements

The completion of the present thesis was only possible thanks to everyone who supported me along the way, had the patience to answer my questions and provided me with encouraging words and feedback.

I would like to thank all the interview participants who took the time to participate in my research project and shared their eating habits with me. Thank you for trusting me with your interesting stories and for introducing me to other candidates.

A special thanks goes to my supervisors, to Norman Backhaus and especially to Mollie Chapman, for supporting and guiding me from start to finish. I highly appreciated all the useful feedback you gave me. I highly enjoyed our collaboration.

Abstract

Society is facing major environmental challenges due to anthropogenic interference with the ecosystem. The current food system contributes significantly to climate change and environmental degradation (FAO 2010; Poore and Nemecek 2018). Agriculture is increasingly exerting environmental pressure on the ecosystem due to changing dietary patterns and continuing population growth. Livestock farming and food waste have been identified as the two main drivers that need to be addressed. Protecting food security will constitute a major challenge for the future, especially because climate change poses an additional threat to agriculture.

A global trend towards increasing consumption of animal products, and especially of meat, as well as a shift towards highly processed foods with unhealthy nutrient profiles pose a risk to both human health and the environment. Scholars agree that a large-scale shift to plant-based diets and reducing food waste are key in lessening the adversary effects of the food sector on the environment (IPCC 2019). The EAT-Lancet Commission examined the health implications and the environmental impact of different food groups and came to the same conclusion. The Commission proposes sustainable consumption ranges for each food group, which cover health requirements, and which can be adapted to any food culture (Willett et al. 2019). Statistics show that the average Swiss diet differs starkly from the intake recommendations of the EAT-Lancet Commission as the Swiss diet is characterised by a high consumption of animal products and above all by a high consumption of red meat (Agristat 2021). Hence, there is a huge potential for the average Swiss diet to become healthier and more sustainable.

The present thesis aimed at putting the EAT-Lancet Commission's recommendations into practice and to analyse the barriers and enablers which either hinder or promote the shift towards a plant-based diet through a qualitative study. The eating habits of 15 residents of Zurich were analysed through their self-reported food diaries and a series of qualitative interviews. Middlemiss' conceptual framework of the contextualised ecological footprint (2010a and 2010b) was used to describe the capacity of the participants to take pro-environmental action. The barriers and enablers which resulted from the data were categorised according to the four outlined types of capacity: cultural, organisational, infrastructural and personal. Cultural norms and traditions, one's social environment and living constellation as well as lacking knowledge about sustainable diets and inadequate meat substitutes, low emotional investment and perception of self-efficacy and personal values could be identified as relevant factors which impact overall capacity for a dietary shift. Nonetheless, the results suggest that objective barriers are relatively low in privileged places like Zurich and that the prevalent reluctance to switch and adhere to a plant-based diet is rather due to an individual prioritisation of self-serving investments. I, therefore, propose to add prioritisation of investments as an additional barrier which works independently of capacity limitations to adopt a plant-based diet. The prevalence of this factor hints at a lack of ecological citizenship mentality among the participants, which needs to be addressed. This thesis contributes to the theoretical discussion of ecological citizenship, adds to the investigations of barriers and enablers to adapting a plant-based diet and provides suggestions to support a dietary shift in Switzerland.

Table of Contents

List of Tables

List of Figures

Abbreviations

BLV: Federal Food Safety and Veterinary Office (Bundesamt für Lebensmittelsicherheit und Veterinärwesen)

BMI: body mass index

CC: cultural capacity

CO_2-e: carbon dioxide equivalent

CSA: community supported agriculture

CEF: contextualised ecological footprint

GDP: gross domestic product

GHG: greenhouse gas

I: interviewer

IC: infrastructural capacity

IPCC: International Panel on Climate Change

OC: organisational capacity

P: participant

PC: personal capacity

SFCD: Swiss food composition database

WHO: World Health Organization

1 Introduction

Modern diets have proven to be problematic for both the environment and human health. The food sector has been found to negatively impact the environment through increased freshwater use and land-system change, excessive nitrogen and phosphorus input, which disrupts natural biochemical flows, and also by deteriorating biosphere integrity and promoting climate change through greenhouse gas (GHG) emissions (Clark et al. 2019; Willett et al. 2019). Half of the habitable land and 70% of available freshwater are used for agriculture, which also accounts for 78% of eutrophication and counts as one of the main drivers of biodiversity loss (FAO 2011; Poore and Nemecek 2018). Furthermore, 28% of global GHG emissions stem from the food sector (Poore and Nemecek 2018). The meat and the dairy industry have been identified as being especially detrimental to the environment as both domains are extremely resource-intensive due to high fodder requirements (Clark et al. 2019; FAO 2010; IPCC 2019; Weber and Matthews 2009; Willett et al. 2019). In fact, livestock breeding uses 77% of farming land while meat only provides 18% of global calorie supply (Ritchie and Roser 2021). This agricultural domain is also responsible for 52% of GHG emissions resulting from the food sector (not including emissions accruing through production and retail) (Poore and Nemecek 2018; Ritchie and Roser 2021). As such, meat contributes only marginally to feeding the world population but constitutes one of the main drivers of climate change. The growing demand for meat is projected to exacerbate the environmental impact of the current food system if diets remain unaltered (Machovina, Feeley, and Ripple 2015: 420-1).

Simultaneously, society is facing what the World Health Organization (WHO) titled "the double burden of malnutrition" (WHO 2021a). This issue refers to the imbalanced distribution of nutrients across the globe which results in undernourishment in the global South and unhealthy diets in the global North. Undernutrition can be defined as "poor nutritional intake in terms of quantity and/or quality [...] of nutrients", which can lead to stunting, wasting or macronutrient deficiency in people suffering from insufficient diets (FAO, IFAD, UNICEF, WFP and WHO 2021: 193). Most people affected by these conditions are predominately located in Asia, Africa and Latin America. After the percentage of undernourished people plateaued at 8.4% from 2014 to 2019, it rose again to 9.9% in 2020 owning to the drastic effects of the COVID-19 pandemic (FAO, IFAD, UNICEF, WFP and WHO 2021: 8). Undernourishment is especially lethal for children. The WHO estimates that 45% of deaths among children under five years of age are linked to lacking food supply (WHO 2021a). Providing a sufficiently energy-dense and varied diet to the people living in poverty is, therefore, a prime goal in ensuring food security. However, the provisioning of sufficiently energy-dense diets constitutes only one side of the medal of malnutrition. The Institute for Health Metrics and Evaluation found that 22% of deaths in 2017 were related to unhealthy diets, thus accounting for higher mortality rates than tobacco consumption and genetically high blood pressure. The most prevalent causes of diet-related deaths are cardiovascular diseases, followed by type 2 diabetes and cancer (IHME 2019). Mortality related to these diseases is promoted by overweight as a consequence of unhealthy diets. According to the WHO, 39% of the global population is overweight (Body mass index (BMI) = 25 or higher), of which 13% are also obese (BMI = 30 or higher) (WHO 2021b). Unhealthy diets are characterised by an excessive consumption of sodium, sugar, refined grains, fats (especially saturated and trans fatty acids) and meat, whereas vegetables, fruit, legumes, nuts, unsaturated fats and whole grains are not consumed in sufficient amounts (Willett et al. 2019: 459). Thus, the global distribution of macronutrients is proving mortal to those lacking food altogether as well as to those who have access to plenty of food.

The pressure on the environment deriving from the food sector is prognosticated to further increase over the next decades if no dietary shift occurs. Population growth is projected to amount to at least 9.8 billion people by 2050 (UN Department of Economic and Social Affairs 2017), which will pose a challenge to ensure food security. Dietary shifts within newly industrialising countries with increasing spending capacity are leading to an increasing over-consumption and a higher demand for processed foods and

animal products, hence further exacerbating the adverse effects of the current food system on the environment. By 2050, it is expected that dairy and meat production will have increased by 58% and 74% respectively if consumption patterns remain unaltered (Chai et al. 2019: 1). A major threat to food security is climate change as it is prognosticated to lead to a higher number of extreme weather conditions such as floods and draughts, soil degradations and the spread of pests and diseases (IPCC 2019: 56). In addition, the number of people suffering from overweight and diet-related diseases is also growing (WHO 2021a). The current impact of the food sector on the environment and the global shift towards unsustainable eating patterns reveal the urgent need for a dietary shift on a large scale.

There is a consensus in academia that shifting eating habits toward a plant-based diet would significantly contribute to decreasing the environmental burden of the food sector (Chai et al. 2019; Clark et al. 2019; IPCC 2019; Machovina, Feeley, and Ripple 2015; Rabès et al. 2020; Raphaely and Marinova 2014; Rosi et al. 2017; Stokstad 2010; Tilman and Clark 2014.; Weber and Matthews 2009; Willett et al. 2019). A plant-based diet is characterised, on the one hand, by a limited intake of animal products, especially meat, and increased consumption of vegetables, fruits, and plant protein sources such as nuts, seeds and legumes, on the other hand (Lea, Crawford, and Worsley 2006). Research comparing vegan, vegetarian, pescetarian and omnivorous diets concluded that vegan diets produce the least GHG emissions, although similar effects could be achieved by substantially reducing the consumption of animal products without completely excluding them (Chai et al. 2019; Rabès et al. 2020). Meat analogues and other replacement products could potentially support the transition from a meat-rich to a plant-based diet because they allow for the continuation of similar cooking styles and constitute an alternative protein source (IPCC 2019: 58). It has been stressed that, in addition to dietary shifts, food waste has to be drastically reduced in order to render the food sector more sustainable and grant food security to a growing population (FAO 2017). Some studies have explored additional options to render food consumption more sustainable and less wasteful by highlighting the benefits of "leaf-to-root" and "nose-to-tail" approaches. These strategies focus on exploiting as much of the original product as possible (the former approach relating to vegetables, the latter to meat) (Nitzko and Spiller 2019). Buying local and seasonal produce also constitutes a way to reduce GHG emissions, although the transport of food carries considerably less weight than meat consumption and food waste (Ritchie and Roser 2021; Weber and Matthews 2009). A further debate in academia surrounds the role of organic agriculture as a measure to reduce the input of pesticides and fertilisers. While organic production is less disruptive to biochemical flows, it is also less effective than conventional agriculture. Müller et al. argue that switching to organic production would not constitute a viable option if not accompanied by an abatement of food-competing feed and food waste, as this type of agricultural production would else lead to additional land conversion to compensate for its lower efficiency (2017). Put differently, food waste and the consumption of meat and other animal products would have to be reduced significantly to compensate for the additional land requirements of organic agriculture. It is, therefore, unclear at the moment which role organic agriculture will play in reforming the food sector. The IPCC reported that the promotion of sustainable diets, which are nutritionally balanced and diverse, reduce food insecurity and could contribute considerably to preventing further climate change and environmental degradation (IPCC 2019: 42; 45). As such, it is imperative to promote a large-scale shift in diets with a special focus on reducing the consumption of meat and other resource-intensive products in order to lessen the environmental impact of the food sector.

Only a few studies looked at both the sustainability and health implications of diets. Clark et al. (2019: 23359) and Willett et al. (2019: 471) conclude that red meat has the most detrimental impact on both the environment and human health. Clark et al. (2019: 23359) point out that, overall, foods with low environmental impact, such as fruits, vegetables and whole grains, tend to be also the healthiest ones. Although general diet recommendations, like reducing animal produce and increasing vegetable and fruit intake for either environmental and or health's sake, have been proposed by many studies, the EAT-

Lancet Commission was the first group of academics to publish an extensive meta-analysis which examined all food groups from both a health and sustainability perspective and to provide a concrete intake recommendation for each category. The advised intake ranges provide a frame on how to design healthy and sustainable diets which can be accommodated to any cultural background as well as to personal needs and preferences. The EAT-Lancet report has been referenced in many studies and was also used to determine how sustainable the average American (Tichenor Blackstone and Conrad 2020), Indian (Sharma et al. 2020), Brazilian (Marchioni et al. 2022), and Swedish (Moberg et al. 2020) diets and federal nutrition recommendations are. What is more, an Italian research group has adapted the intake recommendations of the EAT-Lancet Commission to suit a Mediterranean diet, although they did not provide a detailed menu plan (Tucci et al. 2021). So far, no efforts have been undertaken to evaluate how sustainable the average Swiss diet is compared to the diet model proposed by the EAT-Lancet Commission, nor have the intake ranges been translated into actual meal plans and used in a qualitative study.

Statistical data and a national survey on eating habits conducted in 2015 revealed that the average Swiss diet is characterised by high red meat and dairy consumption (Agristat 2021; Bochud, Chatelan, and Blanco 2017). Typical diet patterns include drastic over-eating of red meat, sugars and dairy products, whereas legumes are widely neglected (Agristat 2021: 20-1). The Federal Office of Public Health reports that 15% of children and 42% of Swiss adults are overweight, of which 11% also qualify as obese (BAG 2022). In addition, approximately 3.6% of the Swiss population suffered from type 2 diabetes in 2017 (BAG 2020; BAG n.d.). Furthermore, coronary heart diseases, which in 2019 accounted for 31.4% of deaths, continue to be the most common cause of death (SWI 2019). Both type 2 diabetes and coronary heart diseases are promoted by overweight and unhealthy diets. Thus, the statistics suggest that the average Swiss diet contributes to climate change and environmental degradation as well as having detrimental health consequences for Swiss people. The question arises why a large proportion of the Swiss population maintains such unhealthy and unsustainable eating habits, despite the federal efforts to sensitise and educate Swiss people on adequate diets.

The theory of sustainable consumption argues that consumers can support sustainable development through their consumption choices (Jackson 2006: 254). In the case of eating habits, people are required to opt for a plant-based diet in order to reduce the environmental impact of the food sector. The underlying theoretical paradigm to justify a need for sustainable consumption is ecological citizenship. This theory frames sustainable consumption as a shared responsibility of society. Every individual is asked to contribute to the common goal of protecting the environment, even if this requires neglecting the pursuit of short-term self-serving aims (Dobson 2007). From an ecological citizenship perspective, Switzerland is not yet assuming its full share of responsibility as the data on the average Swiss diet suggests, although it is unclear why.

Extensive research has been dedicated to the motivations and barriers to engaging in sustainable consumption and which factors play a role in such choices (Fehér et al. 2020; Kaplan 2000; Kollmuss and Agyeman 2002; Lea, Crawford, and Worsley 2006; Lourenco et al. 2022; Maiteny 2002; Pohjolainen, Vinnari, and Jokinen 2015; Reipurth et al. 2019; Stoll-Kleemann and Schmidt 2017). The most common aspects are financial resources, knowledge, availability of sustainable alternatives, cultural norms and traditions, personal preferences, curiosity to try new things, personal values, perceived urgency of climate change and level of self-efficacy, the attitude held by one's social environment towards sustainability topics and the engagement of one's place of work, place of study or other affiliated organisations in sustainability practices, among others, so research suggests (Middlemiss 2010b; Kollmuss and Agyemann 2002; Oreg and Katz-Gerro 2006). Although certain factors are of a recurring nature and have been found to play a role across different cultures and nations, there are still considerable differences between specific case studies. So far, no research has been conducted on the

barriers and enablers of adapting a sustainable diet in Switzerland. Due to the high consumption of animal products by Swiss people, such a study would be helpful to understand the barriers hindering people to assume a plant-based diet. Especially so, since Switzerland could be expected to display a higher level of sustainable consumption as it is a prosperous country in which straightforward barriers such as limited governmental involvement, financial means and provision of sustainable products could be expected to be irrelevant to most people. Rendering Swiss diets more sustainable will be key to help to reach the federal sustainability goal of becoming climate neutral by 2050 (BAFU 2020).

The overarching aim of this thesis is to gain deeper insight in the eating habits of people living in Zurich and similar areas. For this purpose, I compare the diets of 15 people living in Zurich with the recommendations provided by the EAT-Lancet Commission and evaluate which factors furthered or limited their capacity to eat a healthy and sustainable diet. For this end, 15 qualitative interviews were conducted in preparation to which the participants tracked their diet for a week. In order to explore the acceptability of the dietary recommendations published by the EAT-Lancet Commission, the proposed intake ranges were translated into three different meal plans as a basis for discussion. The barriers and enablers mentioned during the interview were evaluated by applying the conceptual framework of the contextualised ecological footprint (CEF) developed by Middlemiss (2010b). The CEF also informed the sampling process and the design of the interview script. The framework proved to be a useful tool as it operationalises the theory of ecological citizenship and can be applied to the specific context of diets. While the CEF suggests a number of possible directions for investigation, it is also broad enough to allow for adaptations and the addition of context-specific factors. The statistics and survey results on Swiss diets revealed the necessity for a switch to healthier and more sustainable diets (Agristat 2021; Bochud, Chatelan, and Blanco 2017), but the present study will mainly centre on the sustainability dimension of diets as a focus on salutary criteria would exceed my field of knowledge and the scope of this thesis. Given the paramount importance of reducing meat consumption, as this food category has an especially high impact on the environment, the main focus in the interviews and the analysis thereof was on meat reduction. Other sustainability approaches such as reducing food waste, using meat and dairy replacement products, buying local and seasonal produce, limiting palm oil consumption, favouring foods with a sustainability label such as organic products and eating nose-to-tail were also discussed in the interviews and considered in the analysis. While the qualitative nature of this study will not allow for extrapolating the results and making generalising claims about the diets of all people living in Zurich, the thesis will provide an overview of potential barriers and enabling factors to adopt a plant-based diet. As the discussion of the results is based on previous research, the findings should provide a reliable basis to direct future quantitative studies on sustainable diets and contribute to finding solutions on how to lower barriers and motivate Swiss people to engage in environmentally friendly consumption.

The research goals for this master thesis are the following:

1. ***Find out how Swiss consumption differs from the intake recommendations provided by the EAT-Lancet Commission.***
2. ***Translate the intake ranges provided by the EAT-Lancet Commission into actual meal plans and use them as a basis for discussion during qualitative interviews.***
3. ***Investigate which factors are limiting and enabling the overall capacity of people living in Zurich to adopt a plant-based diet through qualitative methods.***
4. ***Analyse how the factors can be categorised according to the CEF and what can be deduced from the distribution of factors about the capacity of Swiss people to eat sustainably.***
5. ***Discuss the potential approaches to increase the capacity of Swiss people to adopt a plant-based diet.***
6. ***Evaluate whether the CEF provides an adequate framework for analysing limiting and promoting factors for adopting a plant-based diet and suggest adaptations, if necessary, in order to contribute to future study design on sustainable consumption and add to the broader discussion of ecological citizenship theory.***

I first introduce the EAT-Lancet Commission and summarise their report on healthy and sustainable diets on which this thesis is based. Next, I compare the average Swiss diet to the recommended intake ranges of different food groups as proposed by the EAT-Lancet Commission. I then move on to introduce in detail the conceptual framework of the CEF which informed both the sampling process, the interview design and the evaluation of the data. These methodological aspects are discussed in the following chapter, which also includes a section on the design of the menu plans and a reflection on ethical considerations for the study design and positionality. The main part of the thesis comprises the discussion of the qualitative results which are positioned within the context and findings of previous research. Lastly, I critically reflect the study in terms of results, limitations and the applied framework in the conclusion before suggesting possible paths for future research.

2 Healthy and Sustainable Diets as Recommended by the EAT-Lancet Commission

"The EAT-Lancet Commission on food, planet and health" united 37 international scientists from different domains in order to answer the question of how to feed a future population of 10 billion people so that everyone can benefit from a healthy and sustainable diet (The EAT-Lancet Commission n.d.). The commission provides a possible answer to this question with "the planetary health diet" which consists of recommended intake ranges of different food groups such as meat, vegetables, dairy products and legumes. The commission conducted an extensive meta-analysis of a body of research focusing on both the health and sustainability aspects of diets and the global food system in order to model adequate intake recommendations. It is the first report of its kind which evaluated all main food categories from both perspectives and also suggests concrete intake ranges (The EAT-Lancet Commission n.d.).

The EAT-Lancet Commission sought to propose a health-promoting diet, meaning that it promotes "a state of complete physical, mental, and social wellbeing, and not just the absence of disease" (Willett et al. 2019: 453). In order to determine adequate intake ranges, the EAT-Lancet commission considered the minimum requirements for certain nutrients and determined the upper limit by looking at potential

adverse effects of higher consumption or evaluating where the threshold lies above which the additional intake of a given food group does not yield additional health benefits anymore (Willett et al. 2019).

To evaluate the impact of certain food groups on the environment, the EAT-Lancet Commission adopted the "planetary boundaries" framework. Originally developed by Rockström et al. (2009), this concept identifies nine overarching processes which determine the stability and resilience of the earth system. The nine processes are climate change, novel entities, stratospheric ozone depletion, atmospheric aerosol loading, ocean acidification, biogeochemical flows, entailing both phosphorus and nitrogen flows, freshwater use, land-system change and biosphere integrity, the last of which considers both genetic and functional diversity (Steffen et al. 2015). For each of these processes, planetary boundaries of a certain control variable have been defined to delineate a "safe operating space" in which the Holocene environment can be preserved (Rockström et al. 2009: 2). *Figure 1* depicts the updated conceptualisation of the planetary boundaries framework developed by Steffen et al. (2015). It shows that two of the nine processes, namely biosphere integrity and biochemical flows, are already operating outside the safe operating space. Rockström et al. (2009: 2) believe that if the defined planetary boundaries are overstepped, there is a high risk of catastrophic and irreversible environmental change at global scale, which will deeply harm humanity. Steffen et al. (2015: 8) further suggest that climate change and biosphere integrity are of special importance to maintain an intact earth system and, therefore, advise to prioritise those two processes above the remaining seven.

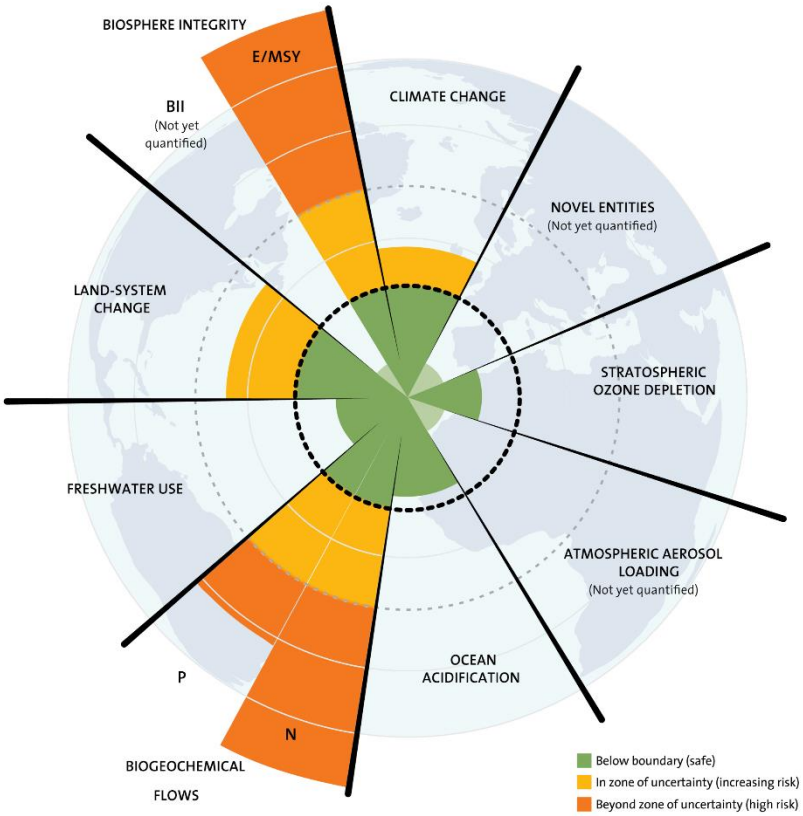

***Figure 1**: The revised planetary boundary concept (Steffen et al. 2015).*

The EAT-Lancet Commission concluded that only five of these processes are significantly affected by the food sector. Hence, the report only focuses on climate change, the biochemical flows of both nitrogen and phosphorus, freshwater use, land-system change and biodiversity loss (Willett et al. 2019: 452),

which corresponds with what Steffen et al. (2015) titled "biosphere integrity". The commission evaluated different types of foods in terms of their effect on the relevant planetary boundaries. It concluded that animal products have the largest impact on the outlined process spheres as *figure 2* shows. Hence, the EAT-Lancet Commission stated that only a large-scale adoption of a plant-based diet can address both the contemporary health crisis and the sustainability issues deriving from the modern food system.

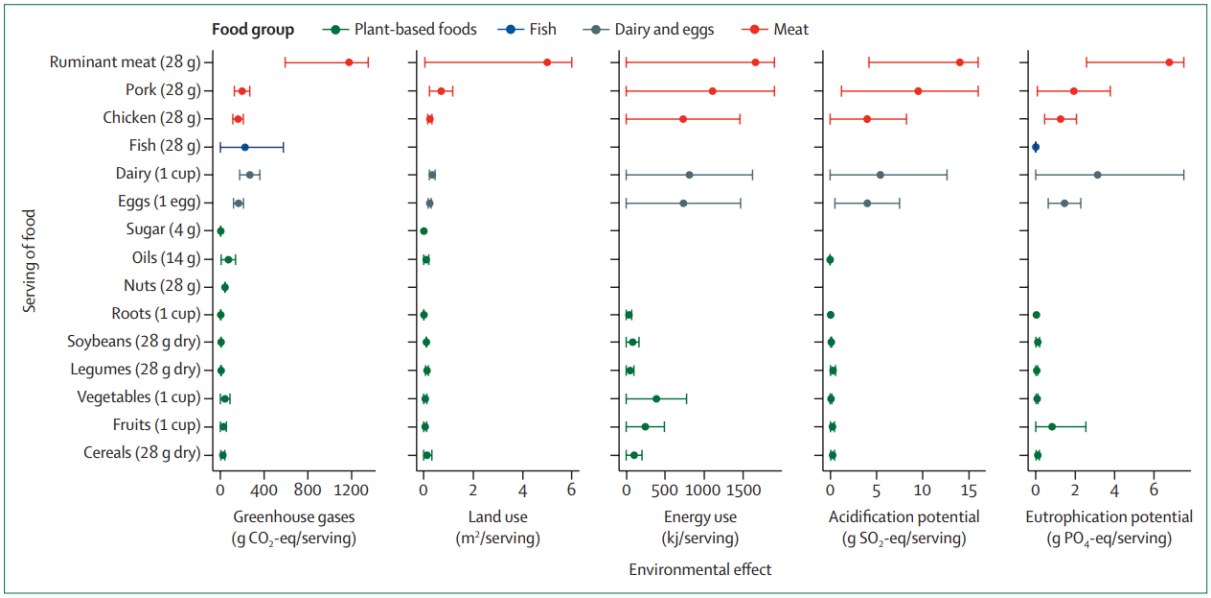

***Figure 2**: Different food groups and their corresponding environmental impact (Willett et al. 2019: 471).*

3 Evaluation of Swiss Diets

The Swiss food pyramid designed by the Federal Food Security and Veterinary Office (BLV 2021) is intended to provide guidance on healthy and balanced diets. It suggests appropriate intake ranges of different food groups. Their conceptualisation as a pyramid is meant to visualise which food groups are to be prioritised (see *figure 3*). The food pyramid reflects in essence the suggestions provided by the EAT-Lancet Commission. *Table 1* compares the intake recommendations of both institutions. One key difference is that the BLV suggests the intake of three portions of either grains, potatoes or legumes but without further specifying how to split up the portions. The commission lists these three foods as separate food groups in order to explicitly promote higher consumption of plant-based protein sources in form of legumes and to limit the consumption of potatoes. A further point of difference concerns the intake of animal proteins. Interestingly, the description of a healthy diet provided by the BLV does not precisely match the food pyramid on their website. The BLV suggests 3 portions of carbohydrate sources and 4 portions of predominately animal protein sources per day whereas the Swiss food pyramid ranks carbohydrate below protein sources, thus suggesting that grains, pulses and potatoes should be consumed more often than meat, dairy, tofu and quorn. The visual rendition of the food pyramid is, thus, closer to what the EAT-Lancet Commission advises than the written explanation provided by the BLV. Especially in terms of dairy, the federal office advises 3-4 portions per day, whereas the EAT-Lancet report concludes that one portion would be ideal, although 0-2 portions are also viable. Nonetheless, the written description of a healthy diet provided by the BLV still promotes a sustainable intake of meat, provided that people interpret it in such a way that all the listed protein sources should be eaten in equal

amounts. In that case, the BLV would actually recommend a lower intake of chicken and fish compared to the EAT-Lancet Commission.

***Figure 3**: The Swiss Food Pyramid (BLV 2021).*

Food group	**Recommended daily intake by the BLV**	**Recommended intake by the EAT-Lancet Commission**

Sweets, salty snacks and alcohol	• 1 portion of either:
	  ○ salty snacks
	  ○ sweets
	  ○ alcoholic beverage
		• Focus on unsaturated fats
		• Max. 6.8g of palm oil
		• Max. 31g of sugar
		• No specifications on alcohol

Fats and oils	• 2 - 3 spoons, half of which must be rapeseed oil • 20 - 30g nuts or seeds • Max. 10g of butter, margarine, cream etc.	• 40g (rapeseed, olive, peanut, soybean and sunflower oil in equal amounts) • 25g tree nuts • 25g peanuts • No dairy fats • 5g of lard or tallow are admissible

Dairy, meat, eggs and plant-based protein sources	• 3 portions of dairy; 1 portion =
	  ○ 2dl milk
	  ○ 30-60g cheese
	  ○ 150-200g yoghurt, curd, cottage cheese etc.
	• Alternately either:
	  ○ 100-120g of red meat, poultry, fish, tofu, quorn or seitan
	  ○ or 2-3 eggs
		• 1 portion of dairy (153kcal)
		  ○ 2dl milk
		  ○ 60g cheese
		  ○ 200g yoghurt, curd, cottage cheese etc.
		• Per week:
		  ○ 98g (0-196g) of red meat
		  ○ 200g (0-400g) poultry
		  ○ 200g (0-400g) fish

	○ or an additional portion of dairy (see above) ➢ One portion of each per week	○ 50g (0-100g) soy foods ○ 1.5 (0-3) eggs
Grains, potatoes and legumes	• 3 portions; 1 portion = ○ 75-125g bread ○ 60-100g pulses (dry weight) ○ 180-300g potatoes ○ 45-75g pasta, rice, grains, flour etc. (dry weight)	• 50g (0-100g) pulses (dry weight) • 50g (0-100g) potatoes • 232g whole grains in whatever form (dry weight)
Vegetables and fruit	• 3 portions of vegetables • 2 portions of fruit ○ 1 portion of vegetables/fruit can be substituted by 2dl juice with non-added sugars	• 300g (200-600g) vegetables • 200g (100-300g) fruit
Fluids	• 1-2l unsweetened beverages	• Not specified

***Table 1**: Comparison of recommended intake ranges provided by the BLV (2021) and the EAT-Lancet Commission (Willett et al. 2019: 451).*

The average Swiss diet differs greatly from what the Swiss government, and even more so from what the EAT-Lancet Commission recommend. The following section discusses the average Swiss intake of different food groups compared to what the EAT-Lance Commission suggests. The next paragraphs refer to *table 2*, which compares the average Swiss consumption of different food groups with the recommended intake ranges provided by the EAT-Lancet Commission.

Whole grains: The average per capita consumption of cereals is close to the recommended amount and well within the possible consumption range. Grains are a key component of diets, and it is suggested that up to 60% of daily energy intake should be derived from whole-grain wheat, rice, corn and other cereals. However, it is important to note that while whole grains as a source of fibre have been associated with reduced risks of type 2 diabetes, coronary heart diseases and overall mortality, refined grains have adverse metabolic effects and are linked to an elevated risk of weight gain, metabolic abnormalities and cardiovascular diseases. As such, it is key to focus on whole-grain cereals and reduce refined grain intake (Willett et al. 2019: 458). The statistic provided by Agristat does not differentiate between the consumption of whole grains and refined grains, meaning that there might still be room for improvement in this regard.

Vegetables and fruits: The average consumption of vegetables corresponds approximately with the daily intake suggested by the report. With 316g/day, the consumption of fruits lies slightly above the recommended range of 300g/day. From a health perspective, there is no evidence that higher consumption leads to adverse effects. Furthermore, the EAT-Lancet Commission deemed fruits and vegetables to belong to the food groups with the lowest environmental effect per serving, although the cultivation of fruits is related to increased phosphorus usage (Willett et al. 2019: 470-2). As such, the

slightly elevated consumption of fruits among Swiss residents is one of the least problematic aspects of their diets.

Tubers and starchy vegetables: In Swiss diets, the only relevant aliment from this food group are potatoes. Their consumption lies substantially above the recommended amount, even when compared to the upper limit of the intake recommendation (+26%), although potatoes are not being as drastically overconsumed as other products. The issue with potatoes is primarily health-related, not environmentally. Daily consumption of potatoes has been shown to be linked to an increased risk of weight gain, hypertension and type 2 diabetes due to its high glycaemic index (Willet et al. 2019: 458).

Animal products: By comparing the EAT-Lancet intake recommendations with Swiss consumption, it becomes apparent that animal products are starkly over-consumed. Pork constitutes the most frequently eaten type of meat. On average, it is consumed almost 7.5 times more often than recommended by the EAT-Lancet Commission. The second most popular type of meat in Switzerland is beef. Its corresponding figure in *table 2* also comprises veal (6g/day) and lamb meat (3g/day), but the main component of this figure is clearly beef (30g/day). This number is over 4.5 times higher than the suggested mean. Even compared to the upper intake ranges, both types of red meat are heavily overconsumed. Poultry consumption corresponds precisely with the recommended amount while fish is slightly under-consumed. The given consumption patterns are not surprising considering Switzerland's long-standing tradition of livestock farming in more alpine regions where crop growing is difficult. In fact, meat is the food category after dairy products for which Switzerland displays the highest degree of self-sufficiency with 84% (Agristat 2021: 23-4). In contrast, fish is not a typical component of traditional Swiss diets as the nation has no direct access to the sea and 98% of fish has to be imported from other countries (Agristat 2021: 23-4). Another animal food group which is over-represented in Swiss diets is dairy. Measured in caloric intake per day, Swiss people eat almost three times the recommended amount suggested by the EAT-Lancet Commission. Again, the high consumption of dairy is linked to it being the most prevalent agricultural sector and the only food group which Switzerland can self-sufficiently produce and export the surplus (Agristat 2021: 23-4). Lastly, eggs are also consumed 169% more than what is recommended, although still being the animal product that is over-consumed the least compared to pork, beef, and dairy.

Legumes: Contrary to animal products, legumes such as dry beans, lentils, peas, soy and peanuts are widely neglected in the average Swiss diet. The low consumption of soy foods and peanuts can partially be explained by them not being regional products and, therefore, not featuring in typical Swiss dishes. Peanuts are entirely imported, while only 18% of Swiss consumption can be covered with domestic production. Legumes too are almost completely imported with only 1% of Swiss consumption being covered by domestic production (Agristat 2019: 22). The comparison shows that Swiss people cover most of their protein requirement with animal protein sources. Ideally, part of the animal protein sources, especially those derived from meat, should be replaced by plant-based protein sources from legumes, for which there is still a considerable potential to increase consumption within a sustainable range.

Added fats, lard and tallow: While the average amount of added plant-based fats in Switzerland corresponds with the recommendations provided by the EAT-Lancet Commission, the choice of used fats differs. The EAT-Lancet report specifies that the added unsaturated oils should consist of approximately even parts of rapeseed, olive, sunflower, soybean and peanut oil (Willett et al. 2019: 451). In Switzerland, however, most plant-based fat stems from rapeseeds (37.8%) and sunflowers (33.3%). Olive oil contributes 14.1% of total fat intake, whereas soybean and peanut oil are not specifically listed in the Agristat data set and are only indirectly captured with the categories "not further specified plant-based fats" and "plant-based fats in general". Although it is unclear how much of those two types of fats are consumed in Switzerland, it is less than the 20% recommended by the EAT-Lancet Commission. A positive aspect regarding Swiss diets is that the average palm oil consumption (6g/day) lies underneath

the maximum defined by the EAT-Lancet Commission (6.8g/day). In contrast, butter is a well-established ingredient in Swiss cuisine given the flourishing dairy industry in Switzerland. The daily per capita consumption constitutes 15g, which accounts for 23% of total added fats. The EAT-Lancet Commission recommends renouncing butter completely due to its high saturated fat content which promotes coronary heart diseases and the high resource requirements of the dairy sector. Although the EAT-Lancet Commission allows for very moderate consumption of lard or tallow, it is specified that this source of fat is optional and does not provide any health benefits (Willett et al. 2019: 458). I, therefore, did not mark the consumption of lard and tallow in red in *table 2*. Its consumption, however, can contribute to a more efficient usage of animals which aligns with the nose-to-tail approach.

Sugar: The average consumption of added sugars in Switzerland is over three times as high as the upper limit recommended by the EAT-Lancet Commission. The EAT-Lancet Commission adopted the WHO's advice to reduce the intake of sugar to less than 5% of total energy intake due to its adverse metabolic effects, which entail promoting weight gain, type 2 diabetes and cardiovascular mortality (2020). As sugar has no nutritional value, 31g should be understood as the upper limit, while consuming even less or no added sugar at all would be favourable.

Caloric intake: According to the Agristat report, the average daily intake of Swiss people amounts to 3048kcal, which constitutes an additional 22% of the caloric intake compared to the recommended 2500kcal/day which already accounts for additional energy needs of the overweight part of the global population. The average caloric consumption reported by Agristat could explain why 42% of adults in Switzerland are overweight, of which 11% also classify as obese (BAG 2022). Nonetheless, the average energy intake estimated by Agristat differs significantly from what the participants of the menuCH survey self-reported. In the poll, participants stated to consume 2229kcal/day on average (the main factor to account for variance being gender). The two numbers differ by 819kcal, the equivalent of a meal. Part of the divergence can be explained by the survey design of menuCH, where the results were purely based on self-reports of the study participants. It is, therefore, likely that the reports underrepresent the actual energy intake (Zuberbuehler and Camenzind-Frey 2021: 17). Both numbers are tainted with a certain level of insecurity, especially because Agristat does not provide a detailed account of how they estimate the average caloric consumption of Swiss people.

Food group	Recommended intake range [g/d]	Swiss per capita consumption in 2020 [g/d]	Percentual deviation from the recommended intake
Whole grains	232	248	+6.9%
Tubers or starchy vegetables (potatoes)	50 (0-100)	126	+126% (+26%)
Vegetables (all)	300 (200-600)	289	-4%
Fruits (all)	200 (100-300)	316	+58% (+5%)
Milk and derivative equivalents [kcal/day]	153 kcal/day (0-306 kcal/day)	446 kcal/day	+192% (+46%)
Beef and lamb	7 (0-14)	39	+457% (+179%)
Pork	7 (0-14)	59	+743% (+321%)
Chicken and other poultry	29 (0-58)	29	+0%
Eggs	13 (0-25)	35	+169% (+40%)
Fish	28 (0-100)	21	-25%
Dry beans, lentils and peas	50 (0-100)	4	-92%
Soy foods	25 (0-25)	2	-92%
Peanuts	25 (0-75)	3	-88%
Tree nuts	25	24	-4%
Palm oil	6.8 (0-6.8)	6	-12%
Unsaturated oils	40 (20-80)	43 (all vegetable oils expect palm oil)	+7.5%
Dairy fats (butter)	0	15	+1500%
Lard or tallow	5 (0-5)	1	-80%
All sweeteners	31 (0-31)	102	+229%
Calories	2500 kcal	3048 kcal or 2229 kcal (Zuberbuehler and Camenzind-Frey 2021: 9)	+22% -11%

***Table 2**: Comparison between the intake recommendations provided by the EAT-Lancet Commission and the average Swiss consumption of different food groups (Willett et al. 2019: 451; Agristat 2021: 20-1).*

4 Conceptual Framework

Two related strands of theory are relevant for this thesis: sustainable consumption and ecological citizenship. The former theory focuses on the impact of consumption choices and services which are engrossed in the environment, social equity and on personal and collective well-being. People can opt for either more or less sustainable options and thereby influence the magnitude and the kind of impact resulting from their choices (Jackson 2006: 254). While sustainable consumption theory emphasises human agency, it considers the responsibility of the individual in direct relation to their social structure. High levels of green provisioning installed by the government and public institutions are necessary to facilitate opting for environmentally friendly consumption choices. This consideration avoids an overemphasis on individual responsibility and the negligence of holding corporate and governmental actors accountable for sustainable development (Spaargaren 2003: 687-90). Overall, sustainable consumption explains how individuals can lower their environmental impact by choosing sustainable products and services which governments, institutions and corporations are obliged to provide. Ecological citizenship, the second theory of interest, conceptualises pro-environmental behaviour as a shared responsibility in society so as to benefit the community instead of the self (Dobson 2007: 280). Pro-environmental behaviour describes behaviour which "consciously seeks to minimize the negative impact of one's actions on the natural and built world" (Kollmuss and Agyeman 2002: 240). The main difference to sustainable consumption is that pro-environmental behaviour can also take place decoupled from consumption (i.e. avoiding littering). Either way, both pro-environmental behaviour and sustainable consumption are practices which characterise ecological citizenship. While sustainable action may not always align with direct self-promoting aims, the theoretical concept argues that, in the long term, everyone will benefit from collective action as environmental degradation and climate change will, ultimately, affect everyone (Dobson 2007: 280). Ecological citizenship theory advocates the same conceptualisation of responsibility distribution as sustainable consumption. The more agency someone has, the higher their duty to act pro-environmentally. Both strands of theory are related to the overarching theory of environmental justice and inform the overarching goal of this thesis and similar studies to motivate people to shift to a plant-based diet.

While sustainable consumption and ecological citizenship form the theoretical basis on which this thesis is situated, the framework I chose to operationalise those theories is called "the contextualised ecological footprint" (CEF), developed by Lucie Middlemiss (2010a and 2010b). She takes the ecological footprint, which describes the number of resources a person consumes and the environmental impact resulting from consumption, as a starting point. She argues that the ecological footprint combines the "right to a certain amount of ecological resources (for meeting basic needs), with a responsibility not to use more than a given amount" (Middlemiss 2010a: 74). This idea is, thus, closely linked to the concept of ecological citizenship. Just as ecological citizenship theory, the CEF also draws on certain principles of environmental justice when it comes to the question of responsibility. In her book on environmental justice, Shrader-Frechette defines an individual's responsibility to act environmentally friendly in relation to their ability to do so: "To the degree that people have the ability to make a positive difference in such situations, […] they are obliged to do so" (2002: 178). Both Shrader-Frechette and Middle miss argue that acting pro-environmentally constitutes a shared obligation between society and the individual. The CEF framework sets out to investigate individual responsibility to reduce one's footprint by looking at limiting factors. Middlemiss groups these factors into four categories which each describe the range of agency or capacity, as she titles it, in a certain domain. According to the CEF, one's responsibility to reduce one's ecological footprint is equivalent to one's cultural, organisational, infrastructural and personal capacity combined (Middlemiss 2010b: 158, 160). Middlemiss argues that the higher one's capacities are, or put differently, the less inhibiting factors there are, the higher the responsibility to reduce one's ecological footprint (2010a: 160). Of course, capacities are not just defined through limiting factors but can also be conceptualised as being actively promoted by enabling factors. It is

important to note that capacities are dynamic and that they can change over time. Hence, there is always the potential for improvement, although there is also a risk for capacities to shrink again (Middlemiss 2010b). *Figure 4* visualises the dynamic relationship between the four capacities and the level of responsibility to reduce one's ecological footprint visualised by the footprint's size. The CEF framework is designed to conceptualise the relationship between barriers and enablers and their impact on engaging in pro-environmental action in general. As such, it can also be adapted to the scope of this thesis, aimed at investigating the factors which shape Swiss people's capacity to adopt a plant-based diet. The four capacities can be described as follows in relation to the aim of the present study:

Cultural capacity (CC) refers to socially determined norms, customs and traditions, which can be more or less environmentally favourable. A positive example for a sustainable norm is the informal rule to always finish the food on one's plate, which avoids food waste, whereas the cultural importance of meat as a status symbol and sign of appreciation in hospitality is an unfavourable example of a cultural norm. The norms, customs and traditions a person adheres to are influenced by the society they live in. If these norms entail considerations of sustainability, then it is more likely that a person will be enabled to act sustainably (Middlemiss 2010a: 162). Cultural norms can either be directly linked to sustainability, namely if a given society is aware of environmental concerns and, therefore, supports environmentally sound practices, such as limiting meat consumption, or they can indirectly be linked to sustainability if, for instance, certain cultural practices are environmentally friendly, even though they are motivated by a different reason. Religiously motivated dietary laws, for instance, may coincide with sustainability goals. The most prominent example thereof is Hinduism, which postulates a vegetarian diet for its devotees (Hackett and McClendon 2017). Overall, social norms, customs and cultural traditions shape people's attitudes and have the power to propagate more or less sustainable lifestyles or, in this case, diets (Kollmuss and Agyeman 2002; Stoll-Kleemann and Schmidt 2017).

Organisational capacity (OC) looks at barriers imposed, and enablers provided by some sort of community. Any social group can play a role in one's organisational capacity, including work and study place, associations, one's family and friends. A positive enabler for organisational capacity is a community which displays environmentally sound behaviour and, therefore, functions as a role model and encourages pro-environmental behaviour (Middlemiss 2010b). For instance, having a group of friends which all care about environmentalism and actively try to reduce their meat consumption is likely to have a positive influence on one's own behaviour. A negative example would be a social environment which is oblivious to the necessity of sustainable behaviour and provides no opportunity for confrontation.

Infrastructural capacity (IC) refers to the provision of and accessibility to sustainable products, services and infrastructure (Middlemiss 2010b). Applied to the question of sustainable food consumption, one issue regarding infrastructural capacity might arise from the availability of vegetarian menus in restaurants and canteens, and the offer of vegetarian convenience products and fast food in supermarkets or take away restaurants. One factor that has only recently come into play might regard vegetarian replacement products, and especially meat alternatives. While fairly new on the market, they seem to be gaining popularity in Switzerland and could potentially offer a more environmentally friendly alternative to meat (Herrmann and Bolliger 2021).

Lastly, **personal capacity** (PC) entails all the factors which influence individuals in their consumption decisions. These range from knowledge on sustainability and health aspects of diets, food intolerances which limit nutrition, the availability of financial means (Middlemiss 2010: 162) as well as a range of motivational factors, such as an interest in sustainability topics and cooking, perceived self-efficacy, personal values and emotional preservations, to name only a few. Similar studies on personal barriers and enablers sometimes refer to these aspects as internal factors as opposed to external ones, which would comprise the factors listed under the previous three types of capacities (Kollmuss and Agyeman

2002). A person who has only a limited budget available for groceries might not be able to afford certain meat alternatives which are more expensive than their meat counterpart in Switzerland (Herrmann and Bolliger 2021: 19). On the other hand, a person with more extensive financial means could opt for regional products, even if they cost more than imported ones and have, therefore, a higher personal capacity to consume sustainably.

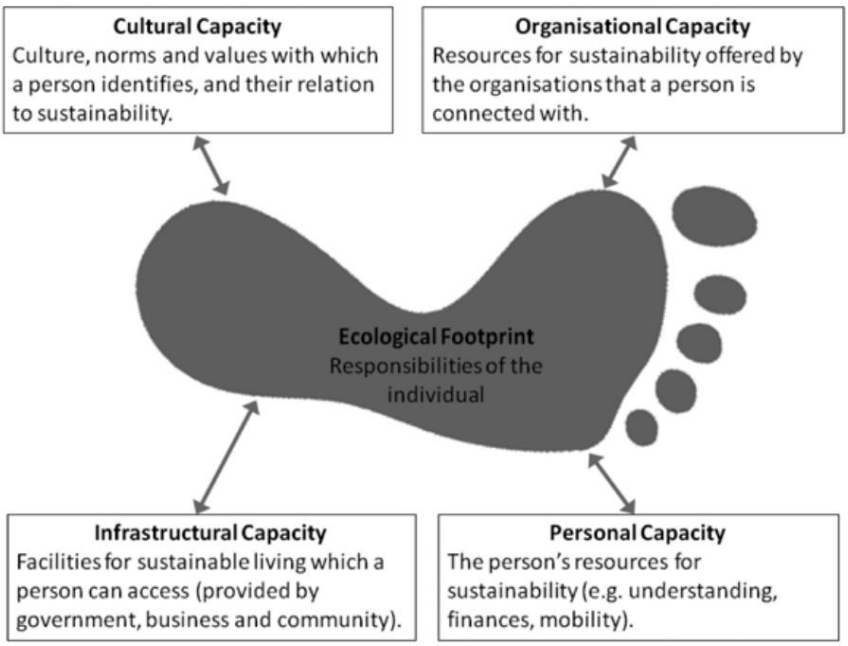

***Figure 4**: The contextualised ecological footprint (Middlemiss 2010b: 160).*

5 Methodology

5.1 Qualitative Interviews

The data collection occurred through 15 interviews as the aim of the present study was to focus on in-depth analysis of barriers and enabling factors for pro-environmental behaviour in diet choice. After the participants were informed about the study aim and agreed to partake in it, they were asked to compile a food diary for a week in which they tracked all their meals and approximate amounts of different food groups (with a special focus on animal products) in preparation to the interviews. The interviews were conducted at the participants' home in May 2022 and they each lasted about an hour. Furthermore, they were recorded in either dialect or standard German, depending on the participants' preference, and were later transcribed in standard German. I chose to conduct semi-structured interviews which were based on an interview guide listing the topics and questions which had to be covered (see chapter 9.3). Semi-structured interviews can be used when the topics of interest are known but not well enough to draft a standardised questionnaire. This method allows for spontaneity and in-depth exploration as follow-up questions can be asked whenever necessary, while it also ascertains that all participants are asked to discuss the same topics. Moreover, it is a time-efficient way to conduct interviews as a certain frame and structure is predetermined, which allows for goal-oriented interactions (Newing 2011: 101-2). The interviews consisted of four parts. The first part focused on the participants' eating behaviours and their food diaries, the second on my pre-designed meal plans, the third on specific meals from the meal plans and the last part centred on specific factors which the participants may or may not consider in their diets.

It is important to note that the participants were not informed about the study focus on sustainability prior to the interviews. The reason thereof was to elicit as spontaneous and authentic responses as possible which were not influenced by their expectations knowing the exact scope of the thesis. I considered the order effect, a phenomenon which explains how people's answers will be influenced by what has been discussed previously (Newing 2011: 111). It made sense, therefore, to start the interview broad and go gradually more into details with the question asked. Of course, some respondents might have been aware about my educational background and have guessed the overarching topic of my study, nonetheless. Before starting the fourth interview section which focused on sustainability, the participants were informed about the focus of the study. However, it is likely that the approximate study focus was already guessable after explaining the design of the meal plans in section two. At the end of the interviews, the participants were asked to complete a short demographic questionary. As positionality is key in qualitative research, I provide a more in-depth discussion of the topic in chapter 5.1.5.

The first section of the interview focused on the participants' eating behaviour and the things they consider and care about when eating. The food diaries were used in this part to analyse the participants' eating habits and discuss regularities and anomalies of the reported week, their cooking habits and skills, routines, considerations they take when planning their meals, dietary preferences and requirements as well as the interplay between their cultural background and their diets. The participants were prompted indirectly to talk about potential environmental considerations in their diets by referring to the food diaries, for example: "In your documentation I saw that you bought an organic apple on Wednesday, is that something you care about in general?" or "I noticed that you always put oat milk in your coffee, why is that?". I did not further pursue the topic of sustainability if it was not mentioned by the participants themselves after providing subtle cues. The food diaries proved to be helpful to draw the participants' attention to consumption patterns and habits they were not aware of or did not mention spontaneously.

In the second part of the interview, the participants were asked to select one of three differently themed meal plans which most drew their interest. They could choose between the "Swiss" (typical Swiss dishes), the "European" (Mediterranean dishes and dishes from the neighbouring countries of Switzerland) and the "International" meal plan (entailing a variety of Asian and oriental dishes as well as some American ones). The only condition to choosing a plan was that the participants liked the cuisines that each meal plan featured. The respondents were then shown the chosen plan and asked to think aloud about things they noticed, liked and disliked about the template. They were also asked to reflect on the differences between their eating habits and the eating style featured in the meal plan. To help them comparing, a table was added beneath the meal plans which indicated the amounts of animal products which were used in the proposed menu (corresponding with the intake ranges provided by the EAT-Lance Commission). I then asked them to intuitively compare their own consumption of animal products with the quantity stated in the table and whether they could imagine consuming only the proposed amount. In certain cases, I used the food diaries to draw attention onto disparities between perceived and reported consumption patterns. In addition, the participants were asked to elaborate on the difficulties and drawbacks they would experience in adhering to a similar diet. Lastly, I informed the participants that the meal plans were designed based to the results of a meta-study which calculated the "fair share" of global food resources for a future 10 billion population and which also took environmental considerations into account. The interviewees were then asked whether this information changed their opinion about the meal plan and whether they believe that positive environmental change could be achieved through their dietary choices.

The third section of the discussion zoomed in on three meals from the meal plan which each represented a different approach to reducing meat consumption. One was a dish with a low quantity of meat, another dish featured a meat replacement product and the third meal was a traditional vegetarian dish with no

substitute. The participants were asked to explain what they liked or disliked about each approach, and which appealed to them. Next, I shifted the discussion to meat and dairy substitutes and the participants were directed to state their opinions about them. To conclude this part of the interview, I inquired whether the interviewees could imagine serving a vegetarian dish or meat substitutes to their guests.

In the last part of the interview, the respondents were asked explicitly whether they consider certain health and sustainability aspects. I framed these questions, for example, as follows: "Do you actively try to reduce your meat consumption?" or "Do you pay attention to your caloric intake?". Of course, they were also asked to clarify why or why not they do so. By now, the interviewees were aware of the study focus on sustainability which in some instances led to a change in attitudes. In such cases, I pointed out the discrepancies with earlier statements to the participants. This provided me with further insight into their actual behaviours, their underlying motives and rationalisations. The respondents were then asked about whether and where they come in touch with the topic of healthy and sustainable diets (i.e. during their education, through their social environment etc.) and how relevant this topic is to them. In conclusion, I asked the participants to reflect on possible changes in eating behaviour during their life and the reasons for these changes.

5.1.1 Sampling

The goal for the present study was to capture a broad spectrum of factors impacting individual capacity to reduce one's ecological footprint, therefore a purposive sampling was conducted to meet the study aim. Purposive sampling denotes a sampling strategy which is used to select respondents who are expected to yield useful and appropriate information. Unlike randomised sampling, this strategy purposefully selects people with specific characteristics. In other words:

> "a purposive strategy is based on the assumption that, given the aims and objectives of the study, specific kinds of people may hold different and important views about the ideas and issues at question and therefore need to be included in the sample" (Campbell et al. 2020: 654).

An advantage of this strategy is that it uses limited research resources effectively. However, it is crucial to ensure that the rationale for the sample selection is aligned with the overarching purpose of the study (Campbell et al. 2020: 653-4). For this matter, I determined a number of personal characteristics with the potential to yield different types of respondents prior to the sampling. The factors are based on previous literature on pro-environmental behaviour and other studies which analysed motivators and barriers to adapting a plant-based diet.

Some of the factors which I suspected to have an influence on the participants' capabilities were quite specific and complex, wherefore it would have been impossible to sample people based directly on these factors. Hence, it was necessary to determine which of the characteristics could be inquired prior to the interviews. On the one hand, the selected characteristics had to ensure a diverse sample while, on the other hand, they also had to be easily answerable by the candidates or by other people who might suggest a potential candidate. For example, it is easier to ask people about their age rather than asking about their cultural upbringing. While the latter point can only be addressed during the actual interview, asking about someone's age is a straightforward question and it is probable that people of different ages also experienced a different upbringing. For each capacity, I tried to determine at least one substituting sampling criterion, although the exact number varied depending on how important I assumed a capacity would be prior to the study. All of the chosen sampling criteria are based on a review of previous literature and were found by other scholars to have an impact on eating patterns and, more specifically, on choosing or refusing to adhere to a plant-based diet. The next paragraphs will shortly introduce the

different attributes that were chosen for sampling and explain how they are linked to the different capacities, which are indicated with their abbreviations in brackets.

Age: The first sampling category chosen was age, as it seemed natural that eating habits might vary depending on one's life situation and health requirements (PC). Studies suggest that on the one hand, younger people can be particularly critical of meat consumption while, on the other hand, older people, and especially women, tend to decrease their meat consumption again at a higher age (Pohjolainen, Vinnari, and Jokinen 2015). Moreover, age is an indicator for differing social environments in which people grew up (OC). I expected that people of different ages were raised in different ways, in different circumstances and internalised different social norms (CC). Lastly, depending on when school was attended, people might have learned more or less about climate change and environmental degradation and how that is linked to the food sector (PC). An even age distribution was sought among the following age groups: 18-29, 30-39, 40-49, 50-59, 60-69, 70+. There are at least two participants who belong to each age group.

Gender: Gender was found by previous studies to correlate with a wide range of eating habits, behaviours and attitudes which were of interest to the present thesis. Previous investigations found that men consume more meat (CC), are less likely to be vegetarians and have adequate cooking skills to prepare plant-based dishes (PC) compared to women. In contrast, women were found to be more likely to adhere to a vegetarian or plant-based diet, be concerned with weight reduction or maintenance (PC) and cook their own food (Bochud, Chatelan, and Blanco 2017; Pohjolainen, Vinnari, and Jokinen 2015: 1158; Ruby and Heine 2011; Stoll-Kleemann and Schmidt 2017: 1268).

Domicile: The candidates' domicile was also of interest because Pohjolainen et al. (2015) found that living in a rural area is positively correlated with higher meat consumption, although they do not provide an explanation for their findings. Possible reasons might be differences in social norms (CC), personal values (PC) and accessibility to meat and dairy alternatives (IC) between people living in rural and urban areas. Furthermore, their social environment could prove to be more conservative (OC). I distinguished between rural, rather rural, rather urban and urban as domicile attributes. This categorisation was based on the personal perception of the study participants only and not on any geographical indicator.

Political positioning: Milfont et al. found that people with a liberal or left-winged political orientation are more likely to adopt a plant-based diet than people with a conservative, right-winged political position (OC) because their social environment might hold conservative opinions and not prioritise sustainability aims as much (Milfont et al. 2021). Hence, participants were asked to mark their political positioning on a beam. Based on their answers, they were categorised as either left-winged, rather left-winged, middle, rather right-winged and right-winged.

Education level: Education is one of the individual determinants which influences consumption behaviour (Terlau and Hirsch 2015: 161). Low education has been associated with higher meat consumption (Lea, Crawford, and Worsley 2006: 831; Pohjolainen, Vinnari, and Jokinen 2015: 1158). One's educational background is especially relevant if it provids additional knowledge on the food sector, agriculture, the health aspects related to diets or contemporary environmental challenges, as lacking expertise in these areas has been identified as a key barrier to making informed consumption choices (PC) (Vermeir and Verbeke 2006: 174-5).

Work or study domain: Work or study domains which are part of the food industry or are linked to the environmental sector are more likely to engage with questions of sustainable dieting than other jobs from other branches and require specific knowledge on the topic (PC) Furthermore, jobs and studies which are directly related to the food sector or deal with sustainability issues might also provide opportunities for hands-on experiences of the adverse effects of current eating habits. Kollmuss and Agyman found that direct experience has a higher impact on attitudes than knowledge on its own, but

also that knowledge is a prerequisite for developing an interest in sustainability topics (2002: 242, 250). Working and study environment can also be considered to be a part of one's social environment (OC). I tried to find both people whose work or study domain was either related or unrelated to the food industry and sustainability topics.

Financial means: Limited financial means could pose restrictions on what is consumed, or which dietary aspects are prioritised over others (PC). If only a limited budget is available for food, people might be less willing to pay extra for organic products and such marked with a different sustainability label or for regional products if imported ones are sold for a lower price. The types of food and frequency with which they are consumed might also vary depending on one's financial means. It was found, for instance, that people with lower socio-economic status and limited financial means consume more fatty meats (Stoll-Kleemann and Schmidt 2017: 1268). As this is a very personal question and rather difficult to estimate for third parties, only the three ordinal categories ('below the Swiss average', 'about the Swiss average' and 'above the Swiss average') were offered to choose from. Asking people to describe their financial situation or that of the candidate they were suggesting in these terms seemed more viable than asking for actual numbers. This method also had the advantage that it inquires people's perception of their financial situation without reducing one's financial means to income only (i.e. someone could have a very high income but also be indebted and, thus, still have a low spending capacity).

Living constellation: Another attribute of interest was the candidate's living constellation, meaning whether they live in a single-person-household, with their partner, in a shared apartment, or in a family with children. This is insofar relevant as, in most living constellations, people have to adapt their eating habits to those of other family members (OC) (or flatmates, depending on the living arrangement). The effect of spouses and especially children on shared eating habits has been reported by several studies (Pohjolainen, Vinnari, and Jokinen 2015).

Cultural background: Finally, the cultural background of the participant and their spouses, if they considered that part to be relevant for their eating habits, was recorded. Multiple studies suggest that meat consumption is closely tied to social and cultural norms (CC) (Pohjolainen, Vinnari, and Jokinen 2015: 1160; Stoll-Kleemann and Schmidt 2017: 1269-70). There was no specific sampling target other than including people who only have a Swiss background and people who have additional cultural influences other than Swiss. As the focus was on residents in Zurich, only people who have been living a minimum of five years in the canton of Zurich were chosen for this study.

I selected the participants through a combination of personal relations and the snowball system in which people propose other candidates from their social network who potentially comply with the study requirements (Newing 2011: 72). People were recruited in order to depict as broad a variety of sampling attributes as possible to ensure a wide spectrum of views on potential limiting and enabling factors for assuming a plant-based diet. It was key to ensure a diverse sample in order to reflect the diversity of the population in question, which comprises all people who eat and live in Zurich or, in other words, all residents of Zurich. I did not always inquire about all the attributes prior to the interviews. Rather, I mostly focused on age, gender, living-constellation and domicile, whereas I confirmed all the other attributes during the interview and through a short demographic questionnaire at the end of the session (see chapter 9.4). I opted for this reiterative sampling process because it seemed easiest, and in the end, it worked out quite well. As the recruitment process proceeded, candidates were specifically targeted to match with some attributes which had not been fulfilled by the previous participants. In this later sampling stage I used the snowball system to gain access to potential matches. *Table 3* shows the 15 study participants and their sampling attributes. The cultural backgrounds are stated in the order of importance, cultural influences deriving from spouses are indicated in brackets. Only people of age, who have been living for a minimum of 5 years in the canton of Zurich and are fluent in German were eligible for this study.

	Age	Gender	Political positioning	Cultural background	Domicile	Education	Living constellation	Financial means	Field of studies/ Employment
P1	30	m	-	Italian/Swiss (Spanish)	Urban	No higher education	Family with two children	Average	Construction work
P2	28	m	No clear position	German/Swiss	Urban and rural	University degree	Shared apartment	Below average	Physics (Student)
P3	55	f	Left-winged	Swiss/Italian	Urban	University degree	Partner (1 child)	Above average	Food science
P4	48	f	Rather left-winged	Swiss/Italian (Thai)	Urban	No higher education	Family with 4 children	Above average	Care work
P5	25	m	Rather right-winged	Swiss/German	Urban	University degree	Shared apartment	Below average	Engineering (Student)
P6	25	f	-	Albanian/Swiss	Urban	University degree	Shared apartment	Below average	Law (Student)
P7	60	m	Right-winged	Swiss/Italian	Rather urban	University degree	Family with 1 child (3 in total)	Above average	Architecture
P8	56	f	Rather left-winged	Swiss	Rather urban	No higher education	Family with 2 children	Below average	Cleaning
P9	62	m	Rather right-winged	Swiss (Moroccan)	Rural	Some sort of higher education	Partner (4 children)	Above average	Finance
P10	33	m	Left-winged	Swiss	Urban and rural	University degree	Shared apartment	Below average	Agriculture
P11	76	m	Right-winged	Swiss	Rather rural	No higher education	Single household	Above average	Retired (Banking)
P12	70	f	-	Swiss	Rather rural	No higher education	Single household	No answer	Retired (Agriculture)
P13	47	f	Middle	Swiss/German (Lebanese)	Rural	Some sort of higher education	Family with 2 children	Average	Tuition
P14	47	f	Rather left-winged	Swiss/Mexican (English)	Rather rural	Some sort of higher education	Family with 2 children	Above average	Meteorology
P15	36	m	Left-winged	Swiss/Bosnian	Urban and rural	University degree	Family with 1 child	Above average	Marketing

Table 3: *Characterisation of study participants.*

5.1.2 Food Diaries

The participants were asked to compile a food diary for a week during which they had to report all they ate and drank apart of water. This was useful because it allowed me to form an idea about their eating habits and ask specific questions during the interview and point to the according passages in their food

diaries for evidence if needed. It also provided me with a basis to check whether the participants' descriptions of their eating behaviour differed significantly from what had been reported in the food diaries.

The participants were free to choose between writing their diary on their own or reporting their consumption to me via Whatsapp, although they could have also chosen a different communication system if they had preferred to do so. All but two participants opted for the second option and sent a combination of visual and text-based reports via Whatsapp. Both photos and videos were used for visual documentation and were usually accompanied by an oral or text-based description of their meals. Sometimes, text-based descriptions only were used for reporting. The advantage of this type of communication was that I could ask for clarifications or further details if needed, whereas I had to trust the self-documenting participants to be specific enough. I, therefore, promoted the second option as I could also send reminders to study participants if they forgot to report their meals. The two participants self-reporting were, ultimately, of the least concern in terms of accuracy as one decided to weigh everything because she herself was interested in a precise report, and the other participant ate almost exclusively vegan meals during the study week, with the exception of an egg dish, for which he had counted the number of eggs used, and potentially one dinner which he ate at a vegetarian restaurant and for which he was unable to tell whether eggs or dairy had been used in the dishes from the buffet.

The documentation had to include what had been eaten, what meal it constituted (breakfast, morning snack, lunch etc.), whether and which animal products were used, the portion size and the approximate quantities of animal products which had been used. Not all of these elements were equally well reported. The most difficult things to estimate were usually portion size and approximate amounts of animal products consumed. The issue was that the participants were not asked to weigh their food as this might have posed too much of an effort and proven difficult, especially if the food was not self-prepared. It was hard to make precise estimates even with visual material because the photographs often only depicted one serving or a meal that was already half eaten or because no photo was provided at all. I, therefore, asked the participants to be more specific about the amounts of animal products and estimate the weigh if possible. Foods that have standardised weights could easily be measured. A small yoghurt typically has a net weight of 180g, a large one is 500g. Thus, the participants could either tell me directly the weight of the yoghurt without having to weight anything or I could deduce it from their reports. Some data needed extra research and calculation in order to assign a number to it. One example, for instance, is how to estimate the quantity of cream people put in their coffee. A little pre-packaged portion of cream equals 12ml of cream. I could, therefore, ask the respondents how many of the little portions they had used or how many pre-packed portions they would usually use to estimate their cream consumption if they had poured the cream from a milk churn. If they had baked a cake, I asked how many eggs, how much milk et cetera they had used and then asked them to estimate the fraction of the cake they had eaten so that I could calculate their approximate consumption of animal products. In terms of meat, most participants seemed to be aware of how large a 200g steak is as it is a rather standard size. I also sent them a photo for comparison. I then asked them to compare their meat serving with their idea of a 200g steak and evaluate how much more or less the serving was. For cold cuts, I asked the participants to count the slices they ate and assumed a weight of 10g for each slice. For cheese, I photographed a 20g stick of cheese and sent it to the participants as a reference for their estimates. I calculated 1dl of milk per milk coffee, cappuccino, latte etc. as the standard measure, as most participants stated that this seemed to be a reasonable estimate. Convenience foods were especially difficult to evaluate unless the participant could state the exact brand and product name. If estimates could not be done reliably and the animal product was not a main ingredient of the dish, it was neglected for the total count.

For estimating dairy consumption, an additional factor had to be taken into consideration as the EAT-Lancet report defines the ideal amount through either milk equivalents, to which no further

specifications are given, and the energetic value of 153kcal. I had to choose the second option and used the information on the caloric content for different dairy from the Swiss Consumption Data Base. This data base provides mean values for product groups such as hard cheese, soft cheese, milk, cream etc., meaning that the actual caloric content of the specific dairy product the participants ate could have differed slightly. This adds a layer of uncertainty on the total counts for dairy.

Despite all efforts to base the estimates on verifiable numbers, it must be taken into account that the estimates do not precisely capture the participants' actual consumption during the study week. The food diaries can be used to approximate the consumption of animal products and to estimate whether the consumption lies within the recommended range or not. Therefore, *table 4* showing the consumption of animal products in chapter 6.1.2 and *table 5* which presents a ranking of meat consumption in chapter 6.1.3 have to be understood as approximations. The tables should be fairly reliable to determine the approximate place in the ranking of the respondents, but less reliable to compare participants with a similar consumption.

5.1.3 Coding

In qualitative research, coding is a fundamental technique to gain thorough insight into large bodies of data as well as to sort and structure the data in order to select the relevant parts for analysis and give a voice to the study participants (Linneberg and Korsgaard 2019: 261-2). This method entails the assignment of a word or short phrase which succinctly summarises the content or message of a certain interview passage. I chose the "abductive" or "blended" approach of coding which combines the deductive and inductive method. I began the analysis with a set of deductive codes which had been established before I conducted the interviews. The deductive codes were based on the CEF and previous literature on the topic. Deductive coding is a helpful approach as it situates the study within a theoretical basis from the beginning. By also allowing inductive coding, the development of codes based on the actual data, more flexibility is given to the research focus. This explorative approach allows for surprising and unexpected topics being included in the analysis, which can enrich the overall study (Linneberg and Korsgaard 2019: 263-4).

The coding process occurred in four stages. During the first stage, I determined a number of deductive codes which reflected the knowledge gained from previous literature on the topic. I structured the codes based on the CEF framework, meaning that each code was allocated to one of the four capacities. The following phase took place after the data collection. I read the interviews transcripts and screened them for interesting passages, keeping in mind the codes that I had determined prior to the interviews. In the word documents of the transcripts, I marked the relevant passages either in blue, to denote a barrier to adopt a more sustainable diet, green, to highlight enablers for pro-environmental behaviour, or yellow, to mark passages which referenced neither barriers nor enablers, but which were interesting for other reasons. As a part of the third stage, I copied the passages into a different word document which comprised a table with all the deductive codes. If a passage did not fit any of the pre-defined codes, and I remembered other participants addressing the same topic, I added a line in the table with a new code which summarised the content of the passage in question. During the fourth and last cycle of coding, I went through all passages once more and evaluated, whether a category should be further divided into subcategories and whether a passage should also be coded for a different topic. *Figure 5* summarises the codes which were used in the present study. The deductive codes are listed in black, the inductive codes in blue. *Table 12* in chapter 9.5 of the appendix provides a more detailed overview of the questions that a passage with a certain code addressed.

Codes

Cultural Capacity
- Upbringing
- Habits
- Importance of meat
- Importance of dairy
- Social importance of sustainability topics
- Gender differences
- Generational differences
- Personal values

Organisational Capacity
- Living constellation
- Social environment
- Working/study environment
- Other associations
- Perception of federal/political engagement
- Perception of retailer engagement

Infrastructural Capacity
- Availability of sustainable alternatives in shops, restaurants etc.
- Opinion on meat/dairy substitutes
  - Artificiality
  - Highly processed
- School education
- Guiding
  - Labels

Personal Capacity
- Financial means
- Time
- Awareness of own consumption
- Knowledge on sustainability topics
  - Uncertainty
- Cooking skills
- Health requirements
  - Health =/ sustainability
  - Health = sustainability
- Preferences
- Ethical reservations
- Hands-on experience
- Relevance of sustainability topics
- Interest in cooking/eating
- Convenience
- Conflict of interests
- Priorities
- Self-efficacy
  - Social self-efficacy
  - Personal self-efficacy
- Alternative hedonism

Miscellaneous
- Other efforts
  - Nose-to-tail
  - Organic products
  - Food waste

Figure 5: *The codes which were used to analyse the interviews, grouped by capacity (the codes in blue are of a deductive origin and were added during the analysis).*

5.1.4 Ethical Considerations

The ethical aspects I considered in preparation to the study were based on the "Guidelines on Ethics and Safety in Fieldwork for Researchers in Human Geography" provided by the Geographical Institute of the University of Zurich. All the potential participants who were contacted were first explained in an informal way about the approximate goal and proceeding of the study. Once the candidates expressed interest in participating, they were sent a more detailed participation letter and a consent form in which I presented myself and explained the exact proceeding and aims of the study (both documents are listed in the appendix in chapter 9.2). The letter of consent contained information on how the data resulting from the food diaries and the interviews would be anonymised. The photos and messages which the participants sent to report their nutrition were converted into standardised tables with no personal information in them. The interviews were transcribed in such a way, that no names, specific places, or other personal references were stated. The participants were asked to give consent in oral form to being recorded, their food diaries being evaluated and the results, including the direct citing of certain

passages, being used in this thesis. The consent letter also contained a listing of potential benefits and risks resulting from participating. The main risk of the present study posed a potential triggering of eating disorders because of the food tracking and the later interview on eating behaviour. Participants with a current or past history of eating disorders were asked to renounce participating. I provided all candidates with my contact details as well as with those of my thesis supervisor Mollie Chapman and the faculty representative Norman Backhaus in case they had any questions. Lastly, the candidates were informed about the option to terminate the participation at any stage and with no explanation needed.

The American Anthropological Association (2022) lists seven principles of professional responsibility. I will shortly address each of the principles and explain the measures which were taken to ensure that the present study meets all ethical standards.

1. **Do no harm**: Harm could have only resulted from triggering an eating disorder either because the food tracking or the discussion of food habits in general. To avoid that, study candidates were asked not to participate if they felt addressed by the potential risk.

2. **Be open and honest regarding your work**: I was transparent regarding the overall topic of my thesis, namely analysing eating patterns among people living in Zurich but withheld at first that I chose to conduct the analysis from a sustainable consumption perspective. I deemed this retention legitimate as it served an objective research purpose and because it was revealed eventually during the interview. Moreover, I actively asked the participants if they had any questions left at the end of the interviews. They were free to ask for any specification. Most importantly, however, no damage to the participants occurred from withholding this detail during the first part of the interview.

3. **Obtain informed consent and necessary permissions**: The participants were asked for informed consent about willingly participating at the study which included compiling a food diary and giving a recorded interview. The participants were notified about the potential risks accruing from the study and informed of their option to terminate their participation at any given time and not having to provide an answer to questions they did not want to discuss during the interview. Withholding an answer was also stated as an option on the demographic questionnaire.

4. **Weigh competing ethical obligations due to collaborators and affected parties**: This point was of no importance as no other parties like sponsors or collaborators were involved in this study.

5. **Make your results accessible**: The participants will be provided with a link to access my master thesis as soon as it will be published and thanked once again for their participation. They are welcome to ask questions about the study at any time.

6. **Protect and preserve your records**: No one was granted access to any sensible data in which the participants had not been anonymised previously. The original data is stored securely on my personal laptop only. All the data used in the present thesis is anonymised.

7. **Maintain respectful and ethical professional relationships**: The participants as well as my supervisors were met with all due respect and professionality. I highly appreciated our collaboration and feel very grateful for their support.

5.1.5 Positionality

Positionality describes the influence of the researcher on the research, both through their own perception of the participants as well as the participants' perception of the researchers. The reciprocal awareness shapes the answers of the participants as well as the interpretation of those answers by the researcher. Research can, thus, be described as a shared space, which is equally shaped by the researcher and the participants (England 1994). I will first reflect the potential influence of my identity on the participants before I continue inspecting my own biases which might have had an influence in shaping the present study.

It is key to recognise that the researcher's presence is never neutral, and that depending on whether the researcher is perceived as an in- or outsider, responses and interaction might vary. As Bourke puts it:

> "The nature of qualitative research sets the researcher as the data collection instrument. It is reasonable to expect that the researcher's beliefs, political stance, cultural background (gender, race, class, socioeconomic status, educational background) are important variables that may affect the research process. Just as the participants' experiences are framed in social-cultural contexts, so too are those of the researcher" (2014: 2).

I am a 25 years-old, white, middle-class, Swiss, female master's student who knew most of the participants to a certain degree. Due to the fact that I was either directly acquainted to the participants or that we had acquaintances in common, I had an advantage in gaining the participants' trust, be accepted as an in-group-member and allow them to speak more freely. I would clearly consider myself an insider in terms of race, speech community, domicile and nationality, although most of the participants also had an additional cultural background other than Swiss in relation to which I did not always have an insider status. I was not under the impression that gender seemed to play an important role during my interviews as the interactions were always one-to-one and I could not identify instances in which patriarchal power asymmetries were played out in favour of male participants. Neither did my socioeconomic status or class seem to be of much importance. As a student, I could relate to those who argued that their budget limited their diet choices. At the same time, however, I grew up in a middle-class family which associates with a wide range of people belonging to anywhere from the lower middle-class to the upper class. Those participants who could be considered belonging to the upper socioeconomic class had a modest personality and did not treat me as their inferior. Overall, I felt accepted by the participants and was able to build a relationship of mutual trust with all respondents.

Despite my insider access to the participants and sharing a majority of cultural attributes, my age, educational background and underlying pro-environmental attitude were highly relevant to my positionality. My age difference to most of the participants seemed to matter at least to a certain degree as age was often mentioned to explain differences in environmental knowledge, cultural upbringing and eating habits. The fact that I was perceived by older participants to belong to a younger generation which grew up with a different sensitivity for sustainability issues was probably strengthened by their knowledge of my educational background. The participants knew that I am currently doing a master's program in geography at the University of Zurich, and this might have had an intimidating effect on those who did not have any higher level of education, especially because we discussed a topic belonging to my expertise. The most important factor in the participants' perception of me was probably my favourable attitude towards environmentalism, pro-environmental behaviour and plant-based diets. While I tried to formulate questions and answers in a neutral and non-judgemental manner, it is important to recognise positionality as "a space in which objectivism and subjectivism meet. […] To achieve a pure objectivism is a naïve quest, and we can never truly divorce ourselves of subjectivity" (Bourke 2014: 3). As such, my efforts to act in a neutral and objective manner were probably limited by the participants' awareness of the underlying paradigm informing my own understanding and the scope

of the study. Although remaining as objective and non-judgemental as possible is key in scientific research, "There's no enunciation without positionality. You have to position yourself somewhere in order to say anything at all" (Hall 1990: 18). I believe that it is key to prevent further climate change and environmental degradation and that adhering to a plant-based diet contributes to rendering the food sector more sustainable. This view is backed by scientific literature which has been presented in the introduction and which supports the study design and the development of my thesis throughout. It is likely that the participants became aware of my stance at some point during the interview. Hence, there is a high potential that the participants were affected by the so-called "self-esteem effect". This effect describes people's tendency to respond in a manner which reflects well on themselves in order to appear in a good light to others, whether that happens consciously or not (Newing 2011: 111). Hence, the participants might have reported pro-environmental attitudes or behaviour to make a better impression on me knowing that I hold an environmentalist point of view. The self-esteem effect might have been even stronger than usual in this case because of the direct or indirect acquaintance between the participants and me. I tried to minimise my influence on the respondents by pre-scripting the interview questions and revising them according to my supervisor's feedback to make sure that they were formulated in an unbiased manner. In addition, whenever I asked the participants' opinions on pro-environmental initiatives, I introduced them as "other researchers' opinions or findings" to distance myself from the environmental point of view and to maintain, as far as possible, a neutral stance. Lastly, I tried to give the participants the feeling that they were welcome to express their personal views, regardless of whether they corresponded with my personal opinion or not. I met all the respondents and their statements with respect and showed interest in their arguments in order to reduce the dividing effect of positionality.

The other aspect of positionality which needs to be reflected is how my personal mindset influenced my analysis and interpretation of the interviews. The analysis in the present thesis is shaped by my personal belief that it is key for our society to adapt a plant-based diet in order to prevent further environmental damage and climate change. This means, however, that not only my interpretation is channelled by the underlying paradigm of environmentalism but also the selection of analysed data is. As Linneberg and Korsgaar explain, coding is subjected to the personal choice of the researcher on which topics are further examined and discussed and to which are given less attention (2019: 267). Although this issue cannot be resolved completely, the abductive approach ensured that several objective codes which are backed up by literature were chosen as a starting point but that surprising elements could still be added and evaluated in later cycles. I tried to be especially considerate of potential bias manifesting in my interpretations of the interviews. Thus, I also incorporated counterevidence to my main argumentation and provided different interpretations of similar discourses where indicated. I attempted to present my analysis with empathy, and I would like to add nothing is meant as a personal affront, even if certain practices or statements are critically discussed in the results section. Despite all my efforts, I must acknowledge that there is a chance for me having been biased by my personal values and opinions in my understanding and interpretation of the qualitative data.

5.2 Meal Plans

Three meal plans were designed to facilitate the visualisation of what the intake recommendations of the EAT-Lancet Commission translates to in practice. The dishes selected for the meal plans have different thematic foci. The first plan incorporates a selection of typical Swiss dishes, the second a variety of European dishes and the third one a range of international dishes from other continents. None of the plans is extensive enough to be representative of the culinary diversity of Switzerland, and even less so for Europe or the other continents. The selection is mostly reflective of my own culinary

understanding of the three selected spheres of interest. The plans were drafted for two portions of each dish, meaning that it could easily be scaled up or down to adapt it to household size.

The meal plans each include breakfast, lunch and dinner as the three main meals for each day and also a snack and a dessert for most days if the energy balance allowed for the addition. Eating three meals a day is in line with the eating habits of the majority of Swiss people: in the menuCH survey, 96% stated to eat dinner, 92% lunch and 89% breakfast. The decision for adding snacks to the meal plans resulted from the findings of the same survey, which revealed that 80% of the participants eat at least one solid snack a day and that 22% of total energy intake is consumed through snacks. The menuCH survey showed, that 88% of the participants consume a light meal between breakfast and lunch, and that 75% consume one between lunch and dinner or after dinner (Zuberbuehler and Camenzind-Frey 2021: 8-9). Furthermore, the BLV deems two snacks a day as being part of a healthy and well-balanced diet (2021). Given the recommendation of the federal authorities to consume up to two light meals a day and the popularity snacking enjoys among the Swiss population, I decided to include one in the meal plans, provided that through the additional energy intake the total energy budget of 2500kcal/day would not be exceeded. The average Swiss consumption of 102g of sugar per day (Agristat 2021: 20-1) suggests that sweets are also a staple in the typical Swiss diet, so I decided to incorporate desserts as well in the meal plans. Both the snack and the dessert can be eaten whenever preferred to match individual preferences.

The plans were designed by first compiling seven dishes for each breakfast, lunch, snack, dinner and dessert which fit with the overarching theme of the meal plan by keeping an approximate count in mind for ingredients of which only a low amount was recommended in the EAT-Lancet report (i.e. red meat, poultry, fish, eggs and dairy products). Next, I listed all the quantities of all the necessary ingredients for each dish. This was accomplished through personal knowledge and experience in cooking those dishes or based on online recipes. In many cases, I replaced animal products which would feature in original recipes with plant-based alternatives. Oat milk was for instance used to replace regular milk and meat was substituted by tofu or meat analogues (see *table 10* in chapter 9.1.1 in the appendix for an exhaustive list of the replacements I made). The alternatives were chosen based on their nutritional value (with special regard towards low saturated fat content), plant base (i.e. soy, wheat, peas), taste, which mostly depended on the plant base, and price.

For every day of the week, I filled in the totals of all the food groups from the EAT-report used for the dishes of that day in an excel sheet. I also added a table for the total count of each food group for the whole week, in order to check whether a type of macronutrient was under- or overrepresented in the meal plan. In addition, the caloric value of each ingredient was calculated using the "Swiss food composition database" (SFCD). While some specific products were included individually in the database, like "Parmesan", for others, like "Brie", information was only available for broader categories, such as "soft cheese". This means that the energy density which I calculated for the dishes might slightly differ from the actual value. If a product was not included at all in the database, the nutritional information of the specific product chosen from either Migros or Coop was used to determine the nutritional value. The meal plans as well as the macronutrient totals for each week can be found in the appendix in chapter 9.1.

While raw and unprocessed products could easily be allocated to their according food group, processed foods were more challenging to assign. Details on sugar, palm oil and saturated fat content were taken either from the nutritional information provided on the SFCD or on the selected product itself. Other content percentages of certain ingredients were more difficult to determine. Chocolate, for instance, is relevant for both the food categories "sugar" and "nuts" (because of cocoa). While the sugar content is always indicated in the nutritional information of a product, it was not always clear how much cocoa (including cocoa butter) the chocolate contained. In this case, I decided to deduce the sugar content from

the total weight and consider the result equal to the amount of cocoa used for the chocolate, as it is its main ingredient. I had to resort to such simplifications a couple of times as no other option was available. In order to calculate the dry weight of canned legumes, green beans and sweet corn, for instance, the difference in water content stated on the SFCD was subtracted from the weight of the canned legumes, green beans and sweet corn. This was necessary because the EAT-Lancet report provides intake recommendations for legumes and the other products in dry weight. Similarly, in order to estimate the normal weight of dried fruits and vegetables, the weight difference in water content was added to the weight of the dried products. For products with only one predominant main ingredient, such as bread and pasta, the weight of the product was fully attributed to its corresponding food group, in this case, whole grains. Dairy products were counted in terms of caloric value and not in weight. This method was proposed within the EAT-Lancet report (Willett et al., 2019: 451) as they provided, on the one hand, a possible range of intake in grams and, on the other hand, an estimated caloric equivalent for daily intake for each food category. I opted for this method because the intake range in grams for dairy specified that it related to "milk equivalents" and could not be generalised for other products. Since it was unclear how milk equivalents could be calculated for other dairy, I decided to take the caloric density as a reference. The report neither specifies how the caloric intake range was calculated nor does it provide a possible intake range as it does with the weight. Thus, the same percentual range for possible intake as stated for the weight was applied to the caloric recommendation. The report recommends the intake of 250g of dairy with a possible range between 0 and 500g, which, therefore, corresponds to 153kcal with a possible range of 0 to 306kcal/d. Of all the applied methods, this is probably the least precise one as different dairy products vary strongly in caloric value and milk input for production. *Table 11* in chapter 9.1.2 in the appendix summarises all the products which could not be directly attributed to a food group and the methods used in order to estimate the nutritional values and their food category equivalents.

In order to design the meal plans and to account for their macronutrient equivalents, certain simplifications had to be accepted. The most relevant in terms of plan design was the omission of beverages. It is hard to account for different drinking habits, since every beverage apart from water is optional. The second difficulty arose from identifying the macronutrient value of processed products. For most processed foods, there was not an exact percentage of each food group stated which had to be tracked on the package, rendering it very difficult to account for them. Furthermore, some ingredients were not captured by the food groups table. This was the case, for instance, for spices, coffee and wine, which were also used in the recipes. Coffee and wine require considerable resources to be produced. The production of 1kg of coffee, for example, emits approximately 28.53kg CO_2-e, which is more than the production of cheese (23.88 kg CO_2-e), pig meat (12.31 kgCO_2-e) or poultry (9.87kg CO_2-e) emits (Poore and Nemecek 2018). However, coffee has no nutritional value and is, therefore, not captured by the macronutrient totals despite its consumption having an impact on the environment. Likewise, for a bottle of wine (750ml), about 1.18kg of grapes are needed for production (Gerling 2011). Here too, however, exists a wide discrepancy between the resources used to produce wine and its nutritional value. From a health perspective, attributing the equivalent quantity of grapes used to produce the wine as fruit consumption would be odd, as there is not the same health benefit accruing from drinking wine as would result from eating the grapes because vitamins and other nutrients are lost during the fermentation process and alcohol is unhealthy. Unfortunately, the EAT-Lancet Commission does not specify how to adequately account for such products. A further element which was not considered in my menu plans was the differentiation between "dark green", "red and orange" and "other" vegetables, proposed in the EAT-Lancet report (Willett et al. 2019: 451). Although the food group table in the EAT-Lancet report makes this differentiation, there was no specification of which vegetables belong to which category, so it was not possible to put this recommendation into practice. Similarly, the report did not state whether the differentiation between fruits and vegetables is based on botanical grounds or on a common culinary understanding on how to categorise them. Eggplants, cucumbers and tomatoes, for example, classify as

fruits from a botanical perspective but they are displayed in the vegetable section in supermarkets. Since most of the interviewees for this study did not have a background in biology, it seemed more suitable to apply the common culinary categorisation, even if it is botanically incorrect. There is evidence that this approach reflects that taken by the EAT-Lancet Commission, as they classify legumes as a separate category and consider corn to be a cereal, even though both legumes and corn botanically count as fruits ("Legume" 2022). This reflection on the difficulties of putting the EAT-Lancet Commission's intake recommendations into practice demonstrates that a precise adherence would not be feasible in everyday consumption unless a tracking tool for food, like an app, would be developed to facilitate the process.

6 Results and Discussion

This section presents the study results and also provides a discussion of the data which is backed up by previous research on similar topics.

6.1 Cultural Capacity

Two reoccurring discursive patterns could be identified which emphasised the cultural dimension of nutrition. The first discourse foregrounded the impact of one's cultural upbringing and the norms, habits and preferences which are passed on from the parents and the surrounding social milieu to the next generation. The second discourse centred around the cultural importance of meat as the main element of a dish and being key when serving food to guests. The cultural importance of meat is also transmitted as part of one's cultural upbringing, but as it was a frequently reoccurring topic which seemed to be of major importance to the participants, I decided to analyse this motif in a separate subchapter. The last factor discussed in this chapter is the influence of gender on eating habits and especially on meat consumption. It is important to mention that from here on, "meat" will refer to red meat, poultry and fish unless further specified. I chose to do so as participants often used meat as a generalising term too, although there were clear differences in the amounts consumed of the three different types of meat.

6.1.1 Cultural Upbringing: "You cook what you already know because it's easiest, and you know you will like it"

Social norms are a key factor in behavioural science and have been proven to play an important role in dietary choices too (Stoll-Kleemann and Schmidt 2017). Biccheri et al. describe norms as follows: "The common values of a society are embodied in norms that, when conformed to, guarantee the orderly functioning and reproduction of the social system" (2018). Norms shape individual needs and preferences, meaning that although people choose according to their preferences, they still conform to social expectations because their preferences are informed by these reoccurring social patterns. Norms have a crucial influence on behaviour because they inform one's motives for action. Importantly, these social codes of conduct are internalised through socialisation. This process starts in infancy and is mainly driven by parents and a few additional significant others (Biccheri, Muldoon and Sontuoso 2018). Hence, dietary patterns and traditions are often acquired as part of one's upbringing and remain relatively stable and unquestioned throughout life. Indeed, many participants highlighted the impact their upbringing had on their later eating habits. As one's upbringing is always embedded in the context of a specific society and culture, I decided to attribute the factor to cultural capacity. The possible traditions and consumption patterns that are transmitted from the family and the social environment vary widely and can be either favourable or unfavourable in promoting a shift towards a more sustainable

diet. Of course, one's cultural upbringing is not a guaranteed predictor of later consumption patterns, but 13 out of 15 participants stated that their eating habits and traditions coincided at least partially with those of their parents.

One recurring discourse centred around the importance of cooking freshly, something the participants stated had already been of a high value to their parents. The respondents explained how they learned to appreciate this tradition during their upbringing:

> *"Ich kenne das von zu Hause so, dass bei uns eigentlich jeden Tag zu Hause frisch gekocht wurde und ich deshalb selber früh ans Kochen herangeführt wurde"*[1] (P2: 174-5).

> *"Meine Eltern sind sicher ganz grosse Vorbilder, weil sie haben immer, und kochen immer noch, alles selber frisch"*[2] (P4: 92-3).

P2 and P4 both acknowledge the role model function of their parents in terms of cooking freshly. P2 also explains how he was gradually introduced to cooking as a part of his upbringing and was, therefore, actively involved in this family tradition which he continues to partake in to date. The second quote highlights the role model function parents have and also the importance P4 attributes to this habit of cooking freshly. Other participants argued that cooking freshly is an inherent part of eating well, which sometimes was also described as a family tradition: *"Ich [bin] so aufgewachsen mit gut Essen. […] Es ist eine Familientradition, gut zu essen"* (P7: 93-6). This quote foregrounds how parts of one's upbringing can also be perceived as traditions which are worthwhile to be continued. All the instances in which the participants reported the celebration of eating together as a family were linked to cooking food freshly. One participant described how his fascination with food encompasses elements such as eating well, cooking and being introduced to new culinary cultures:

> *"Ich bin ich mega verwöhnt worden und bin schon früh mit so viele Geschmäcker in Berührung gekommen. Auch dass ich auch mega früh die internationale und thailändische Küche und so gekannt habe […]. [Meine Mutter] hat sich jetzt nicht irgendwie ausschliesslich ökologisch ernährt, aber ihr war es grundsätzlich schon auch wichtig […]. Ich glaube, dieses Flair ist auch mega von dort weitergegeben worden. Auch das selber Kochen, sie hat eigentlich immer selber gekocht, und die Faszination, das ist sicherlich auch zu uns Kids übergesprungen"*[3] (P10: 228-33).

This passage shows how ecological considerations can be woven into family traditions and affect the development of personal values related to one's eating culture. P10 explains how he not only learned to value the pleasure of eating well, but how he was also taught that sustainability is an important aspect of nutrition. Interestingly, he chose a positive term, "Flair", to describe the ecological dimension of food. This suggests that this additional consideration is not perceived as a cumbersome affair but rather adds a compelling layer to eating, in his case. During the interview it became clear that both the enjoyment of food and sustainability considerations continue to play a key role in the life of P10. Another example of the level of influence one's upbringing can have on later eating habits provides the following passage by a different respondent:

[1] "I know it from home that food was freshly cooked almost every day which is why I was introduced to cooking early on."

[2] "My parents are certainly huge role models because they have always cooked everything fresh and still do."

[3] "I got spoiled by being brought in touch with so many different tastes from early on. Also that I got to know the international and Thai cuisine […]. [My mother] did not eat exclusively ecologically grown products, but she did care about that in general […] I believe part of this flair passed was passed on by her. Also the habit of cooking yourself, she basically always cooked herself, this fascination was certainly also transmitted to us kids."

> *"Von [meiner Mutter] habe ich immer viel mitgekriegt. Es orientiert sich eigentlich immer viel an ihr, auch wenn sie was Neues kennenlernt oder was Neues kocht oder so, dann gucke ich mir das an und dann probiere ich das auch nachzumachen oder zu übernehmen […]. Von ihr habe ich auch so ein bisschen diese Richtung übernommen mit der vegetarischen Ernährung"*[4] (P5: 119-24).

This participant acknowledges that his mother continues to function as a role model and source of inspiration even now after he moved out from home. The fact that P5 even assumed the mostly vegetarian eating style from his mother indicates the potential to pass on a level of environmental consciousness in terms of nutrition through an according upbringing. Both P10 and P5 mention a liking for Asian food with which they were acquainted early on. Of course, there were other participants who did not grow up with such a culinary multitude but still developed an interest and liking for other cuisines later on in life, as was the case for P4: *"Sonst ist es sehr italienisch geprägt von zuhause, aber ich habe alles gerne"* (P4: 150-1)[5]. Similarly, P3 grew up knowing only traditional North-Italian cuisine but states that she finds the Asian cuisine more exciting because of the variety of spices that are used (P3: 444-6). The respondents referring to the Asian cuisine all had in common that they describe a special liking for this type of food because it provides many vegetarian options. The experiences of P3 and P4 suggest that personal preference and interest are not solely determined by one's cultural upbringing and that experiences and cultural encounters later on in life can also influence eating habits. Nonetheless, an early introduction to certain cooking and different eating styles may have positive lasting impressions and provide the opportunity to introduce sustainability considerations as an integral part of one's culinary upbringing.

Not just certain traditions and norms are passed on over generations but also habits can be acquired through one's upbringing. Habits refer to repetitive, routinised actions which play a major role in purchasing, preparation and consumption of food. As habits unconsciously shape day-to-day practices and tend to be reliable, rewarding and reinforcing, they can constitute a major barrier in reducing meat consumption and assuming a plant-based diet (Lea, Crawford, and Worsley 2006: 831). Lea et al. found that especially older people expressed reluctance to change their eating habits (2006: 831). Routinised behaviour develops over time, and it is also possible that it was learned during childhood as part of one's upbringing. One participant explains why he thinks his cultural background matters in his everyday life as follows: *"[Der kulturelle Hintergrund] spielt eine Rolle, weil du einfach daran gewöhnt bist […]. Es ist einfach einfacher zum Kochen, weil du es schon kennst, weisst wie es geht, oder weisst, wie du es gerne hast"* (P1: 134-6)[6]. For him, relying on knowledge from his cultural background is convenient because it is easier and thus quicker to prepare and because he knows that he will be satisfied with those well-known meals. P4, who has an Italian cultural background, shares this experience and explains: *"Die Gerichte, die mir so, wenn ich keine Zeit habe, schnell aus der Hand gehen, das sind eher die italienischen"* (P4: 122-5)[7]. Both examples imply that the well-known dishes one grew up with are the most routinised ones which cost the least effort to prepare. In fact, habits are closely linked to convenience. They facilitate daily life because such behavioural sequences are automatised and easy to adhere to as they do not necessitate much brain power. One participant explains how he continued to cook and eat the way he learned it at home and how he carried on with his mother's eating style more

[4] I have always learned a lot from her [my mother]. Much is geared to her, also whenever she gets to know something new or cooks a novel thing, I usually copy that from her and also try to imitate it […] I also assumed her tendency to eat vegetarian."

[5] "Else, it is strongly influenced from home by my Italian background, but I like everything."

[6] [One's cultural background] plays a role because you're already used to it. […] It is simply easier to cook because you already know it, you know how to cook it, and you know how you like it."

[7] "The dishes that I can do without much thinking when I am short on time are rather the Italian ones."

or less unchanged and without ever questioning it: *"Die Sachen, die wir jetzt essen, hat meine Mutter auch immer wieder gemacht und das Einzige, was sich verändert hat, seit ich alleine wohne, ist vielleicht, dass es ein bisschen mehr spanische Sachen gibt. Aber sonst ist eigentlich alles plus minus gleich geblieben"*[8] (P1: 626-8). The only thing which changed is that he now shares parts of his spouse's Spanish eating culture, which resulted in a mixture of cooking styles. In the case of P1, this means that he eats meat on a daily basis, which exemplifies how unfavourable habits can be transmitted through socialisation and promote unsustainable behaviour as the unquestioned norm.

An example of routinised consumption pattern typical for Switzerland is to replace dinner or lunch by a "cold meal" (café complet). Three participants reported to have such cold meals regularly while another three participants listed such meals in their food diary. Two people also mentioned that this way of eating has a long-standing tradition in their family:

> *"Ich kenne das von zuhause. […] Also bei uns war Mittag gekocht. Bei uns war das Mittagessen die Hauptmahlzeit, bei der alle am Tisch sassen und am Abend war im Normalfall Café Complet. […] Café Complet hatten wir früher als Abendessen und jetzt als Mittagessen"*[9] (P7: 300-3; 656-7).

> *"Am Abend, wenn nichts da ist im Kühlschrank, was machst du? Käse und Brot und vielleicht hat es noch ein bisschen Aufschnitt. Also früher hat man ja sowieso […] nicht warm gegessen am Abend, da hat man Birchermüesli, Salat, Eier, Aufschnitt, vielleicht Geschwellte [gegessen]"*[10] (P9: 173-6).

These cold meals resemble a typical Swiss breakfast which usually entails bread with butter and a sweet spread (eaten by 18.7% of Swiss at breakfast), cheese, cold meats, eggs (eaten by 13.7% of Swiss at breakfast) or Birchermüesli, which combines yoghurt, cereals, nuts and fruits (eaten by 17.8% of Swiss at breakfast) (BLV 2019: 4). The breakfasts consumed by the participants reflect the general eating patterns described above. This is insofar relevant, as both breakfast and café complet usually entail a substantial amount of meat and dairy products, which could also be seen in the food diaries. This cultural tradition might be a factor why cheese and meat, including less healthy options like butter and cold cuts, remain an important element of Swiss diets. *"Käse ist ein wichtiger Bestandteil unserer Ernährung. Käse und auch Wurst. Käse und Fleisch"*[11] (P7: 142-3), as one participant summarises it. The example of café complet as a Swiss tradition exemplifies how potentially unfavourable eating habits and traditions are reproduced and furthered through one's cultural upbringing.

Overall, only two people did not identify at all with the cooking style and eating habits of their parents. One participant described her differing preferences as follows:

> *"Das finde ich noch speziell. Mein Vater ist noch ganz angetan von der Nouvelle Cuisine Française […]. Das mache ich überhaupt nicht. Eben, das ist mir alles zu viel. Und meine*

[8] "The things that we eat now already used to cook my mother. The only thing that has changed ever since I moved out is that I eat more Spanish dishes. But else, everything remained more or less the same."

[9] "I know that from home […]. Lunch used to be cooked at home. Lunch was the main meal of the day which all family members attended whereas dinner was usually served cold (café complet). […] We used to have café complet for dinner which is now our lunch."

[10] "In the evening when there is nothing in the fridge, what do you eat? Cheese and bread and maybe some cold cuts. Earlier, it was normal not to eat a warm dinner, people ate muesli, salad, eggs, cold cuts and maybe boiled potatoes."

[11] "Cheese is an important part of our diet. Cheese and charcuterie. Cheese and meat."

> *Mutter ist aus Norditalien und das was sie uns da gekocht hat, haben wir gehasst"*[12] (P8: 148-51).

Her experience seemed to be rather exceptional among the respondents. Nonetheless, she acknowledges that she did inherit a preference for freshly prepared food from her parents, suggesting that at least certain family traditions were passed on (P8: 158-60). A second participant stated that he dislikes Bosnian dishes because they are too greasy and he, therefore, never identified with the Bosnian food culture (P15: 509-11). However, his cultural upbringing did leave its marks on his later consumption behaviour. His parents let him choose whatever he wanted to eat, which resulted in him eating mostly unhealthy foods throughout his childhood. He also mentioned that due to prevalent gender norms in his Bosnian family, he was never expected to help in the household (P15: 179-202). This had two consequences: firstly, for a long time he had little to no knowledge about healthy diets and ate mostly convenience and fast food, and second, he never learned how to cook until he met his current partner who also taught him about healthy and sustainable diets (P15: 354-358). P8 and P15 exemplify how the effects of one's cultural upbringing not always manifest equally and sometimes do so in subtler ways than inheriting similar preferences to those of one's parents. The enjoyment of cooking and eating freshly prepared foods as well as other values surrounding food such as the cultural importance of meat, environmental and health considerations or the lack thereof can also be transmitted from one generation to the other.

6.1.2 Cultural Importance of Meat: "I wouldn't be a good host without serving meat"

An important example of a cultural norm which competes with sustainability aims is the cultural significance of meat in diets. Meat has historically been one of the more expensive types of food and became a central element in the cultural identity of the aristocracy and the emerging urban middle class in medieval Europe (Chiles and Fitzgerald 2018: 8). The average per capita consumption of meat was considerably lower than nowadays with an estimated 16kg per year until the 20th century. Cereals, as well as vegetables, constituted the main component of diets in pre-industrialised Europe. Wheat was very common and consumed in the form of either bread or purée. Soups were another frequent dish in which vegetables, grains and the occasional serving of meat could be used efficiently. Towards the end of the 18th century, potatoes also became established as a main food component north of the alps (Hirschfelder and Trummer 2013). Given the limited availability of meat for centuries, it has remained a status symbol and representative of spending capacity to date (at least for certain cuts). Only the industrialisation of livestock farming made most cuts available to the broad mass. The decrease in price led to a shift in perception of meat from being a luxury good reserved only for a few important occasions to the idea that a meal is not complete without a serving of meat; a perspective which continues to be prevalent nowadays (Paulitz and Winter 2019: 236). The focus on meat as the centrepiece of a meal can psychologically be explained as the desire of the working class to imitate the upper class and to partake in the prestige of consuming a luxury good as well as to experience the satisfaction of consuming a special dish reserved for holidays on a daily basis (Trummer 2015: 68-9). The economic crisis during and after the Second World War re-established meat as a luxury good, a notion that can still be prevalent among the elderly born in that era. By the 1960s, however, meat consumption soared to an all-time high due to decreasing prices as a consequence of modernisation technologies in livestock farming. In the coming decades, traditional meat products were gradually replaced by meat-based convenience products like chicken nuggets, which reflected a general trend toward an increasingly convenience-oriented lifestyle (Chiles and Fitzgerald 2018: 13). The historical and economic perspective help to understand

[12] "I find that interesting. My father was fascinated by the French Nouvelle Cuisine. […] I never do that. As I said, that is too much effort. My mother is from the northern part of Italy, and the things she cooked, we all hated them."

the dual position of meat as a prestigious food and as a core element of cheap convenience products in contemporary society, which also figured in the interviews. As such, meat appeals to people from all classes, including people with limited financial means who benefit from the low, subsidised meat prices (Stoll-Kleemann and Schmidt 2017: 1270).

From the food diaries it became apparent that meat is a central element of most of the participants' eating habits (see *table 4*). Eight out of 15 participants ate at least one meal a day which incorporated red meat, poultry or fish. Of course, the amounts of meat used in the dishes varied, but the diaries suggested that meat is an established ingredient used on a regular basis by part of the participants. The food diaries of the people who reported a daily or almost daily consumption of meat showed that it was mostly red meat which was consumed in considerably larger amounts than suggested by the EAT-Lancet Commission. Ten participants ate more than the upper limit of 200g per week indicated by the EAT-Lancet Commission (marked in red in *table 4*). Nonetheless, the total intake differed widely even among those who ate more than the suggested intake range with weekly totals estimated as high as 1800g of red meat. Poultry was the second most consumed meat type after red meat. Seven participants ate more than the recommended mean portion of 200g of poultry but only two people ate more than the upper limit of 400g. Those two people also consumed the largest amounts of red meat. Overall, six people reported no fish consumption and another two ate only 50g or less during the study week. Four out of the six people who reported no fish consumption belonged to the group with overall high meat consumption. There was only one person who ate more than the recommended quantity of 200g of fish, albeit it only being 250g, which is still within the possible range indicated by the EAT-Lancet Commission. These results reflect the average consumption habits of Swiss people and can partially be explained by the fact that Switzerland is a land-locked country and has to import 98% of its fish for consumption (Agristat 2020: 14), whereas the inland production covers 58% of national chicken, 87% of beef and 92% of pork consumption (Agristat 2021). The historically limited availability of fish in Switzerland therefore explains why eating fish is not as culturally rooted as the consumption of other meat. The central role of meat which the food diaries had suggested was later substantiated during the interviews.

Participant	Red Meat	Poultry	Fish	Dairy	Eggs
P1	1800g	550g	0g	12 kcalP	6
P2	750g	400g	0g	12 kcalP	1
P3	50g	90g	0g	8 kcalP	2
P4	220g	0g	130g	7 kcalP	4.5
P5	0g	0g	0g	0 kcalP	3
P6	720g	250g	0g	7 kcalP	0.5
P7	1000g	700g	0g	7 kcalP	0.5
P8	0g	0g	0g	10 kcalP	1
P9	800g	100g	250g	16 kcalP	0
P10	230g	0g	0g	7 kcalP	2
P11	380g	400g	175g	15 kcalP	3
P12	200g	150g	200g	14 kcalP	3.5
P13	250g	250g	200g	6 kcalP	3.5
P14	400g	300g	30g	12 kcalP	2.5
P15	75g	0g	50g	7 kcalP	4

Table 4: *Approximated consumption of animal products of the study participants (the table elements in red denote a consumption above the recommended range of intake. Dairy is stated in caloric portions (kcalP), 1 kcalP corresponds to 152kcal).*

While most participants agreed that they would not mind a vegetarian dish, even if they do not actively try to integrate meatless dishes into their diets, one person clearly stated that in his opinion, vegetarian dishes are incomplete and only moderately enjoyable: *"Man kann es essen, aber es ist dann nicht komplett"*[13] (P11: 151). P11 argued that a typical dish of his always looks as follows: *"Es ist ein immer Fisch in Begleitung von Gemüse oder eines Reises beispielsweise und dasselbe für ein Stück Fleisch oder ein Stück Lamm oder was auch immer"*[14] (P11: 127-9). He describes meat as the central element of any dish which is accompanied by a vegetable and starchy side. Although most participants did not adhere to such a rigid structuring of their meals, they still mentioned an awareness for this meal composition. One participant referred to it as the *"deutsche Dreifaltigkeit"*[15] (P2: 235), while P4 called it *"der Teller durch drei"*[16] (75). This common conceptualisation enforces the idea that meat is a necessity of every dish and that the other components are just a side, but not sufficient to constitute a meal in itself. A qualitative study conducted by Weinrich found that the same conceptualisation also limited the acceptability of meatless dishes among French and Germans (2018: 8). P15 stated that he and his partner are regularly confronted with judgemental commentaries when they mention that they eat predominately vegetarian food, which is perceived as a side dish but not as a proper meal: *"Wenn wir irgendwo hingegangen sind und dann sagst du, du isst kein Fleisch, ja was esst ihr dann? So, ja eben, es gibt auch noch andere Sachen. Ja, aber du kannst dich doch nicht von Beilagen ernähren?"*[17] (P15: 32-4). This prejudice of vegetarian food consisting of sides only and being very limited in variety reflects the notion described above that there always need to be three components in a dish or else there is something lacking. This notion is clearly outdated, however, as the emergence of many plant-based restaurants proves. Restaurant Guru lists 427 results when searching for vegetarian restaurants in Zurich alone[18] (Restaruant Guru 2022). The belief that a meal cannot be complete without a piece of meat poses a barrier to adapting a more plant-based diet which was also found in a qualitative study by Macdiarmid et al. (2016: 491). Given the evolution of the plant-based food scene in recent times, this notion can rather be classified as a prejudice which could be proven incorrect if the people holding this belief are enough open-minded to try new dishes.

While most participants emphasised that it is not a problem for them to eat a vegetarian meal in their everyday life, they still reported a strong association of meat with special occasions, traditions and hospitality. One participant narrated how she experienced a fine dining event in which only vegetarian dishes were served: *"Ich merke für mich, es war gut, es war spannend, es war cool, […aber] ich habe gemerkt, mir fehlt an so einem Abend etwas"*[19] (P13: 210-24). Although she reported enjoying vegetarian dishes too, she expected meat to be served at such a high-class event and was, therefore, slightly disappointed by the vegetarian menu. Meat has historically been regarded as a status symbol and representative of spending capacity, which might explain why P13 felt irritated by the lack of meat at such a prestigious event. The special status of meat was reflected in the agreement of some respondents that meat is an essential element for special occasions such as Christmas. They stated that

[13] "You can eat it, but it is incomplete."

[14] "It is always fish accompanied by some vegetables or rice, for example, and the same applies for a serving of meat or lamb or whatever."

[15] "The German trinity."

[16] "The plate divided by three."

[17] "Whenever we went somewhere and we mentioned that we don't eat meat, they would ask: but what do you eat? Well, there are also other things than meat. But you can't possibly just live off sides?"

[18] Not all of the listed restaurants are strictly vegetarian, but they offer at least a wider variety of vegetarian options.

[19] "I thought to myself it was good, it was interesting, it was cool, […but] I realised that something was missing for me at such an event."

it is expected to either serve or be served meat on such events: *"Wenn ich jetzt auch zum Weihnachtsessen eingeladen wäre und irgendwie nur so Gemüse, Pasta oder so gäbe, dann wäre ich schon enttäuscht von meinem Gastgeber"*[20] (P2: 617-8). The expectation to be served meat on special occasions, which do not occur as often, is in itself not problematic, as a reasonable consumption of meat is acceptable from an environmental perspective. However, this cultural norm pressures people to serve meat to their guests, even if they themselves would prefer otherwise. One participant, who had previously stated not to like meat particularly, expresses her awareness of this cultural pressure as follows:

> *I: Sagen wir, […] du kochst für Weihnachten. Hast du das Gefühl, da müsste auch irgendein fleischhaltiges Gericht auf den Tisch kommen?*
>
> *P: Würde ich schon. Nicht nur, aber würde ich schon.*
>
> *I: Ja. Einfach weil es dazu gehört?*
>
> *P: Nein, eher für die Gäste, die dann enttäuscht wären*[21] (P3: 150-5).

P3 fears that her guests would be disappointed if she did not serve meat on important occasions. The issue is that some people feel obliged to conform to this social norm and always serve meat to their guests, even for a normal lunch or dinner. One participant summarises this informal rule as follows: *"Wenn wir Gäste haben, gibt es immer Fleisch. Das ist bei uns ein bisschen unfreundlich, wenn Gäste vorbeikommen und es dann kein Fleisch gibt"*[22] (P6: 184-6[23]). In her social environment, not serving meat would even be perceived as being impolite. The fear of being judged by others shows how deeply rooted the cultural expectation to serve meat is. In fact, a different respondent reported that, paradoxically, she would even feel guilty not serving meat if her guests were vegetarians: *"Da wäre ich keine gute Gastgeberin […]. Sogar wenn ich eine Vegetarierin einladen würde, hätte ich das Gefühl, das Gericht ist nicht vollkommen. Es fehlt etwas"*[24] (P4: 159-62). This circumstance highlights her difficulty to shift her mindset and accept that a plant-based or vegetarian meal would not express a lack of hospitality. Nonetheless, all but one participant added that they would not have a problem being served a vegetarian dish when being invited for a normal lunch or dinner. This indicates toward a mismatch in expectations from the hosts' and the guests' perspectives: while people feel obliged to serve meat, they would mostly not mind being served a vegetarian dish unless it is a special event. This circumstance could, potentially, hint at a gradual loosening of the cultural norm to always serve meat to guests, although this shift has clearly not fully unfolded yet.

The previous anecdotes reflect the high status that continues to be ascribed to meat. The prevalence of meat as a status symbol is even stronger in cultures or countries which are still going through an economic transition and where the consumption of meat is considered aspirational and a symbol of

[20] "If I were invited for Christmas and only vegetables or pasta or something the like were served, I would definitely be disappointed by my host."

[21] I: "Let's say you are cooking for Christmas. Would you also serve a meat dish?" P: "I would. Not only, but I would." I: "Yes. Because it's just part of it?" P: "No, rather for the guests who would be disappointed otherwise."

[22] "When we invite guests, we always serve meat. In our culture, it is considered impolite not to serve meat when you invite guests."

[23] It must be noted that the social background of P6 is strongly influenced by Albanian culture, so there might be differences in the acceptability of vegetarian dishes depending on one's extended cultural and social environment.

[24] "I wouldn't be a good host. Even if I invited a vegetarian, I would have the impression that the dish isn't complete, that there is something missing."

wealth (Macdiarmid, Douglas, and Campbell 2016: 488). One participant related how his Bosnian family, who now lives in Switzerland, still has this mindset:

> *"Und wenn du [Fleisch] nicht isst, […] dann denken sie, es stimmt etwas nicht mit dir. Kannst du es dir nicht leisten? Aber das ist ja nicht der Fall, du kannst es dir eigentlich leisten. Es wird mit Wohlstand verbunden. Und was bei uns in der Kultur auch recht stark verankert ist, dass […] wenn man genug viel auf den Rippen hat, dann ist man für die Leute gesund. […] Mollig ist für sie der Standard, [der zeigt,] diese Person ist gesund, sie ist nicht am Hungern"*[25] *(P15: 235-40).*

Not only meat consumption but also moderate over-weight is associated with wealth by his Bosnian relatives. The perception of moderate overweight as a sign of affluence and wealth is typical for low and middle-income countries and pointedly illustrates the nexus between wealth and food (Templin et al. 2019: 3). Another participant provides an example about his parents which shows that even in Switzerland, meat was not as commonly eaten until rather recently:

> *"Sie können es sich jetzt leisten und darum wollen sie sich das auch möglichst viel leisten, während sie früher nur einmal im Monat Fleisch bekommen haben […] jetzt können sie es sich leisten für sich selber, aber auch gerade für ihre Kinder […], weil sie, glaube ich, recht darunter gelitten haben, wollen sie diese Fülle weitergeben"*[26] (P10: 276-81).

P10 explains how his parents' diet was rather scarce and how meat was a luxury they could only enjoy very rarely. It seems that his parents suffered from this circumstance which motivated them to strive toward a more prosperous lifestyle in which meat could be eaten more often. In this instance, serving meat to the family can be read as an act of caring and an effort to provide a better, wealthier life to their children than what the parents experienced themselves. However, as meat is increasingly becoming more affordable and turning into a staple ingredient, this could also weaken the association between meat and social mobility in younger generations. Whitton et al. provide interesting insights on the relationship between financial wealth and meat consumption. They found that up to a per capita gross domestic product (GDP) of 40,000 USD, an increase in GDP is positively related to an increase in meat consumption, whereas an increase in GDP above that margin either results in stagnation or decrease in meat consumption (2021: 3466). In Switzerland, yearly meat consumption per capita peaked at the end of the 1980s at over 61kg (Proviande 2020), shortly before the country first reached a per capita GDP of 40,000 USD in 1992 (Data Commons 2020). Per capita meat consumption has since decreased by approximately 10kg and has remained relatively stable at about 50kg since the turn of the millennium (Proviande 2020). Whitton et al.'s study suggests that there is a chance that the younger generations, who have not witnessed the economic transition in the 1990s and do not perceive meat as an aspirational symbol of wealth anymore, will also ascribe less cultural importance to meat (2021).

Although the high value which is culturally attributed to meat fosters problematic mindsets about its role in diets, there is one cultural norm regarding meat consumption which is favourable from an environmental point of view. The nose-to-tail approach entails the idea to use all bits and pieces of an animal for human consumption instead of focusing on the best cuts only. This concept aims at increasing

[25] "And if you don't eat meat, they think there is something wrong with you. Can you not afford it? But that is not the case because you could afford it. It is associated with wealth. And the other notion that is firmly anchored in our culture is that people who are chubby are perceived as being healthy. Chubbiness is the standard, it means that this person is not starving."

[26] "They can now afford it and they want, therefore, to consume it as often as possible, whereas they only received meat once a month when they were young […]. They can now afford it for themselves but also for their children. Because I believe that they suffered from their situation, they now want to provide a plentiful life for their children."

direct use of meat for human consumption and diminishing less effective utilisation options such as the conversion of meat into livestock feed or worse, incineration (Nitzko and Spiller 2019: 4). This mindset was a matter of course when meat was still considered a luxury good. In the last decades, however, meat has become more affordable in industrialised countries and the demand increasingly centres on expensive meat cuts such as filet or entrecote, whereas cheaper parts which need longer cooking time and entrails have decreased in popularity. One participant explains that offal used to be more popular in earlier times because it was more affordable: *"Es war auch eine Preisfrage […]. Es war wesentlich billiger, wenn du so Sachen kaufen konntest"*[27] (P11: 571-5). As meat is now financially available to the majority of Swiss people, the need to save money on cheaper meat cuts has declined. Unfortunately, no statistics could be found on Swiss innards consumption, but corresponding data was available for Germany and Austria, which proves the shift. In Germany, for instance, per capita meat consumption has fallen by 7% from 1991 to 2019. The consumption of offal, however, has dropped from 1.4kg per capita to 160g during the same time period, which constitutes a decrease of almost 90% (Heinrich-Böll-Stiftung et al. 2021: 40). Moreover, a poll conducted in 2012 found that 42% of Austrians reported to buy less innards than five years previously, whereas only 9% reported an increase in consumption (Agrarmarkt Austria Marketing GmbH 2012: 1). Although no direct data was available to confirm a similar decrease in offal consumption in Switzerland, all participants who eat innards reported to perceive a decrease in nose-to-tail consumption. The respondents complained about having difficulty to find offal even at the butcher's or in farmer shops (P11: 557-61; P13: 578). They explained the limited availability with a lack of demand. One participant pointed out the paradox that he pays less for chicken hearts than for the equivalent amount of chicken meat, even though many more chickens have to be slaughtered to produce the hearts (P2: 713-7). Another participant explains how it has not always been like that: *"Die heutige Generation kauft keine Nieren und keine Leber mehr. […] Das finde ich schade, aber das ist ein Zeichen der Zeit"*[28] (P9: 572-5). He emphasises that, back in time, it was normal to eat offal whereas the younger generations feel alienated by it. Interestingly, there were representatives from all age categories who stated to eat or refused to eat offal in the study. As such, no generational difference could be identified within the sample group. One participant also mentioned his efforts to eat a soup hen every once in a while (P10: 351-2). This statement implicitly draws attention to another manifestation of lacking nose-to-tail utilisation. Former laying hens are less marketable due to their lower meat mass and were, for a long time, either converted into pet food or incinerated rather than being re-integrated into the human food chain. In 2008, for instance, only 22% of Swiss laying hens were reused for human consumption. Thanks to the Swiss egg producer organisation GalloCircle, the percentage for direct repurposing could be increased to 75% by 2012 (Malher et al. 2015: 7-8). The incorporation of laying hens or offal into one's diet is important because it allows for a more efficient utilisation of meat with the potential to decrease overall meat production. Some participants argued that they had naturally acquired a nose-to-tail mentality through their upbringing (P2: 714; P10: 692-4), as the following quotes show:

> *"Ich esse alles, ich komme von einer Bauernfamilie, da hat man Nose-to-Tail gegessen, ich sag's dir. Ausser den Knochen hat man alles gegessen"*[29] (P3: 564-5).

> *P: "Ich gehe auch gerne an eine Metzgete und so. Also ich kann dir sagen, ich esse auch Gehirn. Ich esse Knochenmark, ich esse Zunge, alles."*

[27] "It was also a price question […]. It was significantly cheaper when you could buy such things."

[28] "Today's generation doesn't buy kidneys and livers anymore […]. I find that sad, but it is a sign of our time."

[29] "I eat everything, I stem from a farmers' family. I can tell you we did eat nose-to-tail. Apart from the bones we ate everything."

I: "Hast du das von zuhause mitbekommen?"

P: "Ja, ja, eindeutig. […] Kutteln sind einfach super fein. […] Aber es gibt viele Sachen, vor denen sich die Leute einfach ekeln und wir haben zuhause alles gegessen"[30] (P4: 469-78).

The latter quote hints at the perception shift of meat. As the nose-to-tail mindset has widely lost its financial incentive, less people are used to eating offal. This influences how people regard those cuts: *"Viele finden es auch eklig, weil sie es nicht kennen und es auch nicht gewohnt sind"*[31] (P10: 719). The alienation of less prestigious cuts and especially innards is likely to influence preferences and deteriorate people's attitudes towards pieces of meat which are now considered as unconventional and further decrease overall demand. As some participants admit: *"Mich ekelt das andere. Ich habe es nicht gerne, wenn es so Fett und Sehnen und all das hat"*[32] (P14: 561). The fact that meat consumption has risen while some people now refuse to eat fat, tendons and offal or, put differently, everything that reminds them too much of the past life of meat, describes the paradox of modern meat consumption. Industrialisation seems to have changed the relationship with meat as it is almost exclusively bought pre-cut and pre-packaged. As such, meat is objectified as a product which is regarded as distinctly separate from the animal (Grauerholz 2007: 339). Indeed, consumer demand suggests that the living being behind the product shall remain invisible. In conclusion, while the high status of meat in general is a problematic aspect of the cultural upbringing in Switzerland, a valorisation of a wider range of different cuts rather than an exclusive focus on the expensive ones would be desirable from an environmental point of view.

6.1.3 Gendered Consumption: "As a boy, I was not expected to help in the kitchen"

Gender is an important predictor of eating behaviours. Studies show that women are on average more preoccupied with their nutrition and more likely to restrict energy intake and follow a specific diet than men (Bochud, Chatelan, and Blanco 2017: 51). The present study revealed a similar pattern with four out of the seven female participants stating that they were either on a diet, making some efforts to maintain or reduce their weight or being concerned about their weight and wanting to change their eating behaviour (P4, P6, P12 and P13). While there were also three male participants who expressed an awareness of and slight concern for their rising weight, they all emphasised that they were neither on a diet nor that they were planning on doing so in the future (P1, P7 and P9). Previous studies have also shown that women are more likely to follow a vegetarian diet than men. In Switzerland, for instance, about 5.2% of women claimed to be vegetarians, whereas only 4% of men reported to do so in 2017 (Bochud, Chatelan, and Blanco 2017: 51). Gendered differences in eating habits were also noticed by one participant who is the mother of two girls and two boys: *"Ich merke auch die Jungs oder die Männer in unserer Familie, die ticken sehr ähnlich und wir Frauen ticken auch sehr ähnlich"*[33] (P4: 54-6). She continues by explaining that the male members of her family prefer starchy foods and dishes which take a longer time to prepare, whereas the female members prefer one-pot-dishes and salads and do not mind a cold dinner, unlike the men (P4: 69; 73-9). While biological requirements might vary depending on the sex, it is also possible that certain eating habits are influenced by gender norms.

[30] P: "I also like going to a slaughtering event. I can tell you, I even eat brain. I eat marrow, I eat tongue, everything." I: "Did you grow up with that?" P: "Yes, definitely. […] Tripe is absolutely delicious. […] But there are many things which disgust people, but we ate everything at home."

[31] "Many people find it disgusting because they don't know it and are not used to it."

[32] "I am grossed out by that other stuff. I don't like it when there is fat and tendons and all that."

[33] "I notice that the boys or the men in our family have similar preferences and that we women also have similar preferences."

Whilst the gender rate was equal among those participants who ate moderate quantities of meat, there was a clear gender gap among the participants who ate more than the recommended 500g of meat a week with heavy meat eaters being predominately male (see *table 5*). It needs to be noted, of course, that this table does not take into account that male participants might have a higher caloric expenditure and, therefore, generally eat more than the female participants. While the results from the present study have no quantitative explanatory power, they reflect the statistics on meat consumption by gender in Switzerland. According to the BLV, men consume an average of 980g of meat per week whereas women eat 570g on average (BLV 2017). The higher meat consumption of men was found by previous studies to be linked to a discourse which emphasises the health benefits of meat and which also established it as a core element of masculinity (Bochud, Chatelan, and Blanco 2017; Pohjolainen, Vinnari, and Jokinen 2015: 1158; Ruby and Heine 2011; Stoll-Kleemann and Schmidt 2017: 1268). Its image as fuelling and key to muscle strength was first promoted through military propaganda during the Second World War. In order to maintain the meat supply for the soldiers, it had to be rationalised, especially on the cost of women. This strengthened the association of meat and masculinity, a discourse of relevance also in contemporary society. As Chiles and Fitzgerald put it, "meat has long been culturally associated with power and vitality, and this has made the conspicuous consumption of meat an effective resource for performing masculinity" (2018: 13). In recent years, the meat-masculinity connection has experienced a resurgence within the context of uncertainty which the questioning and shifting of gender roles caused. Successful performance of gender relies on the incorporation of stereotypes and the adherence to gender norms. The role of meat in the performance of masculinity can be seen, for instance, in the sheer majority of men grilling, preparing and consuming meat in commercials. Ruby and Heine also found that vegetarians are perceived as being less masculine than omnivores, especially by male participants, thus providing additional evidence for the association between meat and masculinity (2011: 450). The key position meat plays in the male diet can, therefore, be seen as an attempt to adhere to and perpetuate traditional gender roles (Chiles and Fitzgerald 2018: 13). This might make it challenging for men to change their diets and consume less meat as such a change might interfere with their gender performance. Two interview passages seemed to entail a performative element related to masculinity. One participant seemed to brag about his meat consumption before the topic of sustainability was brought into the discussion. When confronted with the meal plan, his first reaction was to state that he would rather eat a much larger portion of meat rather than the proposed 100g: P: *"Wenn schon Rindfleisch, dann eher so 400g. I: Auf einmal? P: Sicher"*[34] (P9: 288-90). Shortly after, he related an anecdote about how he and his spouse had gone to a steak house, had both ordered each a 900g steak and how he succeeded in eating this humongous portion at once, while his spouse was unable to do so: *"Hammer Fleisch, aber 900g. […] Ich habe auch 30 Unzen genommen. […] Sie hat dann irgendwie einen Drittel gegessen und ich habe mit Mühe alles gegessen. […] Ich esse unglaublich gerne Fleisch. […] Aber dann nicht 100g, dann lieber gar nicht"*[35] (P9: 297-306). The participant seemed to be proud of having been able to consume such a large quantity of steak even though he admitted that it was hard to do so. This anecdote could be read as an affirmation of his masculinity as Chiles and Fitzgerald propose (2018: 13). Another participant also made an interesting comment on how he had heard that drinking milk was inadequate for an adult man because it was considered to be baby food: *"Ich habe früher sehr viel Milch getrunken. Das habe ich ein bisschen runtergefahren, weil mir immer gesagt wurde, das ist Baby-Food. Und ich bin kein Baby mehr und zu viel Milch ist ja offenbar nicht gesund"*[36] (P7: 137-9). Although this passage is not directly related to gender differences in meat consumption, it

[34] P: "If I am eating beef then I'd rather have 400g or so." I: "All at once?" P: "Sure."

[35] "Amazing meat but 900g. […] I also took 30 ounces […]. She ate about a third and I barely managed to it the lot. […] I love eating meat. […] But not just 100g, then I'd rather eat no meat at all."

[36] "I used to drink a lot of milk. I reduced my consumption because I was told that milk is baby food, and I am not a baby anymore. And, apparently, too much milk is not healthy either."

shows that some people might consciously or subconsciously adapt their eating behaviour to express their identity or distance themselves from attributes they do not want to be associated with. Gender norms could potentially explain part of the consumption pattern which resulted from the food diaries, but further investigation would be needed to confirm this hypothesis.

Gender also plays a role in terms of cooking behaviour. In Switzerland, women stated to prepare hot meals on 60% of weekdays whereas only 49% of men stated to do so. A possible explanation for this difference is that women are more frequently in charge of raising the children at home and have, therefore, more opportunities to prepare lunch or cook dinner for their family. The division of labour is also apparent on weekends, where women and men stated to cook 86% and 77% of times respectively a hot meal (Bochud, Chatelan, and Blanco 2017: 56). Evidence for gender differences in cooking responsibility and skills could also be found in this study. Nine participants stated to live together with their spouses. Of these nine participants seven stated that the main responsible person for cooking is the female partner, although all of them mentioned that the male partner also cooked sometimes (P3, P4, P7, P8, P9, P13, P14 and P15). Only two participants reported that both partners were equally responsible for cooking (P1 and P13), and no one stated that the male partner was predominately in charge of cooking. Four male participants stated that they had doubts on whether they would be able to change their diets and cook predominately plant-based meals due to their moderate cooking skills (P7, P9, P11 and P15). Female participants did not report similar reservations. A lack of cooking skills has been found to constitute a barrier to adopt a plant-based diet by other studies (Fehér et al. 2020: 11; Reipurth et al. 2019: 291). The differing perception of the participants' cooking skills suggest that gender differences in cooking proficiency could especially limit the capacity of men to change their diets.

Participant	Total Meat Consumption	Gender
P1	2350g	m
P7	1700g	m
P2	1150g	m
P9	1150g	m
P6	970g	f
P11	955g	m
P14	730g	f
P13	700g	f
P12	550g	f
P4	350g	f
P10	230g	m
P3	140g	f
P15	125g	m
P5	0g	m
P8	0g	f

Table 5: *Estimated meat consumption ranked by weight in relation to gender.*

6.2 Organisational Capacity

Organisational capacity was outlined slightly differently in Middlemiss' qualitative study then it was found to influence the sample group in the present thesis. The author of the concept emphasises organisations in a more literal way, such as church and charity communities (Middlemiss 2010a). The

impact of traditional forms of organisations such as clubs or associations seemed to be mostly irrelevant in the present study with only one participant mentioning that he had once partaken at organising a sustainability event. The participation in this project, however, was mostly due to his previous interest in the matter and did not increase his organisational capacity. While some participants reported a certain involvement of their working or study places in the topic of healthy and sustainable diets, none attributed much significance or confrontational power to them. The two main factors that were mentioned in the study influencing organisational capacity were the social environment and the living constellation of the participants. These aspects were not discussed by Middlemiss, but I deemed them to fit best in this category as they constitute social communities, although one's social environment and cohabitants might not necessarily be perceived as organisations.

6.2.1 Social Environment: "My dad also cooks vegetarian lasagne now"

One's social environment can play an important role in promoting sustainable diets by thematising eating habits and issues linked to the food sector, providing new input, fostering the transmission of knowledge and encouraging behaviour which aligns with sustainable in-group norms. These are very influential because adhering to them enhances in-group affiliation and the probability of being liked (Stoll-Kleemann and Schmidt 2017: 1269). All but one of the participants who stated not to consider any sustainability aspects in their diet also reported to have a social environment in which health and especially sustainability aspects of diets are not discussed, as, for instance, P7 explains: *"Aber effektiv rein in unserem Umfeld [wird das Thema] mehrheitlich nicht [besprochen…]. So wie wir uns bewegen und wo wir uns bewegen, findet das eher nicht statt"*[37] (P7: 627-30). This is unfortunate because a social environment free of any worries about sustainability does not provide confrontation which might lead to behavioural change. On the contrary, it might even reinforce meat-centric norms while never thematising the adverse effects of such consumption. The second part of the quote hints at the tendency of people to look for like-minded people with similar attitudes and behaviour to become friends with, a principle which is called "homophily" (Mcpherson, Smith-lovin, and Cook 2001: 416). This tendency can partially be explained by a natural propensity of people "to search for information that supports their beliefs and ignore or distort data contradicting them", otherwise known as the confirmation bias (Peters 2020: 1351). The effect of homophily and the confirmation bias limit the potential of social contacts to provoke a change of mind because the opportunities for exchange with people who hold a radically different point of view might be limited. Similarly, P10 reported that most people from his "bubble" highly value a sustainable lifestyle and, therefore, adhere to a plant-based diet: *"Ich lebe da ein bisschen in einer Bubble, habe ich das Gefühl. Dort [ist gesunde und nachhaltige Ernährung] mega ein Thema"*[38] (P10: 767). He is aware that his social environment shares a very similar perspective on environmentalism but that this might not be representative for the view commonly held by society. His case exemplifies that homophily can also work to the advantage of strengthening people's decision to adhere to a plant-based diet. The issue remains, however, that people with very different opinions on sustainability might rather look for like-minded people which leads to a confirmation bias rather than to a fruitful exchange and broadening of the mind, especially for those who have not previously come in touch with the topic.

Nonetheless, there was also evidence for social contacts having a positive influence on respondents who had previously not cared about sustainable diets. One participant who had grown up with no sense for

[37] "Overall, the topic is not really discussed in our social environment. Such discussions do not occur in the way we interact with other people and the places we move in."

[38] "I have the impression I live a bit in a bubble in which the topic of healthy and sustainable diets is highly relevant."

healthy and sustainable nutrition was gradually brought in contact with the topic and, ultimately, decided to switch to a plant-based and overall healthier diet: *"Der Anstoss kam von ihr und dann habe ich selber ein paar Sachen gelesen [über vegetarische Ernährung]. […] Also wenn es die [Name der Partnerin] nicht gäbe, dann würde ich mich noch viel mehr von Pasta ernähren, als dass ich es sonst schon mache"*[39] (P15: 104-5; 14-5). In his case, his partner triggered a major change in his eating behaviour because she had always been highly invested in sustainable and healthy nutrition. He contrasts his experience with that of his friends, who have been part of his social environment since before he met his current partner. Unlike him, they continue to be oblivious about sustainable dieting because they did not meet someone who initiated a process of change: *"[Meine Freunde,] die wissen die Basics was gesund ist und was nicht, aber der eine wusste nicht mal was der Unterschied zwischen vegetarisch und vegan ist […]. Die haben sonst niemanden, der so ein Bewusstsein dafür hat"*[40] (P15: 580-3). Although he talked with his friends a couple of times about his new eating habits, his effect on them remained very limited because they are not close enough to trigger a change as had been the case between P15 and his partner. P4 also provided an example which demonstrates how one's social environment bears the potential to confront people with topics which they might not have been acquainted with previously and solicit pro-environmental behaviour. She explained how some of her family members are vegetarians or follow religiously motivated dietary laws and how that led to a change in the dishes served at family gatherings. Although she mentions that this change constituted a challenge initially, the family was able to gradually overcome it and even family members who, in the beginning, had shown resistance, were, ultimately, persuaded to prepare a vegetarian version of their signature dishes:

> *"So Feste feiern wir immer mit der ganzen Familie, da sind wir mindestens 20 Leute. Jetzt müssen wir halt immer ein bisschen schauen, wir haben sicher 2, 3 Vegetarier. […] Dann haben wir den [Name des Freundes der Nichte], der Moslem ist und, also es wird nicht einfacher. Es wird nicht einfacher. Aber an so grossen Festen wie Ostern […] bringen alle etwas mit und dann gibt es wirklich eine grosse Vielfalt und jeder kann nehmen was er will […]. Mein Vater, obwohl er Mühe hatte mit [der Umstellung], kocht jetzt wirklich auch vegetarisch […]. Es gibt jetzt auch Vegi-Lasagne"*[41] (P4: 178-89).

Her anecdote shows that change is a gradual process, and that people might need more time to adapt their attitudes but might eventually come to terms with the idea of plant-based diets. Having a social environment which holds favourable attitudes toward assuming a sustainable diet provides an opportunity to rethink one's own opinions and motivates people to experiment with plant-based eating.

However, trying to convince people to change their eating behaviour can also have the opposite effect and elicit defiant responses, especially if people insist on the change too strongly and express an over-proportional load of criticism. P2 and P12 shared negative experiences about people trying to change their eating behaviours or negative reactions when they brought up the topic:

[39] "The impulse came from her and then I read a couple of things about [vegetarian nutrition]. […] If it weren't for my partner, I would eat even more pasta than I already do."

[40] "[My friends] know the basics about what is healthy and what is not, but one of them didn't even know the difference between vegetarian and vegan nutrition […]. They don't have anyone who has this type of mentality."

[41] "We celebrate such parties with the whole family where we are at least 20 people. We have to be a bit more considerate now because there are two or three vegetarians […]. Then we also have [Name of the niece's boyfriend] who is Muslim, and it doesn't get easier. It doesn't get easier. At large celebrations such as Easter, everyone brings something to eat and there is a huge variety of dishes, and everyone can take whatever they prefer. My father also cooks vegetarian things now, even though he had a difficult time at first […]. He even makes vegetarian lasagne now."

> *"Ich hatte schon Diskussionen, eben mit solchen, die noch Bauern sind und dann wirst du sofort überfahren"*[42] (P12: 493-4).

> *"Es gibt schon einige Leute, die versuchen, das ständig wieder aufzubringen und sehr oberlehrerhaft dann einen versuchen zu belehren, wo ich persönlich glaube, dass das eher immer zu Trotz bei den Leuten führt und das Gegenteil bewirkt"*[43] (P2: 852-8).

Both quotes suggest that food is a highly emotionally charged topic and direct or indirect critique of someone's eating patterns can elicit adverse reactions. Since food consumption represents a way to stage a lifestyle and construct social identities (Stoll-Kleemann and Schmidt 2017: 1270), criticising someone's diet can easily be misinterpreted as a personal affront. P12 explains that not only the topic of sustainable, plant-based diets is never discussed in her social environment but also that the attempt to bring it up is encountered with vigorous resistance and hostility. Farmers whose livelihood depends on cattle and the meat sector might feel threatened by such a discussion. The prospect of a large-scale shift towards plant-based diets can be daunting for those whose income is dependent on meat consumption, which might explain their hostile attitude with which P12 was met. Hence, discussions about dietary shifts should also consider how some people would be negatively affected by a drastic reduction in meat consumption and show empathy for their situation. P2 also draws attention to the fact that too much insistence or criticism might not be helpful either and trigger reactions contrary to what was intended. This also happened to a participant who switched to a predominately plant-based diet thanks to his partner's influence. Despite his eventual shift, he criticised his partner's insistence on the topic:

> *"Mich hat dann genervt, als sie so angefangen hat zu pointen und mir so ein bisschen ein schlechtes Gewissen [zu machen]. Und dann hat es angefangen, bei mir so auszulösen, hey, ich esse was ich will […]. Es ging mehr darum ihr zu zeigen, hey, du kannst immer deine Inputs einbringen, aber wenn du nicht akzeptierst, dass ich so esse, wie ich essen möchte, dann haben wir ein grundlegendes Problem"*[44] (P15: 96-102).

P15 criticised how his partner tried to make him feel guilty for not yet adhering to a plant-based diet, which evoked adversary feelings to the proposed change in diet. Although he appreciated her input and the things he learned from her, he did not like her tactics to accelerate his transition. His experience suggests that change might take time and be gradual and that people should be given enough time to adapt to the new eating habits. P10 talked about his own experiences of inspiring people from his social environment to rethink their consumption:

> *"Wir sollten es so betreiben, dass wir in einer Bubble von Mensch zu Mensch [unsere Erfahrungen] teilen und oftmals auch, das habe ich auch gemerkt mit meinen Freunden, gar nicht unbedingt gross rumdiskutieren oder debattieren, sondern einfach einen Grossteil vorleben. Dann braucht es eine Zeit und dann werden sie neugierig oder sehen Veränderungen. Das habe ich bei mega vielen gesehen. Als ich auf vegetarische Ernährung umgestiegen bin, haben sie es auch versucht und sind dadurch in das reingekommen und haben dann ihren eigenen Weg [zum Thema] gefunden. Aber ich glaube, rein die*

[42] "I already had such discussions with people who still work with farmers, but you get instantly bashed."

[43] "There are a couple of people who try to constantly raise the topic and indoctrinate other people, although I believe that such a behaviour leads to defiant reactions and the opposite outcome than intended."

[44] "I got annoyed when she started to point out my behaviour and make me feel guilty. This started to trigger a reaction in me like hey, I eat whatever I want […]. it was about showing her hey, you can always bring in your input but if you can't accept that I eat how I like to eat, we have a fundamental problem."

> *Auseinandersetzung mit dem Thema ist mega wichtig und dort muss die Motivation von jedem einzelnen kommen"*[45] (P10: 812-9).

He thereby emphasises that he was able to prompt sustainable behaviour through functioning as a role model rather than trying to convince others to follow the same path as he did. Multiple passages in the interviews suggested that calling out people on their meat consumption might not yield the intended results and that a more emphatic approach in which people provide constructive feedback and act as role models might be more productive inspire people to change their diets.

6.2.2 Living Constellation: "If I only had to look for myself, I would cook differently"

Discourses surrounding considerations about nutrition and eating habits differed distinctly between participants living in a single household (comprising people living in a shared apartment in which the cooking is organised individually) compared to those living together with a partner and even more so compared to family households with children. The clear majority of participants who share their household with other people and are also responsible for cooking reported to adapt their eating behaviour and cooking style to accommodate for the needs of the other family members. There were different reports on whether that entailed a change for the better or a decline in environmental consideration. Despite of a variety of different opinions, there seemed to be a consensus between the parents among the participants that the addition of children to the family leads to a positive change in diet as additional health considerations are taken for the sake of the children's wellbeing:

> *"Für mich war es automatisch, […] dass er [der Sohn] eher nur Gesundes kriegt und du dann automatisch […] versuchst, ein bisschen gesünder zu kochen"*[46] (P3: 746-50).

> *"Du merkst dort auch einen Unterscheid zwischen den Leuten, die Familie haben und denen, die keine haben. Also die, die Familie haben, schauen [auf gesunde Ernährung], die ohne Familie schauen ein bisschen weniger darauf"*[47] (P1: 596-99).

One participant who reported to have moderate cooking skills and low interest in cooking stated that his daughter is a motivation for him to expand his cooking repertoire for the future as he wants to be able to provide a variety of healthy meals to her which go beyond basic pasta dishes: *"Motivation hätte ich, mich mit der Zeit mehr [mit dem Thema Kochen auseinanderzusetzen], weil ich der [Name der Tochter] nicht nur basic Sachen machen können will, also halt nur Pasta und so, weil das einfach zu wenig ist"*[48] (P15: 148-9). Hence, children can function as a reason for parents to reassess their diet as they consider what type of nutrition they want to provide to their offspring. This could offer an opportunity to engage with sustainability aspects of nutrition too. Soon to be parents could, therefore, represent a target group

[45] "If we do it as we do it, that we share [our experiences] in our bubble with other people and that we don't even try to argue or discuss as much with other people and rather just act as a role model, it will take some time and then other people will get interested in the change. I witnessed that with a lot of people when I switched to a vegetarian diet. They also gave it a try and gained access to this lifestyle and then found their own path. I believe that an engagement with the topic is super important, but people have to be motivated to do so."

[46] "It was clear for me that my son would only get healthy food and so you try automatically to cook a bit more healthily."

[47] "You can tell there is a difference between people who have a family and those who don't. Those who have a family pay attention to healthy nutrition, those without a family pay less attention to it."

[48] "I would be motivated to engage more with the topic of cooking because I want to be able to provide more than just pasta to my daughter because that's just not enough."

for placing information about healthy and sustainable nutrition provided by doctors and medical institutions.

Other participants explained how their children actively requested a change in diet which had lasting effects on the other family members. P8, for instance, narrated how her daughter decided to become vegetarian at the age of 12 and how she needed her mother's support to implement this change which, ultimately, led to her mother and the other family members assuming a mostly plant-based diet too: *"Und dann habe ich etwa 10 Jahre lang Fleisch gegessen, bis die [Name der Tochter] meinte, sie wolle nicht mehr und dann ist es weniger geworden"*[49] (P8: 429-30). Another participant relates how the pro-environmental determination of her daughter to eat less meat influenced the eating behaviour of the whole family and continues to do so even after she moved out:

> *"Wir sind extrem daran [weniger Fleisch zu essen], weil der [Name der Tochter] ist das auch extrem wichtig. Gut, jetzt ist sie ausgezogen, aber bis vor 3 Wochen hat sie noch hier gewohnt und hat auch gemeint, hey, wir müssen einfach kein Fleisch mehr essen. Der [Name des jüngsten Sohnes] hatte am meisten Mühe damit, aber er hat sich auch auf diese Vegi-Burger eingelassen"*[50] (P4: 274-7).

The daughter's initiative also increased his brother's willingness to eat meat alternatives, although he was against the change initially. Positive dietary changes can also be introduced by a partner as the example of P15 showed: *"Also die [Name der Partnerin] war dort schon auch der Auslöser, [um auf eine vegetarische Ernährung umzusteigen]. […] Sie ist die, die immer dafür sorgt, dass wir eine ausgewogene Ernährung haben"*[51] (P15: 87; 63). In his case, cohabiting with a vegetarian partner who is mainly responsible for preparing food led to a radical and permanent shift in his diet, especially now that they have a daughter. These examples are similar to those from the previous chapter on the influence of one's social environment onto dietary patterns, although they show that cohabitation might even have a stronger impact in shifting eating habits, since the shared preparation and consumption of food provides a much more frequent site of confrontation.

However, cohabitation can also pose a challenge to accommodate different eating habits and preferences. One participant explained how she renounces to cooking legumes as often as she would like to because her husband does not like them and preparing two separate dishes would be too much effort: *"[Hülsenfrüchte gibt es] nicht so oft. Ich muss immer überlegen, was isst mein Gegenüber? Weil ich zum Beispiel liebe Linsen, ich würde sehr oft Linsen essen. Aber dann müsste ich zwei verschiedene Sachen kochen"*[52] (P3: 329-31). This compromise is unfavourable from a health perspective because the participant is struggling to meet her protein requirement as she decided to reduce her meat intake for sustainability reasons. Another participant explained how she resigned her pro-environmental behaviour of eating only little meat to cater to the dietary preferences of her ex-husband:

> *"Fleisch habe ich dann halt auch gekocht, als ich geheiratet habe, weil ich dann auch einen Bauern geheiratet habe, [der das wollte]. Und als ich dann aber alleine war, habe ich dann*

[49] "And then I ate meat for about then years until my daughter mentioned that she didn't want to [eat meat] anymore and so it became less."

[50] "We are trying our best because it is extremely important to our daughter. Ok, now she moved out, but until three weeks ago she was still living here and also argued that we really have to stop eating meat. And my youngest son had the most difficulty with that but, in the end, he also accepted those vegetarian burgers."

[51] "My partner was the catalyst [for switching to a plant-based diet]. […] She is the one who always ensures that we have a balanced diet."

[52] "We don't eat legumes as often. I always have to ask myself what does my counterpart eat? I, for instance, love lentils, I would eat lentils very often but then I would have to cook two different dishes."

> *nur noch das gegessen, das ich gerne habe und habe auch Verschiedenes ausprobiert"*[53] (P12: 150-3).

Only after her divorce did she have the opportunity to adapt her cooking to her likings and experiment more with vegetarian and vegan dishes. Living in a single household provided her with the freedom to assume a more plant-based diet because she could decide independently on what to eat. A different respondent stated that cohabiting with his partner poses a challenge sometimes to limiting food waste: *"Wenn es um mich geht, wird nichts weggeschmissen und das schaffe ich auch. Nichts, wirklich gar nichts. Ich kaufe nur das ein, was gegessen wird. Das ist nicht immer einhaltbar, wenn zwei im Spiel sind"*[54] (P9: 86-8). The quote highlights how cohabitation reduces the level of control not only about what is eaten, but also about what is bought and what might potentially get spoiled. Participants with children, and especially mothers, recurringly mentioned how cooking for a family meant compromising their personal preferences in favour of their children's requirements and wishes. As the following participant summarises: *"Irgendwie ist es so, dass man sich als Mutter schon ein bisschen anpassen muss"*[55] (P13: 5). One respondent mentioned, for instance, that she adores innards but only rarely cooks them because the other family members do not share her preference and find the smell highly unpleasant: *"Wenn ich zuhause Leberchen mache, dann sind alle gegen mich, weil der Geruch halt sehr speziell ist"*[56] (P4: 41-2). The other family members thus prevent her from implementing a nose-to-tail mentality which would be favourable from an environmental perspective. Another participant narrates how she used to eat quorn to substitute meat but stopped doing so because of her children:

> *"Ich will aber nachher nicht riskieren, dass ich was wegschmeisse. Ich glaube, darum kaufe ich immer das Gleiche. […] Du kochst ja nicht für dich alleine. Weil diese Quorn-Sachen habe ich früher eigentlich gemacht, bevor ich Familie hatte und seither nicht mehr so"*[57] (P14: 457-60).

Interestingly, she said that she had not actually tried to cook quorn for her children because she was afraid that they would not like it and that she would have to throw it away. Her situation constitutes an environmental conflict of interests in which she wants to prevent food waste but therefore resigns the opportunity to further reduce the meat consumption of her family, which she states is a goal of hers but which she has not quite achieved yet. Another participant also mentioned that she would not have undertaken to render the diet of her family more sustainable if she had not been supported by the other family members in her attempt: *"Meine Kinder haben mitgemacht und das war für mich auch ein Grund, es zu machen. […] wenn ich jetzt von ihnen nicht […] das Okay bekommen hätte, dann wäre es schwierig gewesen. Ich hätte keine Lust gehabt zu kämpfen"*[58] (P4: 382-4). She also adds that she finds it a challenge to meet the requirements of a healthy and sustainable diet and also cater to the different preferences of all family members: *"Ich finde das […] eine ganz grosse Herausforderung als Familie, es da allen Recht zu werden mit Kochen, dass es gesund ist und dass sie es gerne haben. […] Am*

[53] "I also cooked meat when I married because I had married a farmer. And when I was single again, I only ate what I liked, and I also tried different things."

[54] "If it were just for me, I wouldn't throw away anything and I would definitely manage to do that. Nothing, nothing at all. I only buy what gets eaten. That's not always possible when there is another person involved."

[55] "As a mother, you have to adapt yourself."

[56] "When I cook liver at home, everyone else is against me because it has a very particular smell."

[57] "But I don't want to risk having to throw away something. I think that's why I always buy the same things. […] you don't just cook for yourself. I actually prepared those quorn-schnitzel before I had a family, but ever since not as much anymore."

[58] "My children participated and that was a reason for me to do it. […] If I hadn't received their permission to do so, it would have been difficult. I would not have had the energy to fight."

schönsten wäre es, wenn ich nur für mich schauen würde. […] Ich würde anders [kochen]"[59] (P4: 50-4). Her example summarises that cooking for a family is highly demanding, especially if health and sustainability aspects are taken into consideration. If the person in charge of preparing food decides to change their diet, it has an impact on the whole family, which might not be welcomed by everyone. Indeed, reluctance from other family members to assume a plant-based diet has been found to be a hindering factor in a study conducted by Lea, Crawford and Worsley (2006: 833). Considerations for other preferences also seemed to affect P14, for instance, who explained how she questions her cooking style and eating habits all the time because she wants to provide the best diet possible to her family. However, she concluded that she rarely ever changes something about her routine: *"Ich mache mir dauernd Gedanken über die Ernährung. Aber ob ich dann etwas ändere, ist etwas anderes. Ich hinterfrage mich schon immer wieder"*[60] (P14: 641). As it became clear during that interview, the main reason for her reluctance to alter her diet is the fact that her children are used to the way she cooks and changing something about it would also mean challenging their habits. Fearing that they would oppose any change, she adheres to the established routine. Adjusting dietary choices might pose a challenge for families because alterations could potentially be met with resistance, so it is important to address plant-based eating early on and find ways to accommodate for different preferences. The responses I discussed in this chapter suggest that living in a shared household potentially compromises one's environmentally friendly intentions because other people might have different preferences or not engage in pro-environmental behaviour to the same degree. In total, the responses indicate that cohabitation leads to negotiating eating habits as not all family members might prioritise the same dietary aspects. Especially children seem to add a complicating factor to the equation, even though they might also give reason to re-examine one's diet and change it for the better and start considering a shift towards more plant-based nutrition.

6.3 Infrastructural Capacity

Infrastructural capacity describes the level of provision of and access to products, services and infrastructure which enable people to engage in sustainable action. In general, infrastructural capacity seemed to be less of an issue for the participants than factors limiting the other three types of capacity. It was not criticised, for instance, that there were not enough vegetarian options available in restaurants or supermarkets. Only one participant mentioned that the vegetarian menu at her workplace's canteen showed only little variety and mostly consisted of ravioli (P3: 681). Similar findings were also made in a study which investigated the barriers to adopting a plant-based diet in Denmark, suggesting that infrastructural capacity might not be significantly limited in urban regions of central European countries (Reipurth et al. 2019: 291). It needs to be noted, however, that this could differ for more rural areas and cantons. The only recurring topic relating to infrastructural capacity was a critique of the insufficient offer of good vegetarian or vegan replacement products. Especially meat analogues, products which imitate meat in their physical aspect, taste, consistency, protein content and field of application (Herrmann and Bolliger 2021: 7), were described as in need of improvement in order to facilitate the transition to a plant-based diet. The respondents' opinions on meat replacements, however, varied considerably and included both positive as well as negative points of view.

[59] "I find it a major challenge as a family to cater to everyone's needs with cooking so that it is healthy and so that everyone likes it. […] I would prefer just having to look for myself. I would cook differently."

[60] "I always ponder over nutrition, but whether I change something is a different question. I do question myself sometimes."

6.3.1 Vegetarian Replacement Products and Alternatives: "But are they really necessary?"

The rapid growth of the meat substitutes market in recent years provides evidence for a growing interest in plant-based diets in Switzerland. Total sales revenue of meat replacement products almost doubled from 60 million Swiss Francs in 2016 to 117 million in 2020 (Herrmann and Bolliger 2021: 12). Of the three groups which constitute meat alternatives, namely meat analogues, vegetarian convenience products and tofu, tempeh and seitan, the first category accounts for the largest share in sales and sales revenue. In 2020 a total of 5705 tons of meat alternatives were sold. Nonetheless, these products continue to be a niche market. This becomes apparent if compared to the revenue of meat retail which, in 2020, totalled 5.416 billion Swiss Francs (Herrmann and Bolliger 2021: 8). Despite the rapid market growth in recent years, the annual per-capita consumption of meat alternatives still only amounts to 0.61kg (Herrmann and Bolliger 2021: 27), which is significantly lower compared to the 50.91kg of meat eaten by the average Swiss person (Bundesamt für Landwirtschaft (BLW) 2021: 19). The food diaries of the study participants were reflective of both consumption patterns. On the one hand, all but two participants ate meat during the study week with a clear majority also eating more meat than what is considered sustainable by the EAT-Lancet Commission, while on the other hand, only a few meals featured meat replacement products. One participant reported eating falafel (P2), two people ate tofu, quorn or tempeh (P5 and P12) and another two participants ate meat analogues (P4 and P8). Nonetheless, about half of the respondents stated that meat replacement products have become a part of their diets (see *table 6*), although most participants still consume such products considerably less often than conventional meat products.

The availability of meat replacement products and vegetarian options themselves did not seem to be an issue for the study respondents. Increasing customer demand provided the incentive to retailers to broaden their assortment of sustainable products. Compared to 2016, the range of meat replacements on offer has more than doubled from 334 to 823 by 2020 (Herrmann and Bolliger 2021: 13). These products are sold in all major retailers in Switzerland such as Migros, Coop, Denner, Aldi, Lidl and even Volg. The increased availability of vegetarian alternatives and replacement products was also noticed by some of the participants. As P2 and P3 put it:

> *"Es hat heutzutage viel mehr Optionen als früher und vegetarische Ernährung hat sich in Europa viel mehr etabliert, als es noch vor ein paar Jahren der Fall war […]. Es kommen mehr und mehr Produkte auf den Markt und ich habe auch das Gefühl, die Produkte werden besser"*[61] (P2: 906-9).

> *"Die ersten Jahren hatte Cornature wirklich nur Quorn im Angebot und dann haben sie einfach das Sortiment erweitern müssen"*[62] (P3: 308-9).

They appreciate that both the variety and quality of these products has improved, a potential consequence of the growing competition on the market. However, the range of products available differs considerably. While Migros and Coop have a very broad assortment of meat and dairy alternatives, Lidl, Aldi and especially Denner and Volg offer a smaller range consisting of mostly staple products like vegetarian burgers, nuggets, minced meat, filet stripes, oat milk and a few non-dairy yoghurt varieties. Nonetheless, considering the extensive availability of meat and dairy alternatives in the two largest

[61] "There are many more options nowadays than back in the days and vegetarianism has become much more established in Europe than what it was still the case a couple of years ago […]. There are more and more products entering the market and I am also under the impression that the products are getting better."

[62] "For the first years, there was really only Cornature with quorn being the only product but they had to expand the assortment in the meantime."

retailers in Switzerland, Migros with 950 stores[63] (Migros Genossenschaft 2020; n.d.a) and Coop with 1270 stores[64] (Coop Genossenschaft 2020) in addition to the option for home delivery offered by all the retailers, the infrastructural capacity for meat and dairy alternatives can be considered quite high in Switzerland and especially in the canton of Zurich. In fact, the access to vegetarian alternatives in restaurants, food delivery companies and retailers was deemed at least acceptable by all participants.

Although the participants did not reprobate the availability of meat replacement products in general, they criticised that such products often do not correspond with their conception of healthy foods. The respondents' negative opinion about meat analogues and dairy alternatives was mostly indebted to the heavily processed nature of replacement products as the following statements show:

> *"Der ganze Verarbeitungsweg passt mir eigentlich nicht, weil da ja wirklich nichts mehr Natürliches an dem ist. Das finde ich schade, ich habe es eben gerne möglichst frisch, möglichst natürlich. Darum greife ich immer wieder auf den Tofu zurück"*[65] (P8: 459-61).

> *"Ich bin ganz sicher, wenn du dann schaust [bei den Produkten], die ich gut finde, die haben Zucker drin, die haben Geschmacksverstärker drin, ist ja klar. Und dann finde ich, sorry, dann ersetzt du das eine für das andere. Der Trade-off ist es mir einfach nicht wert"*[66] (P13: 489-92).

> *"Bei Sachen, die ich nicht kenne, da finde ich so, ist das jetzt wirklich notwendig? Weil eben, es gibt ein Alternativprodukt, das echt eins zu eins natürlich ist [z.B. Gemüse oder Hülsenfrüchte]. Also die ganze Verarbeitung, das finde ich echt nicht so nice"*[67] (P15: 620-2).

These participants all had in common that they prioritise a healthy diet, and it seemed that meat replacement products are at odds with their conceptualisation of healthy eating. P8 argued that she favours tofu because she deems it less processed and because there are fewer additives in it and both P13 and P15 stated to prefer substituting meat with vegetables or legumes rather than with a meat analogue for the same reason. Similar reservations were also found to limit the acceptability of meat substitutes in a qualitative study comparing German, French and Dutch consumers (Weinrich 2018: 9). A general favourite of the participants resulted to be the Swiss meat analogue brand "Planted", the products of which were praised for their comparably short ingredients list. As one participant explains:

> *"Ich guck da meistens eigentlich immer einmal auf die Zutatenliste [...]. Planted ist ein Beispiel von diesen Fleischersatzprodukten, die relativ wenig Zutaten haben. Die bestehen aus diesem Erbsenprotein oder aus diesen Fasern und dann kommt nicht mehr viel im Vergleich zu anderen Sachen"*[68] (P5: 427-31).

The fact that their products feature relatively few ingredients and additives in comparison to other products seemed to work in favour of the brand. Five participants mentioned Planted from their own

[63] Including Migrolino ("Migrolino: Portrait" n.d.).

[64] Including Coop pronto, Coop City, Coop to go, Karma Store and Fooby.

[65] "I don't like the whole processing because there is nothing natural left. That's a pity because I like it as fresh and natural as possible. That's why I often fall back onto tofu."

[66] "I am convinced that if you check [the products] I like, there is sugar in them, there are flavour enhancers in them, for sure. And then I think sorry, you replace one thing for another. The trade-off is not worth it."

[67] "With things that I don't know I always ask myself, is it really necessary? Because, as I said, there is an alternative which is completely natural [i.e. vegetables and legumes]. I really don't like the heavy processing at all."

[68] "I usually read the ingredients list […]. Planted, for instance, is an example for those meat replacement products which have comparatively only a few ingredients. They consist of pea protein or the fibres thereof and then there isn't much else compared to others."

initiative and that this product line comprises their favourite meat analogues (P3, P5, P8, P10 and P15). Apart from praising the ingredients list, its taste, texture and consistency were deemed satisfactorily too. The most common points of criticism usually regarded exactly these attributes of meat analogues. But even if a product is deemed acceptable in terms of the above stated criteria, it remains true that meat analogues are mostly highly processed foods, especially when compared to vegetables, legumes and other natural alternatives.

While most participants stated to dislike long ingredient lists with unknown additives, it also seemed that the aversion against those "hidden ingredients" (P6: 468), as one participant calls them, is often based on hearsay rather than on actual knowledge. The following passage exemplifies this given:

> *I: "Du hast gehört, dass es zum Teil Inhaltsstoffe drin hat, die nicht gut sind?"*
>
> *P: "Ich habe es gehört, genau."*
>
> *I: "Aber du bist dir nicht 100% sicher?"*
>
> *P: "Nein, ich habe selber damit noch nie gekocht"*[69] (P6: 486-90).

Meat analogues seem to have a bad reputation as the example of P6 suggests. The notion of certain ingredients being unhealthy prevented her from trying such substitutes. The prejudice that all replacement products are rather unhealthy and potentially not favourable from an environmental perspective was quite prevalent among the participants in general:

> *"Aber ehrlich gesagt, dort bin ich auch nicht sicher, wie gesund alles ist. Ich glaube auch dort gibt es Unterschiede mit gesünder oder weniger […]. Es wäre schön, wenn Ersatzfleisch auch gesund wäre. Das wäre für mich wirklich ein Grund, um mehr solche Produkte zu konsumieren "*[70] (P4: 67-9; 277-80).
>
> *"Ich glaube, das ist unnatürlich bis zu einem gewissen Grad. Ob das dann gescheiter ist? […] Besser für die Gesundheit und im Endeffekt ist es wirklich besser für die Umwelt? Ich weiss es nicht"* (P14: 466-7).

Both P4 and P14 express uncertainty about the nutritional value and the favourability of meat analogues from a sustainability point of view. Just like these two participants, other respondents too said that they would consider replacing more meat or dairy if they knew more about the health and sustainability aspects of replacement products. The insecurity about not knowing exactly what a certain product contains can cast an unfavourable light on the whole product segment and deter people from consuming them. One participant explains how her lacking knowledge about the ingredients induce her with a feeling of discomfort: *"Ich müsste wahrscheinlich so ein Unternehmen besuchen und in so eine Produktion reinschauen. Mir ist es ein bisschen unheimlich, weil ich nicht so genau weiss, was drin ist"*[71] (P13: 434-6). The example shows that some people would be willing and interested in learning more about these novel products to then consider buying them more often. Depending on the product, the prejudice that all substitutes are per definition unhealthy might be unjustified. Studies demonstrate that the nutrient profile of certain meat substitutes match that of meat and even offer additional benefits such as lower quantities in saturated fats, although some are also less favourable from a health perspective (Bohrer 2019; Kumar et al. 2017). As P13 mentions, there are differences in nutritional

[69] I: "You heard that there are some ingredients in them that aren't good?" P: Correct, that's what I heard." I: "But you aren't 100% sure?" P: "No, I've never cooked with them so far."

[70] "But honestly, I'm not so sure how healthy all that stuff is. I believe there exist certain differences with what is healthier and what is less so […]. It would be nice if meat analogues were also healthy. That would really be a reason to consume more such products"

[71] "I would probably have to visit such a company and look into such a production. I find it a bit uncanny because I don't really know what it is in there."

value and processing degree. What is more, a study found that Swiss people on average overestimate the adverse environmental impact of replacement products which, in reality, often perform significantly better than assumed, especially compared to meat (Siegrist and Hartmann 2019).The respondents' unfavourable opinion about the healthiness and level of sustainability of meat replacements seemed to be too little differentiated. There was even an actual instance in which unjustified assumptions about the artificial nature of an alternative product were stated during an interview. One regular consumer of meat alternatives was convinced that the smoky flavour of a smoked salmon alternative derived from artificial flavouring (P8: 356), although the brand "Wild Foods" explicitly advertises their product "Wood Smoked" to be, indeed, wood smoked (Wild Foods n.d.). The present study suggests that there is a tendency to dismiss all meat replacement products, and especially meat analogues, as unhealthy and unsustainable too. It might, thus, be helpful to provide consumers of meat alternatives a tool to better evaluate the nutritional profile and degree of sustainability of meat substitutes so that they can form a more differentiated opinion on these products.

While some participants were open to the idea of incorporating meat substitutes into their diet, other respondents dismissed replacement products on principle. They fundamentally criticised the concept of meat alternatives, as the following quotes exemplify:

> *"Es ist fake. […] Es ist nicht das, was ich eigentlich erwarte und darum stellt es bei mir gleich ab"*[72] (P11: 413).
>
> *"I: Und welchen Teil dieser Fleischersatz-Produkte ist so unattraktiv? Der Geschmack, oder..."*
>
> *"P: Die Idee dahinter. […] Ich finde, wenn man kein Fleisch essen will, dann soll man kein Fleisch essen. Und dann finde ich es konsequenter nicht noch einen Fleischersatz zu haben. Ich finde es schräg"*[73] (P7: 479-80; 502-3).

The incomprehension of the concept of meat analogues was the prevalent reason for disliking them among the strict adversaries of such products. They argued that the idea to replace meat with an artificial imitation is paradoxical and almost hypocritical in their opinion. As such, eating "fake meat" did not appeal to them. Even participants who stated to sometimes consume meat alternatives expressed similar reservations. One participant, for instance, said that she does not like meat alternatives which imitate processed meat products such as sausages or charcuterie: *"Bei mir hört es oft schon auf beim Aussehen. […] Ich denke immer, wenn ich kein Fleisch essen will, wieso muss ich was in der Form eines Wienerli kaufen? Also bei mir hört es dort irgendwie auf"*[74] (P3: 413-5). While she did not mind meat substitutes in the form of chunks or strips, she found products with a heavy visual resemblance to certain meat products dislikeable. This hints at the possibility that consumers do not perceive all meat analogues as equally natural or artificial, an insight which might be of interest when developing such alternatives. The presence of highly adversary opinions about meat substitutes suggests that these products might not cater to everyone's preference and not always be useful in facilitating the transition to a plant-based diet.

One common argument in favour of meat alternatives is that they give people the opportunity to opt for more sustainable choices without having to completely alter their eating habits and way of cooking as

[72] "It's fake […]. It's not what I would expect it to be and that's why I dislike them on principle"

[73] I: "And which part of meat replacement products do you find that unattractive? The taste or…" P: "The idea behind them. […] In my opinion, if you don't want to eat meat, you shouldn't eat meat. But in that case, I find it more consistent not to eat meat replacement products either. I just find it weird."

[74] "I already get repulsed by the looks of it […]. I always think, if I don't want to eat meat, why do I have to buy something in the form of a sausage? That's a deal-breaker for me."

such alternatives can be used in similar ways. One participant who had switched to a plant-based diet only recently confirmed that meat alternatives can support a dietary transition:

> *I: "Haben dir diese Vegi-Ersatzprodukte auch ein bisschen geholfen, [vom Fleisch] wegzukommen?"*
>
> *P: "Ja schon, gerade das Planted Chicken, das definitiv. Also dort habe ich so gemerkt, […] das schmeckt und fühlt sich eigentlich fast schon genau wie das richtige Poulet an"*[75] (P15: 434-6).

He pointed out that these products helped him, especially at the beginning of the transition, whereas he now does not need them anymore, even if he continues to consume them once every one or two weeks. A different participant who also adheres to a plant-based diet expressed concern for meat alternatives focusing too much on the importance of meat in general and inhibiting a more thorough change of mindset:

> *"Manchmal habe ich ein bisschen Mühe mit diesen veganen alternativen Produkten. Sie probieren das Fleisch zu ersetzen, aber braucht es das überhaupt? Also man kommt wie weniger weg vom Fleisch, weil man es immer noch im Fokus hat. Es ist ja ein Fleischersatz"*[76] (P10: 491-4).

In his opinion, replacing meat with something that is meant to imitate meat is not helpful in changing people's habits and attitudes, although he acknowledges that they can support a transition. Nonetheless, P10 argues that at some point it might be useful to focus on traditionally vegetarian meals instead of continuing to emphasise meat or meat-like elements in dishes. His argument can be linked back to the discussion about the common conceptualisation of a dish as consisting of meat, vegetables and a starchy side. As discussed in chapter 6.1.2, this notion hinders the acceptance of a plant-based diet because it positions meat at the centre of a "proper" dish. Arguably, meat analogues further this conceptualisation and might prevent a paradigm shift. Other participants too, pointed out that there is no need for recreating something by artificial means if natural alternatives are available:

> *"Wenn halt das Fleisch durch etwas vegetarisches ersetzt wird, habe ich oft das Gefühl, dass das Gericht drunter leidet. Und es gibt viele gute vegetarische Gerichte. […] Ich sehe, dass das für Leute, die sich halt rein vegetarisch ernähren, schön ist, wenn sie ein klassisches Fleischgericht durch etwas vegetarisches ersetzen können. Aber ich finde, man sollte vielleicht etwas mutiger sein, gute, neue, vegetarische Gerichte zu kreieren, statt immer nur zu versuchen, Fleisch zu ersetzen.* […] *Hummus ist ein gutes, eigenes vegetarisches Produkt, was nicht versucht, etwas zu imitieren. Weil wenn es versucht, etwas zu imitieren, wird das nie so gut werden wie das Original meistens. Und Hummus steht zu nichts in Konkurrenz, man kann es mit nichts vergleichen"*[77] (P2: 844-9; 900-3).

[75] I: "Did those vegetarian replacement products help you to get away [from meat]?" P: "Yes, definitely, especially that Planted chicken. I realised that it tastes and feels almost exactly like real chicken."

[76] "Sometimes I have a bit of an issue with those vegan alternatives. They try to replace meat, but do you even need them? You don't really get away from the meat because it is still in your focus. In the end, it is still a meat replacement product."

[77] "When you replace meat with something vegetarian, I'm often under the impression that the dish suffers from that. There are many good vegetarian dishes. […] I understand that there it is nice for people who eat a purely vegetarian diet when they can replace a traditional meat dish with a vegetarian version. But I think that people should be braver and create good, new, vegetarian dishes rather that always trying to replace meat. […] Hummus is a good vegetarian product on its own because it doesn't try to imitate something else. Because if something attempts to imitate something else, it will never be as good as the original. And hummus doesn't compete with anything else. You can't compare it to nothing else."

P2 argues that imitations are by definition inferior to the original and that efforts should rather be directed towards designing innovative vegetarian products instead of optimising meat analogues. Despite his critical assessment of substitutes, he sometimes consumes meat analogues to replace meat. The broad spectrum of opinions towards meat replacements of both meat enthusiasts and plant-based eaters suggests that these products might support a dietary transition in certain cases, but that a shift towards a plant-based diet is also possible without them.

The multi-faceted discourse surrounding meat replacement products, and especially meat analogues, suggests that such products alone will not be able to transform the diets of Swiss people, although they might facilitate the process. Despite not being representative, there seems to be a pattern among the study participants which shows a relation between meat consumption and the consumption of meat and dairy alternatives (see *table 6*). On the one side, five out of the six participants who reported the highest meat consumption also stated to eat substitutes either rarely or never (P1, P6, P7, P9 and P11). P2 was the only heavy meat eater to report an occasional consumption, although he was not fully convinced of the concept and quality of meat substitutes. The six participants who reported a total meat consumption below 500g per week, on the other side, also declared to eat meat and dairy substitutes either sometimes or regularly (P3, P4, P5, P8, P10 and P15). Indeed, a different study also found that most frequent consumers of meat analogues are people with a reduced meat intake (Weinrich 2018). It remains open for further investigation how the consumption of meat and meat substitutes are related to each other and what the potential of meat and dairy alternatives will be in supporting the transition to plant-based diets.

Participant	Meat Analogues	Tofu, Tempeh, Quorn	Dairy Alternatives
P1	Never	Never	Never
P7	Never	Never	Never
P2	Sometimes	Rarely	Sometimes
P9	Never	Never	Never
P6	Never	Never	Rarely
P11	Never	Never	Never
P14	Rarely	Rarely	Rarely
P13	Rarely	Sometimes	Rarely
P12	Rarely	Regularly	Regularly
P4	Sometimes	Sometimes	Sometimes
P10	Sometimes	Regularly	Regularly
P3	Regularly	Regularly	Regularly
P15	Sometimes	Regularly	Regularly
P5	Sometimes	Regularly	Regularly
P8	Regularly	Regularly	Sometimes

***Table 6**: Relative consumption of meat and dairy substitutes as indicated by study participants, ranked by the participants' meat consumption.*

6.4 Personal Capacity

Personal capacity entails limiting or enabling factors which relate directly to the self. Middlemiss provides three examples of factors influencing personal capacity, namely knowledge, financial means and mobility. Since Middlemiss primarily tried to conceptualise limitations in the provisioning of green infrastructure, it is possible that she only considered factors impacting personal capacity over which people have limited agency to change them. The three examples she provides reinforce this notion, as

financial means and mobility might be difficult to enhance and a basic level of knowledge (which is usually provided through education) is crucial to develop an interest in a certain topic (Kollmuss and Agyeman 2002: 243). During my analysis, it soon became clear that only focusing on factors which the participants had no power to change would elide most of the actual reasons why people decide not to switch to a plant-based diet. The arguments the respondents used to explain their lack of pro-environmental behaviour were more subtle than the obvious examples Middlemiss provides, although I also discuss the lack of appropriate knowledge on sustainable diets. The interviews exposed the influence of a range of rather psychological aspects which the author of the CEF might not have had primarily in mind while developing the framework. I decided to discuss all barriers and enablers for assuming a plant-based diet which relate to the individual in this chapter, even if, arguably, the factors in question might not fit Middlemiss' original conceptualisation of personal capacity (I provide a reflection on the suitability of the framework in the conclusion). The aspects discussed relate to uncertainty about sustainable dieting, emotional investment, one's perceived level of self-efficacy and personal values. The importance of the last factor is also dependent on whether someone has the ability to fathom ways of self-gratification which transcend consumerism, a concept also known as alternative hedonism. Personal values are key to understand whether people will prioritise pro-environmental behaviour or not.

6.4.1 Uncertainty Regarding Sustainable Consumption: "But is it really better for the environment?"

Lacking knowledge is one of factors which Middlemiss herself identified to limit personal capacity, and evidence found in this study supports this claim. Kollmuss and Agyeman distinguish between two types of knowledge as a prerequisite for pro-environmental behaviour: knowledge about the issue and its causes on the one hand, and knowledge about how to lessen the environmental impact on the other hand (2002: 243). Studies suggest that it is rather the latter type, practical knowledge, about which meat alternatives exist and how to prepare them rather than theoretical knowledge about the environmental consequences of unsustainable diets that matters (Lourenco et al., 2022: 10). All but one participant seemed to have at least a basic understanding of how the food sector contributes to environmental degradation and climate change. Unsurprisingly, the one participant who had only a very limited knowledge on the topic, also had little reason to question his eating habits as he stated himself: *"Ich wüsste nicht, warum ich meinen Verbrauch im Moment reduzieren sollte, auch weil ich nicht finde, dass ich übermässig viel Fleisch esse"*[78] (P1: 360-1). This statement stands in stark contrast to his reported meat consumption, which surpassed that of all other participants by length as he ate meat two to three times a day on average. Although public attention has been increasingly focusing on dietary choices and sustainability issues in recent times, it would be incorrect to assume that people are aware of what a sustainable meat consumption constitutes, as this and other cases in the interview suggest. The above passage exemplifies that a basic knowledge on the sustainability issues linked to the food sector is a prerequisite for any sort of improvement. As P1 is unaware of the driving factors for climate change and environmental degradation and how his daily consumption contributes to these processes, he sees no reason to change his behaviour. Thus, basic factual knowledge is a requirement for individuals to develop a favourable attitude towards pro-environmental action (Kollmuss and Agyeman 2002: 250). Although most participants reported having a basic understanding of contemporary environmental challenges linked to the food sector, they also acknowledged a certain level of insecurity about their factual knowledge which hindered them making more informed choices. One participant summarised

[78] "I wouldn't know why I should reduce my consumption at the moment, also because I don't think I eat excessive amounts of meat."

his difficulty to keep track of all the relevant aspects of sustainability by saying that the word "sustainability" is in itself ambiguous: *"Ich finde generell der Begriff Nachhaltigkeit ist ein rechtes Sammelsurium von verschiedenen Sachen. Ich finde es immer schwierig, von was sprechen die Leute, wenn sie von Nachhaltigkeit sprechen?"*[79] (P15: 618-20). His statement reflects the fact that the issues linked to the food sector are manifold, just as the approaches to counter the adverse effects of unsustainable diets are. Although it was mostly only P1 whose personal capacity was severely limited by his knowledge on sustainability issues, decision makers have to be aware that there still exists a part of citizens who, despite recent efforts to raise awareness about unsustainable meat consumption, remain widely unknowledgeable about it.

In the sampling group of the present research, it seemed that especially practical knowledge on sustainability strategies was lacking. A common issue raised during the interviews concerned participants' insecurity about what is sustainable and what is not and how diets can match both health and sustainability aims. Their uncertainty reflects the difficulty of feeding a population of almost 10 billion people with a healthy and sustainable diet to which there is not a one-size-fits-all solution. An exemplary conundrum is organic agriculture. On the one hand, organic agriculture uses fewer pesticides and releases fewer fertilisers into the ecosystems, therefore contributing to decreasing levels of biogeochemical flows and potentially also supporting bio-integrity. On the other hand, organic agriculture is less efficient and, hence, more land is needed to produce the same number of crops than conventional agriculture. This is problematic because it promotes deforestation, which also fosters biodiversity loss. Given the current global consumption patterns, switching to organic production would not be feasible if the upper margin for land conversion is not to be overstepped (Muller et al. 2017: 3-5). To allow for a higher proportion of organic agriculture, food waste and meat consumption would need to be drastically reduced. Muller et al. calculated that a shift to 60% organic production would only be possible if both food waste and the production of food-competing feed for animals were reduced by 50% (2017: 5). This shows that environmental degradation and potential solutions thereof are multifaceted and sometimes ambiguous, which clearly contributed to the participants' uncertainty regarding sustainable options. One respondent, for instance, was unsure about whether tofu can be considered a sustainable alternative for meat: *"Letztens habe ich gehört, dass auch Tofu, das hätte ich jetzt nicht gedacht, aber Tofu ist nicht nachhaltig, glaube ich"*[80] (P4: 617-8). The way she phrases the sentence suggests that her knowledge about sustainable diets is fragmented and partially consists of semi-reliable hear-say, which adds to her insecurity. It also demonstrates how certain pieces of information are presented in a problematic way. The participant heard that tofu is unsustainable, but such statements always have to be put in relation. For example, 1kg of tofu has a carbon footprint of 3.16kg CO_2-e ,which is higher than the carbon footprint of vegetables and fruits and is similar to that of milk (3.15kg CO_2-e). Regardless, tofu has still a considerably lower carbon footprint than all types of meat. For comparison, the production of 1kg of beef emits 99.48kg CO_2-e (Poore and Nemecek 2018). Of course, this brief analysis of tofu did not take other environmental factors into consideration such as water footprint or fertiliser input, but it demonstrates that whether a certain product can be considered sustainable or not also depends on what it is compared to. If tofu is used as a substitute for beef, it constitutes a sustainable alternative, which, however, is not the case if it is used as an alternative to potatoes, for example. And as always, it also comes down to the quantity in which a given product is consumed. One participant pointedly summarises it as follows: *"[Es geht darum] eine Balance zu finden zwischen allem, ohne dass man jetzt sozusagen sagt okay, es gibt kein Fleisch mehr, aber alles Fleisch*

[79] "I generally find the term sustainability quite a conglomeration of different things. I always find it difficult, what are people talking about when they talk about sustainability?"

[80] "Lately, I heard that tofu, and I really didn't expect it, but apparently, tofu is not sustainable, I believe."

ersetze ich jetzt durch Soja"[81] (P5: 501-2). This seemed to be a reasonable strategy, as a diet should always strive towards being balanced and never just focus on one type of food. P5's statement exemplifies how practical knowledge allows him to make sensible diet choices both from a health and a sustainability perspective. Providing consumers with practical strategies could help them make better-informed choices which promote healthy and sustainable nutrition.

It is important to provide people with adequate knowledge on dietary choices which breaks down the most important points as consumers might else grow frustrated and quit their efforts if overwhelmed by too much information. One participant reported how he felt frustrated when he tried to reduce his palm oil consumption on top of eating healthy, organic, and plant-based foods:

> *"Aber ich achte mich nicht mehr so stark darauf, ob es Palmöl drin hat. Ich glaube, das ist wie noch ein Layer mehr drin. Du willst ökologisch sein, du willst regional sein, du willst das, du willst das, du willst das und dann: Hey sorry, aber du kannst das nicht essen, da ist Palmöl drin. Dann denkst du so: Hey, ich gebe mein Bestes"*[82] (P15: 541-5).

P15 expressed how taking more and more sustainability factors into account became increasingly difficult and that he eventually abandoned his initial intention to avoid food products containing palm oil. In his case, this decision did not make a significant change to his otherwise very sustainable diet to which he continues adhering. In other cases, however, such an experience could potentially completely discourage further engagement with the topic. In fact, the above passage is tinted with frustration. P6 also made a discouraging experience, although she predominately referred to the health aspects of diets being confusing:

> *"Ich habe das Gefühl, vor lauter Bäume sehen wir den Wald nicht mehr. Weil damals, als ich mich mit dem Fitness begonnen habe, habe ich mich mega informiert. Ich bin auch einen ganzen Nachmittag hingesessen und habe Menu-Pläne um Menu-Pläne angeschaut und irgendwann wurde es so mühsam […]. Es waren einfach viel zu viele Infos. [Das Thema Ernährung] ist allgemein ein bisschen mit Unsicherheiten verbunden"*[83] (P6: 696-707).

She described how the overload of potentially ambiguous or contrastive information was hard to process and, ultimately, led to even more insecurity about what a healthy diet constitutes. Other participants reported a general uncertainty about how to match health with sustainability aims as this adds another layer of complexity to nutrition. As one participant mentions: *"Avocado ist gesund, aber nachhaltig glaube ich weniger. […] [Gesunde und nachhaltige Ernährung,] das beisst sich ab und zu"* (P4: 416, 408). It is true that not all healthy foods are necessarily also the most sustainable choice, especially if they have to be imported by aircraft. Hence, focusing on regional and seasonal produce is a good start to reducing emissions accruing from transportation and greenhouse farming. In order to do so, however, a basic knowledge of what can be grown where and in which months is necessary. What adds to the difficulty of finding a healthy and sustainable diet are unscientific theories about nutrition. The German Federal Centre for Nutrition confirms the lingering trend of fake news and myths about nutrition spreading over social media and other unreliable platforms (Kirk-Mechtel 2022). P12, for instance,

[81] "[It's about] finding a balance between everything without saying okay, there won't be any meat anymore, but I replace all meat with soy."

[82] "But I don't pay that much attention to whether something contains palm oil or not anymore. I think that adds an additional layer to it. You want to be ecological, you want to be regional, you want this and that and then: hey sorry, but you can't eat that, there is palm oil in it. Then you think to yourself: hey, I'm trying my best."

[83] "I have the impression that you get lost in all the different pieces of information. Some time ago, when I had just started going to the gym and I educated myself on the topic. I even sat down a whole afternoon and studied menu plan after menu plan and at some point, it got too tiresome […]. It was way too much information. […The topic of nutrition] in general is afflicted with a certain level of uncertainty."

explained her failure to lose weight on a vegetarian weight-loss diet with her blood type allegedly not being suitable for vegetarian nutrition (P12: 112-23). Her belief was based on the so-called "blood type diet" promoted by D'Adamo in 1996, which has never been scientifically proven to be effective (Cusack et al., 2013). In the case of P12, a professional nutrition counselling specialised in plant-based diets might have provided her with useful advice on how to integrate a plant-based diet into her weight-loss journey. Instead, she abandoned her plant-based eating habits and returned to a conventional weight-loss diet suggested by her dietician which promotes a high meat consumption. In total, the interviews suggested that nutrition is perceived as a complicated topic, especially if both health and sustainability aspects are to be implemented. The overwhelming load of more or less reliable information increases the insecurity of people on how to find a balanced diet and might reduce their motivation to engage with the topic at all. Equipping consumers with clear guidelines and tools which break down the most important points of healthy and sustainable dieting could provide more clarity on practical strategies.

In fact, the participants frequently expressed a wish for more, easier and better accessible information on healthy and sustainable diets, which could guide them in making better consumption choices and sometimes mentioned labels as a tool they use for orientation. Eight participants stated that they buy mostly organic products as they believe that such products constitute the more sustainable option. However, these participants usually also mentioned a certain level of distrust or insecurity about the genuineness of labels which declare a product to be sustainable: *"Ich bin mir da auch sehr wohl bewusst, dass Bio nicht zwingend gleich sein muss mit es ist eher nachhaltig"*[84] (P5: 72-3). Interestingly, P5 exclusively consumes organic products as he is convinced that they are better for his health. Nonetheless, he doubts whether organic products are really more sustainable. His doubts make reference to the previous discussion about the ambiguity of what the essence of sustainability constitutes and why organic agriculture is not a one-size-fits-all solution. Furthermore, the declaration of a product as being organic does not grant it being more sustainable in general. For instance, just because a steak is marked as being organic does not change the fact that a steak will always be less sustainable than vegetables, regardless of whether they are organic or not, because meat has a considerably higher CO_2 footprint and requires more resources for production. Several other participants alluded to doubting the validity of labels exactly because of such contradictions:

> *I: "Es gibt ja viele Labels."*
>
> *P: "Ja. Aber ich habe viel gehört, dass auch nicht alles stimmt, [was sie versprechen]"*[85] (P10: 739-40).
>
> *"Dann schreiben sie, es sei nachhaltig, aber es stimmt gar nicht"*[86] (P8: 603).
>
> *"Da hat es ja andere Labels [für Fisch], auf die man schauen kann, aber ich weiss nicht, ob man diesen Labels auch trauen kann. Ich weiss überhaupt nicht, was sie genau bedeuten, da weiss ich zu wenig Bescheid"*[87] (P4: 454-7).

The statements allude to a mistrust in the institutions which certify the products. The third quote also shows that it is not just mistrust in the labels which renders them less helpful as an institutional tool of guidance, but that, in addition, knowledge on their actual meaning might be lacking. Furthermore, the same quote suggests that while information might be available, which could help consumers make better choices, it does not necessarily reach the target audience since the labels' signification could easily be

[84] "I'm very well aware that organic does not necessarily equal sustainable."

[85] I: "There are many labels." P: "Yes. But I've also heard that not all is true what they promise."

[86] "They state that it is sustainable but that's not true."

[87] "There are other labels [for fish] on which you could orientate yourself, but I don't know, whether you can trust those labels. I have no idea what they mean, I don't know too little about it."

researched on the internet. The same participant criticised, for instance, that no information is available on whether a product was shipped by aircraft, which constitutes the least sustainable way of transportation:

> *"Dann schreiben sie, es sei nachhaltig, aber es stimmt gar nicht. […] Du musst dich wirklich selber schlau machen. Was ich gerne hätte ist, dass es angeschrieben ist, ist es mit dem Flugzeug importiert worden, ist es mit dem Schiff gekommen? Wäre mir noch wichtig zum Beispiel"*[88] (P8: 602-7).

While it is true that in Switzerland, it is not required by law to state how a product was imported, some products include apposite information. For instance, some fruits have an airplane icon on their price tags which marks their import method. Second, all vendors have to indicate the place of origin of all products, so that it is possible to guess the shipment method for fresh produce. This presupposes additional knowledge, however, which P8 stated not to have. This is probably the point of criticism she expressed in the second sentence: in order to make responsible choices, people first need to inform themselves about the complex matter of sustainability and this might pose a considerable challenge which might deter the average consumer from doing so. P8 wishes that relevant information was made more readily available and that a no deeper investigation from the consumer side was necessary to make sensible decisions. The statement above is pervaded by a feeling of frustration which other participants, too, expressed when talking about making thoughtful consumption choices. Another participant mentioned that she would welcome some sort of federal tool like a coding system which explains how healthy and how sustainable a product is: *"Ich finde, da könnte der Staat etwas machen, dass man viel mehr deklarieren muss, wo das Produkt jetzt hingehört, gesund, nicht gesund […] nachhaltig auch"*[89] (P4: 404-8). She mentioned the Nutri-Score, which she uses to choose healthier options as an example of such a tool. The Nutri-Score was developed in France and was adopted on a voluntary basis in Switzerland in 2019. It rates products with an A to E score, depending on its overall nutritional value with A constituting the best possible score and E the worst. However, the Nutri-Score only provides a relative ranking, meaning that only products from the same category, for instance sweet beverages, can be compared to each other (BLV 2021), whereas items from different product groups cannot be contrasted with each other. P4 argued that she would find a similar ranking tool for sustainability criteria helpful. In fact, one of the main retailers in Switzerland, Migros, introduced such a ranking system, which is called "M-Check". It evaluates the level of eco-friendliness in terms of CO_2 emissions by assigning between one (> 10kg CO_2-e/kg) and five stars (0 - 0.9kg CO_2-e/kg) to products. The advantage of this ranking is that it constitutes an absolute ranking which allows for cross-segment comparison. The most important difference between the concepts of the M-Check and the Nutri-Score is that latter is based on a scientific algorithm which considers a set of comprehensible criteria and was developed in collaboration with the French ministry of health and prevention (Ministère de la Santé et de la Prevéntion and Ministère des Solidarités, de l'Autonomie et des Personnes Handicapées n.d.). In contrast, the M-Check might be transparent in its underlying principle, but it is unclear how Migros determines the overall emissions of products. Migros only states that their scoring is surveyed by myclimate but does not give insight in their actual scoring algorithm (Migros n.d.b). Another drawback of the M-Check is that it only evaluates how sustainable a product is in terms of GHG emissions. While this is certainly an important dimension, it does not cover all the aspects affecting the planetary boundaries relevant for the food system. Similarly, the Nutri-Score was criticised for not taking into account the level of processing of a product, as well as the use of additives and pesticide input. The developers replied that due to a lack

[88] "Then they write that it is sustainable, but it isn't. You really have to inform yourself. What I would like is that they state whether something was imported by aircraft or by freighter. I think that would be very important."

[89] "I think the government could do something so that it would be mandatory to declare how to evaluate a product in terms of health […] and sustainability."

of reliable data and knowledge, it is not (yet) possible to account for those factors (Hercberg et al. 2019). The provision of a trustworthy scoring which supplies useful information about the degree of sustainability and healthiness of foods could also help to shed light on the actual benefits and drawbacks of meat and dairy replacement products and show which ones are more adequate as regular alternatives. Especially so, as there seemed to be a high level of uncertainty among the respondents in evaluating those products. Given the participants' demand, a regulated more elaborated scoring provided by a trusted institution such as the federal government could offer a more transparent tool to guide consumers in making more sustainable and also healthier consumption choices.

However, simply throwing around facts and figures about the consequences of unsustainable consumption and even stating which options are preferrable compared to others might not be enough to achieve a broader shift in behaviour. One participant explained how the canteen of his workplace now provides information on CO_2 emissions for each menu in order to promote more sustainable diet options. As P9 explains, this might be insufficient to deter people from eating meat: *"Wenn du deine 200g […] Fleisch auf dem Teller hast für 12.60 Franken mit etwas Gemüse und so weiter, was heisst, dass so und so viel CO_2 produziert hast […], hindert dich das daran [die weniger nachhaltige Option zu nehmen]?"*[90] (P9: 649-51). In his case at least, the additional information produced little to no effect, although it combined factual with practical knowledge. The example suggests that information of health and sustainability aspects might help those who already have an interest in the topic but might not necessarily convince people who have been so far uninvolved to make more sensible consumption choices. While the spread of knowledge remains a pillar of sustainable development, other factors should be equally addressed, as the subsequent chapters will show.

6.4.2 Emotional Investment: "I don't want to eat my brothers and sisters"

One thing which all participants adhering to a plant-based diet had in common was an emotional investment in either environmentalism or, more frequently, in how they felt about animal breeding and slaughter, something that was not mentioned by the meat enthusiasts. In contrast, knowledge of sustainability issues was also present among frequent meat eaters (except P1) and, thus, did not seem to be the most decisive predictor for adhering to a sustainable diet. Kollmuss and Agyeman argue that direct experiences have a stronger influence on people's behaviour than indirect ones. Learning about an environmental issue classifies as an indirect experience, whereas witnessing environmental degradation, the death of an animal or the injustice towards a certain group of people constitute direct experiences (Kollmuss and Agyeman 2002: 242). The participants adhering to a mostly plant-based diet shared a variety of touching personal reasons why they do not want to eat as much meat anymore. These anecdotes have in common that they had a deep impact on the respondents' consumption because their experiences went beyond informing their understanding of the food system. The following passages substantiate the claim that emotional involvement and personal experience are key to sustainable change in behaviour (Maiteny 2002: 305). One participant, for instance, explained that she had eaten meat most of her life, although she had reduced her meat consumption in recent years due to her daughter becoming vegetarian. The decisive break with meat happened when she had to euthanise her old pony:

> *"Und dann was war am Schluss der Auslöser? Dass ich mein altes Pony einschläfern musste […]. Es ist einfach ein Leben, dass du nimmst, nur damit du ein bisschen Fleisch*

[90] "When you have your 200g […] meat on your plate for 12.60 CHF with some vegetables and so on, which means that you produced so and so much CO2. Does that prevent you from taking [the less sustainable option]?"

> *essen kannst. Das will ich nicht. Und seit damals, das sind jetzt dann vier Jahre, esse ich wirklich [fast kein Fleisch mehr]"*[91] (P8: 441-5).

The participant is a passionate horseback rider and had cared for her pony for many years and established an affectionate relationship with the animal. By witnessing the death of her beloved companion, she realised what it means to kill a living being. She felt so much compassion for her pony that societal meat consumption all of a sudden did not seem like a legitimate reason to kill animals anymore. Another participant told a similar story about her childhood in which she grew up on a farm. There, she regularly had to witness the slaughter of their own farm animals of which she was very affectionate and how that led to an aversion towards meat:

> *"Ich bin also jedes Mal ausgerastet, wenn ich von der Schule nachhause gekommen bin und sie eine Sau gemetzgt haben. Der ganze Platz voll Blut und woah, ich konnte das nicht anschauen. Und dann hättest du auch noch das Zeugs essen sollen. […] Lieber würde ich [Fleisch] nicht essen, auch aus ethischen Gründen, weil ich will eigentlich nicht meine Brüder und Schwestern, meine kleinen, essen "*[92] (P12: 463-5; 187-9).

The way this 70-years-old lady described this scene from her childhood adumbrates how traumatic the slaughter of their animals was to her younger self. She was clearly emotionally attached to the animals living on their farm and even considers them her "little brothers and sisters" to date. What differentiates P8 and P12 from the heavy meat eaters is that they had an emotional relationship with animals which are bred and killed for human consumption. Compassion for animals and ethical preservation about livestock farming was also identified in other studies as a central motivation to adopt a plant-based, vegetarian or even vegan diet (Fox and Ward 2008: 425-6; Stoll-Kleemann and Schmidt 2017: 1267; Weinrich 2018: 5).

Most citizens go to a supermarket and buy a piece of pre-packaged meat which creates an emotional distance between the consumer and the "product". The meat products in retail successfully dissociate meat from the living being it once was, a psychological phenomenon which allows consumers to eat meat despite their aversion to do harm to animals (Benningstad and Kunst 2020: 4). P10 attributes unsustainable consumption patterns of nowadays to the alienation between the average consumer and the agricultural products they eat. He argues that people do not need more information on environmental issues but more hands-on experience which touches them on an emotional rather than on a rational level:

> *"Ich glaube nicht informiert, sondern mehr berührt durch das Thema, emotionalisiert. Ich glaube das ist auch mega das Problem mit diesen abgepackten Produkten, dass wir auch nicht mehr den Bezug haben zum ursprünglichen Produkt. Da finde ich gerade solidarische Landschaft, wo du zurück auf das Feld gehst und dort mitarbeitest und die Menschen siehst und die Produkte gut, was einfach mehr verändert als irgendeine Kampagne. Ich glaube, die Menschen müssen es erleben und auch spüren, so dass sich irgendetwas nachhaltig verändert in ihnen drin"*[93] (P10: 823-8).

[91] "So what was the trigger in the end? That I had to euthanise my old pony […]. It's a life you take, only so you can eat a bit of meat. I don't want that. And ever since, it has been four years now, I [eat almost no meat anymore]."

[92] "I freaked out every time when I came home from school, and they had slaughtered a pig. The whole court was full of blood and woah, I couldn't watch it. And then you were also supposed to eat that stuff. […] I'd rather not eat meat, also due to ethical reasons because I don't really want to eat my little brothers and sisters."

[93] "I don't think more information is necessary but rather being touched by the topic, getting emotionally involved. I think that one of the main issues with these packaged products is that we lose connection to the original product. That's why I find community supported agriculture good where you go back to the field and help working and you see the people and the products, which changes more than some sort of campaign. I think the people have to experience and feel it somehow in order to ensure sustainable change within them."

He contrasts "knowing" with "feeling" and raises the same point as Kollmuss and Agyeman (2002). To P10, it was an eye-opening experience to start working in agriculture. He first came in touch with it though community supported agriculture (CSA) before starting a proper education in the field. CSA represents an alternative to the conventional food system and denotes a variety of partnerships between farmers and consumers. These partnerships are characterised by a high level of consumer involvement. On the one side, consumers pay for a share of the annual production in advance, and, on the other side, they are also required to participate a certain number of hours in field work. This model allocates part of the risk of low yields to the consumer, thus lowering the likelihood for farmers to end up in precarious financial situations. Furthermore, it aims at strengthening a relationship between producers and consumers based on solidarity and foster ecological and socially sustainable food chains (Pettenati, Toldo, and Ferrando 2018: 51). To date, there are nine CSA projects in the canton of Zurich offering different forms of membership (Pura Verdura 2022). P10 argues that engaging in CSA has the potential to reinstate a more personal relationship between consumers and agricultural produce, which would heighten consumers' awareness about the value and ecological dimension of food. Experiencing the reality behind the production of meat and agricultural products could leave a more lasting impression on consumers and potentially heighten their valorisation of food and the environment. In addition, seeing the truth behind the meat industry might deter people from consuming meat in inconsiderate quantities.

Some participants reported that less direct experiences such as documentaries about the environmental crisis and animal suffering sufficed to evoke an emotional response. P15 explained how the engagement with the visual material gradually raised his level of empathy for the animals, which convinced him to reduce his meat consumption:

> *"Die Konfrontation mit all den Dokumentationen darüber, wie […] die Tiere behandelt werden, wie das Ganze funktioniert und was das für einen Impact auf die Gesundheit hat, hat dazu geführt, dass ich […] mehr Empathie für Tiere entwickelt habe. […] Ich glaube, den meisten geht es nicht gut, so wie sie behandelt werden. Und das war der erste Grund, warum ich angefangen habe zu reduzieren und mehr Empathie für die Tiere hatte"*[94] (P15: 831-3 and 79-83).

In his case, watching documentaries led to a confrontation with certain topics with which he had never engaged or known much about before. The sudden epiphany of P15 (it was his partner who suggested watching the documentaries) also implies that if people do not actively seek such content, it is perfectly possible that they will never be confronted with the flip side of the meat industry, which has been successfully banned from every-day life. P15 explains how the many documentaries he watched also had a lasting impact on his fish consumption:

> *"Aber es ist mega ein Thema, das heute alles überfischt wird und was in den Zuchten noch eins mit Antibiotika abgeht und wie es den Fischen geht. Mit all diesen Dokus graut es dich davor und du kannst eigentlich nie mehr Lachs essen, auch wenn es mega geil ist"*[95] (P15: 728-31).

In this case, the effect of the documentaries on the participant might have also been heightened due to the health implications of unsustainable fish farming. In an earlier stage of the interview P15 had

[94] "The confrontation with all the documentaries about […] how the animals get treated, how it all works and what impact it has on our health, I believe, led to my developing more empathy for the animals. […] I think most are not doing well because of how they get treated. And that was the first reason why I began to reduce my consumption and why I developed more empathy for the animals."

[95] "It's a huge topic that everything is overfished nowadays and that antibiotics are being used in fish farming and under which conditions fish are bred. After all those documentaries you are horrified and you can basically never eat salmon ever again, even if it's delicious."

mentioned how he dislikes artificial additives in convenience food. The fact that conventional fisheries use antibiotics makes such fish probably less attractive to the participant. Maiteny found that pro-environmental behaviour is less likely to endure in the long term if it is not experienced as also contributing to personal well-being (2002: 305-6). Hence, informing people about both health and sustainability benefits accruing from plant-based diets might be useful in convincing people to shift their eating habits. The advantage of documentaries is that they are easily accessible, provide touching footage, can also be used for educational purposes and inform about both sides of a sound nutrition.

The interviews provided evidence that emotional investment and resulting pro-environmental behaviour are more likely to persist long-term if the confrontation with the topic is recurring. Especially documentaries might only have a temporary effect on the spectators if no further engagement takes place afterwards. One participant explained how she became vegan for some time after having watched a couple of documentaries and living with a vegan flatmate during a school exchange but stopped doing so when she returned, and the impact of the documentaries had subsided (P6: 769-70). Similarly, one participant recounted how the sight of deforestation in Asia motivated him to radically avoid palm oil when he returned from his vacation:

> *"Es gab eine Zeit, in der ich mega, mega darauf geschaut habe. Ich glaube mehr, weil in Asien, in Kuala Lumpur oder Malaysia, wo wir darüber geflogen sind, eine riesengrosse Fläche gesehen haben, die nur Palmöl war, das man dann auch wirklich gepflanzt hat, damit man dieser Nachfrage gerecht werden kann"*[96] (P15: 532-5).

He explained that he stopped doing so later on again because it was too much of an effort and because he prioritised other sustainability aspects of his diet. Thus, even direct experiences can have a limited action time, especially if they are singular and not of a reoccurring nature and there are other competing factors in place.

Unfortunately, spreading a feeling of involvement in environmental protection among society proves to be difficult because of the psychological distance characteristic of climate change and environmental degradation. Psychological distance refers to the perception of a phenomenon being situated remote from the self. The distance can be of a spatial (e.g. where an event occurs), temporal (when it occurs), social (to whom it occurs) or hypothetical (whether it occurs) nature or a combination thereof (Loy and Spence 2020: 1). Climate change and environmental degradation are psychologically distant in all four aspects. The consequences of global warming affect predominately vulnerable people in the global South, remotely located from the global North. Furthermore, unsustainable action and climate change are characterised by a time lag, meaning that the destructive consequences of current pollution might manifest in their entirety only later in time when it is already too late. In addition, climate change and the functioning of ecosystems are afflicted with considerable uncertainty, which can raise doubts about the veritableness of the prophesied effects of anthropogenic emissions and pollution. The problem lies therein that the perception of environmental issues as a distant phenomena has been proven to be negatively correlated with pro-environmental behaviour (Loy and Spence 2020: 2). As one participant summarises it: *"Das ist wie bei allem, wenn die Motivation und oder der Druck dafür nicht besteht, dann machst du es einfach nicht"*[97] (P9: 374-8). In other words, if people do not have a strong perception of nature being valuable and important to be protected for its own sake, then it is unlikely that they will display pro-environmental behaviour as there is no self-promoting reason or external pressure to do so. In a privileged country such as Switzerland, there is little pressure to effectuate voluntary change if there

[96] "There was a time during which I paid much attention to it. I think mostly because when we were in Asia and flew over Kuala Lumpur or Malaysia, we saw a huge area which they had converted to a palm oil plantation so that they could meet the demand."

[97] "It's as it is with everything. If you lack motivation and there is no pressure to do so, you won't do it."

is no direct benefit resulting from such action. As there is a chance that the aftermath of contemporary pollution will not significantly affect those who are responsible for it in the close future, other ways of "proximising" climate change are needed (Loy and Spence 2020: 1). One option might be to heighten the emotional involvement of society by providing opportunities to experience the beauty of nature on the one side, and the threat unsustainable consumption poses to nature and humanity, on the other.

6.4.3 Self-Efficacy: "Everything big starts small"

One of the most influential factors in promoting diet shifts is the experience of self-efficacy, or the belief to be able to make a change, according to previous research (Eker, Reese, and Obersteiner 2019: 730). Eker et al. found that knowledge about health and climate change benefits resulting from adhering to a plant-based diets not always have a positive effect on consumption behaviour (2019: 730). The factor knowledge only gains relevance if people have a high perception of self-efficacy, or a conviction that the changes in their diet will improve their health and contribute to reaching sustainability goals (Biasini et al. 2021: 200). Low perceived self-efficacy, on the contrary, has the opposite effect and demotivates people to engage in pro-environmental behaviour because they believe their action to be insignificant compared to the impact of powerful others (Kollmuss and Agyeman 2002: 243). Two participants had a very low perception of their self-efficacy. Not only did they question the effectiveness of individual efforts, but also the collective engagement of Switzerland as a comparably small country was doubted to matter on a global scale:

> *"Wenn man zum Beispiel den CO_2-Ausstoss anschaut, finde ich, hat die Schweiz ja sowieso einen geringen Einfluss. Und allein schon, dass zum Beispiel Schweinefleisch in China jetzt so populär wird, wird halt alle Bestrebungen, die wir in Europa machen, sowie wieder wettmachen. Was es natürlich jetzt nicht unbedingt besser macht, wenn wir jetzt auch nicht drauf achten, aber ich habe jetzt nicht so das Gefühl, dass mein eigenes Handeln so einen Einfluss hat"*[98] (P2: 506-12).

> *"Jetzt sprechen wir isoliert von der kleinen Schweiz, ok? Wir können etwas machen. Aber wenn wir in die Welt rausschauen […], wir sind so ein kleines Rädchen im System, da müssten wir viel einen grösseren Effort machen in der ganzen Welt, um das überhaupt stoppen zu können und da fehlt mir irgendwie der Glauben dazu. […] Mit 8 Millionen, was sind wir denn schon? Und wir versuchen die Musterknaben zu sein und alle anderen bauen weiter Kohlekraftwerke und pumpen weiter Zeugs in die Luft bis zum geht nicht mehr"*[99] (P11: 325-32).

Both participants relativise the influence which the Swiss population could have on environmental issues through changing their diets and, therefore, see no reason to reduce their meat intake. The statements also feature a notion of it being unfair that others are acting even less considerate than we do. As a consequence, P11 and P12 feel even less motivated to restrict their own consumption as there are other people who will not do the same. Their mindset alludes to the issue of the "free rider paradigm". The pursuit of environmental protection poses a social dilemma as people must cooperate in order to secure

[98] "If we focus on CO_2 emissions, I believe that Switzerland wouldn't have any influence at all. The fact alone that in China pork is gaining in popularity will annihilate all efforts we make in Europe, which doesn't necessarily make it any better if we don't pay attention to it anymore, but I don't really believe that my personal action has much of an impact."

[99] "Let's only talk about the little country of Switzerland, ok? We can do something. But if you look at the world in its entirety […] we are such a small piece of the puzzle, we would have to make a much bigger effort globally to be able to stop it and I'm lacking faith. […] Who are we with 8 million people? We try to be impeccapble while everyone else continues building coal-fired power plants and emitting more stuff into the air without moderation."

a collective good. As pro-environmental behaviour is difficult to impose on a national, let alone on a global level, people might be reluctant to behave in a way which maximises collective interests while minimising individual, short-term interests. Especially so, as free riders, people who do not engage in pro-environmental action, would still profit from the efforts made by others while pursuing their personal goals. However, if everyone acts according to their individual interests, collective aims such as environmental protection will suffer long-term, and personal interests might also be at risk eventually (Bohr 2014: 362-3). Low levels of perceived self-efficacy seemed to correlate with unsustainable consumption in this study. All participants who did not believe to possess enough agency to make a significant change also displayed a higher consumption of meat. The only exception formed P4 who was primarily motivated by her family to reduce her meat consumption. One participant expressed an especially pessimistic view on the nature of humans:

> *"Ich glaube nicht an diese Welt, denn da bin ich zu realistisch […]. Man sieht das ja gerade jetzt, wie das so abläuft [bezieht sich auf die Covid-19 Pandemie und den Krieg in der Ukraine]. Wir werden uns vorher dezimieren, weil wir nicht bereit sind, einen Fair Share zu machen, weil Fair Share, das heisst immer, der andere muss etwas geben"*[100] (P7: 334-7).

He emphasises that the very nature of humans, which is fundamentally informed by greed, in his opinion, prevents people to act socially just. Unfortunately, people who have low levels of trust towards society are more likely to suspect free riding and are, therefore, less willing to contribute to collective action (Bohr 2014: 363). Interestingly, P7, who uttered the statement above, also argued that he believes that society is overall improving and that he is not as pessimistic in regard to current social issues, including environmental degradation: *"Gesamthaft gesehen geht es uns heute meiner Meinung nach, obwohl viele Andere das vielleicht anders sehen, so gut wie es der Welt noch nie ging. […] Ich sehe eben die Welt überhaupt nicht so schwarz, wie viele sie sehen"*[101] (P7: 382-96). Both statements stand in stark contrast to each other and make it difficult to discern how the two views about society are compatible. It seems that he uses his perceived low self-efficacy and his belief in an improving society to justify his indifference towards sustainability and pro-environmental engagement to himself. Arguably, he needed to construct a positive rationalisation in order to emotionally distance himself from his pessimistic, less comfortable world view stated peviously, as he surrendered to the idea that he could not change anything about the global situation anyway. The case of P7 exemplifies the hindering effect of a low perception of self-efficacy and how that might lead to inertia in pro-environmental behaviour or the construction of alternative reasonings which overshadow societal issues with an overoptimistic world view.

Nonetheless, a clear majority of respondents expressed an optimistic attitude toward the impact people could make by adapting their diets. Some participants believe that an improvement could already be achieved if Swiss people would be more considerate of their meat consumption and food waste, the two issues which were identified as two main drivers of unsustainable consumption by the participants. As one respondent phrased it:

> *"Man kann viel daran ändern. […] Es gibt Leute, die immer noch jeden Tag Fleisch essen, das ist wahnsinnig. Du brauchst, ich weiss nicht, zehnmal mehr Ackerfläche für ein Steak, das ist absolut der Wahnsinn und da kann man viel machen. Nur schon damit den Fleischkonsum auf ein vernünftiges Niveau zu reduzieren, da wäre schon viel gemacht.*

[100] "I don't believe in this world, I'm too realistic for that […]. You can see now how that is going [refers to the Covid-19 pandemic and the war in Ukraine]. We will decimate ourselves because we are not willing to agree to a fair share because a fair share always means one party ceding something to the other."

[101] "Overall, I believe that we have never done better globally than nowadays, even though many people have a different opinion […]. I don't see the world as pessimistic as many others do."

> *Und das andere ist natürlich auch mit was man wegschmeisst. […] In der Schweiz sind wir bald 8 Millionen, die jeden Tag essen. Doch, dann macht es einen Unterschied. […] Also nicht 50% Unterschied, aber man macht einen Unterschied mit dem Essen "*[102] *(P3: 265-9; 274-7).*

The positive view of P3 on the contribution each individual can make acts as a motivation for her to to pay attention to the things she pointed out. She is aware that the Swiss population is too small to stem the tide of sustainability issues linked to the food system alone but acknowledges that the engagement of a whole nation would not be futile either. Hence, P3 displays a high perception of self-efficacy while remaining realistic about the relative influence the Swiss population could have on a global scale. Another interviewee made a suitable comparison to expose the faulty logic of using the perception of low self-efficacy as an excuse for unsustainable consumption: *"Es ist eigentlich immer wie Steuern zahlen. Meine Steuern, die ich zahle, sind vielleicht nicht so gross, aber ich muss sie ja trotzdem zahlen. Wenn alle keine Steuern zahlen, dann haben wir auch kein Geld"*[103] (P5: 406-8). The comparison highlights that P5 regards pro-environmental behaviour as a civil duty, just as paying taxes is. Even if one's contribution is limited compared to that of other stakeholders, it does not justify neglecting the duty. P5 functions as an example of an ecological citizen who recognises his share of responsibility and acts accordingly. Another participant adds: *"Es fängt ja immer bei einem selber an. Wenn wir die Welt verändern wollen, dann müssen wir bei uns selber anfangen […]. Alles Grosse fängt immer im Kleinen an"*[104] (P13: 311-2). Indeed, the current issues resulting from contemporary eating habits cannot be solved top-down only. Instead, it is important that people adapt their mindset and understand the importance of collective action. It is crucial to heighten people's perception of self-efficacy, as feeling helpless has been found to be a major barrier to adopting pro-environmental behaviour (Kaplan 2000: 498; Kollmuss and Agyeman 2002: 255). One participant reported how he first felt impotent while pondering over the environmental issues society is facing nowadays until he decided to take action:

> *"Als ich in der Stadt war, war ich wie so ein bisschen in einer Ohnmacht. Was kann man überhaupt machen? Es ist alles so schrecklich und schlimm. Und jetzt gehe ich es eher pragmatisch an. Halt mehr so, wo kann ich was machen? Jetzt bin ich mehr so auf diesem Weg […] mit meiner täglichen Arbeit, die ich leiste"*[105] (P10: 757-60).

He was able to improve his perception of self-efficacy by adopting a more pragmatic mindset and focusing on the things he was able to do privately and through his additional education in sustainable farming. Again, this passage demonstrates the importance of propagating practical rather than factual knowledge. Providing input on action strategies has the potential to foster self-efficacy and motivate people to become ecological citizens, whereas exclusively informing people about the negative consequences of unsustainable diets might lead to an increased sense of helplessness and result in inertia.

[102] "There is a lot that can be changed […]. There are still people who eat meat every day, that's crazy. You need, I don't know, ten times more arable land to produce a steak. That's absolutely crazy and there is a lot that can be done. If meat consumption were reduced to a reasonable level, it would already make a huge difference. And the other point is what you throw away, of course. […] We are soon eight million people living in Switzerland, and we eat every day. Yes, it does make a difference. […] Maybe not a 50% difference, but you do make a difference with eating."

[103] "It's actually the same as paying taxes. Only because the taxes that I pay are maybe not as high, I still have to pay them. If no one would pay their taxes, we wouldn't have any money."

[104] "It always starts with yourself. If we want to change the world, we have to start with ourselves […]. All big things start small."

[105] "When I was in the city, I felt impotent, what can I possibly do? Everything is so horrible and bad. And now I take a more pragmatic approach. Like, what can I do? I'm now rather on that path […] with my daily work."

6.4.4 Personal Values: "It was important for us that we reserve parts of our financial means to pay the fair price of food"

One important underlying factor for engaging in pro-environmental action is personal values because they inform behaviour. According to Schwartz, human values are "deeply rooted, abstract motivations that guide, justify or explain attitudes, norms, opinions" (Schwartz 2003: 261). Importantly, values are formed early in life through learning experiences and socialisation and remain relatively stable throughout one's lifetime (Schwartz 1992). This means that cultural upbringing also plays a role in forming personal values. This factor, therefore, overlaps with cultural capacity. Due to their abstract nature, values transcend specific actions and situations and influence human behaviour cross-culturally. Furthermore, values are ordered by importance, although action is guided by their interplay (Schwartz 2012: 3-4). The basic values identified by Schwartz can be situated along a spectrum between self-enhancement and self-transcendence. The former pole describes the preference for self-serving action, whereas the latter pole reflects altruistic behaviour. Depending on which values carry more weight, one can have a rather self-serving value orientation or an altruistic value orientation. Hedonism can be situated at the former end of the spectrum as values related to hedonism seek pleasure and sensuous gratification for oneself (Schwartz 2012: 5). Values relating to universalism, on the opposite, are of an altruistic nature and encompass "understanding, appreciation, tolerance, and protection for the welfare of all people and for nature" (Schwartz 2012: 7). People with an altruistic value orientation who prioritise universalism are more likely to engage in pro-environmental behaviour (Oreg and Katz-Gerro 2006: 226-7) because universalist values positively shape attitudes towards such action which, in turn, has been detected to inform buying intention (Terlau and Hirsch 2015: 161). Although the participants were not asked directly about their values, they crystallised during the interviews. A certain level of universalism could be found in all participants as no one expressed complete indifference towards the environment and the effects that environmental degradation might have on others. However, the relative significance of universalism differed widely between the participants. One participant openly admitted that he has other priorities in his life than engaging with plant-based eating:

> *"Aber ich würde jetzt nicht behaupten, dass ich jemand bin, der primär auf [Nachhaltigkeitsaspekte der Ernährung] achtet […]. Einfach, weil ich halt persönlich auch viele andere Interessen und Sachen habe, die Zeit erfordern und die [das Thema] dann etwas in den Hintergrund rücken"*[106] (P2: 877-80).

Interestingly, P2 stated that he cares about the environment and engages in pro-environmental action, but when it comes to nutrition, he prioritises self-gratification. So depending on the situation, the constellation of personal values might differ slightly and inform behaviour in different ways, although in the above case it could also reflect a conflict of interest which will be discussed in chapter 6.5. Another participant described the hierarchy in which he ranks hedonist and universalist aims. Clearly, he prioritises the former above the latter as the following passage shows:

> *P: "Ich schätze [das Engagement im Nachhaltigkeitsbereich] auch. Ich sage einfach, in bin zu faul, um mich da nochmals wesentlich einzuschränken. Mir ist, provokativ gesagt, ein gemütlicher Lebensabend fast wichtiger. Also egozentrisch […]."*
>
> *I: "Und würdest du dir wünschen, dass sich die Gesellschaft noch mehr mit dem Thema gesunde und nachhaltige Ernährung auseinandersetzt?"*
>
> *P: "Ja sie sollen. Aber lasst mich in Ruhe!"*

[106] "I wouldn't claim that I'm someone who primarily pays attention to [sustainability aspects of nutrition] because I have many other interests and things which take up time and which eclipse [the topic]."

I: "Ok. Also du erkennst es schon als wichtiges Thema?"

P: "Unbedingt."

I: "Aber mehr für die künftigen Generationen?"

P: "Ganz fairerweise ja"[107] (P11: 344-6; 662-8).

The participant acknowledged the importance of environmental protection, thereby showing that he is not completely careless about values relating to environmentalism. However, these values seem to be significantly less important than his hedonist drive to maximise self-gratification. It is his priority to spend his remaining years enjoying life, and in this vision, there is no space for any environmental considerations which would require behavioural change or additional effort of any type and length. The prioritisation of hedonist goals leads him to inaction, despite his apprehension of the consequences of climate change. His example suggests that the absence of the most common, objective barriers to pro-environmental behaviour (he has vast financial means and sufficient time at his disposition, he is healthy and fit and is independent in terms of his living constellation) is useless if personal values are strongly oriented towards self-promoting rather than self-transcending aims.

On the contrary, a high valorisation of environmentalism can outweigh barriers to pro-environmental behaviour. One participant I visited lived in very modest circumstances in a shared apartment. He explained that at 33 years of age, he just started an additional education in sustainable farming and earns an exceptionally low wage. Nonetheless, he and his flatmates declared sustainable consumption their absolute priority when they moved together as students. While they had to accommodate their restricted budget, they did not compromise their ethical resolution of only buying local, seasonal and organic food:

> *"Ja es ist teurer, als wenn du beim Denner irgendwelche Sachen in Aktion kaufen gehst, also irgendwelche konventionellen Sachen, aber es ist halt einfach nicht der faire Preis, den du dort zahlst. Und ich glaube, darum ist es für uns da auch die Basis geworden. Dem [Name des Mitbewohners] und mir war es mega wichtig, dass wir uns die finanziellen Mittel einfach nehmen. Es war nie ein Thema"*[108] (P10: 207-12).

His beliefs motivate him to spend extra money on products which align with his universalist values, although money constitutes, to a certain level, a limiting factor in his life. His example shows that highly prioritising universalist values may help overcome or accommodate limiting factors, which, in other cases, might have been used to justify unsustainable consumption.

Although universalism is a favourable baseline for pro-environmental behaviour, the adoption of the value itself is not an infallible predictor for actual consumption as summarised by the attitude-behaviour-gap. This effect denotes the incongruence between attitudes and actual buying behaviour (Terlau and Hirsch 2015: 161). Some of the factors which are discussed in this thesis, such as social norms, habits and competing aims, can lead to a mismatch between intentions and actual behaviour. The described effect might also have figured during the interviews, although it is difficult to differentiate between participants affected by an attitude-behaviour-gap and those claiming to value environmentalism but solely to cast a better light on themselves (see chapter 5.1.5 for a more detailed discussion of the self-

[107] P: "I do appreciate the engagement in sustainability. I'm just saying that I'm too lazy to substantially limit myself. To put it in provocatory words, it matters more to me to have a comfortable evening of life. I'm being egocentric. […]" I: "Do you wish that society engages more with the topic of healthy and sustainable diets?" P: "Yes, they should. But leave me alone!" I: "Ok. So you do recognise it to be an important topic?" P: "Absolutely." I: "But for the future generations?" P: "Frankly speaking, yes."

[108] "Yes, it is more expensive as if you buy whatever they have on offer at Denner, so some sort of conventional products, but it's not the fair price you pay there. I think that's why it became our basic principle. It has always been key to my flatmate and me to reserve the financial means for that. It has never been up for discussion."

esteem effect). If the latter is the case, the participant does not actually have any intrinsic motivation to engage in pro-environmental behaviour and only claims universalist values to be of importance. There was one instance in which a participant himself noticed an inconsistency between his stated personal values and his (lack of) action. At the beginning of the interview, when he did not know yet about the scope of the present study, he described a range of unsustainable features of his diet. When we discussed his attitudes towards sustainable behaviour, he emphasised that he cares and also worries about the potential consequences of unsustainable diets, which is when he uttered the following statement: *"Das ist alles blablabla, wer macht denn etwas dagegen und wer soll das fördern? Und am Schluss sind das alle diese Grossmäuler, wie ich es jetzt auch bin, oder, blablabla, aber schlussendlich, was machst du konkret? Ja noch nicht so viel"*[109] (P9: 382-4). It was very interesting to see his realisation process that he is part of the issue that people do not stand by their word. This passage might be an indicator that he is affected by such an attitude-behaviour-gap. Given his actual behaviour and the absence of confrontation with the topic in his social environment, it is possible that this participant avoids the topic altogether despite having favourable values and attitudes towards environmentalist goals. Another option would be, of course, that he still prioritises hedonist aims above universalist ones, which, ultimately, influences his decision-making. The attitude-behaviour-gap is a key issue which needs to be focused on in order to understand why people do not engage in pro-environmental behaviour. However, the example described above also illustrates how difficult it can be to distinguish between real and pretended attitudes, an issue which is also complicated by the researcher's positionality.

6.4.5 Alternative Hedonism: "It's all about the joy of cooking and the pleasure of eating"

Contemporary Western society elevated the strive for economic growth and the maximisation of material consumption as the default solution to humans' natural yearn for well-being (Maiteny 2002: 300). Hedonism, the "ethics in which pleasure is regarded as the chief good, or the proper end of action" ("Hedonism" 2022) has, therefore, been equated with excessive consumerism, which also encompasses the staggering consumption of meat. However, this default model of everlasting growth as the prime target is fundamentally incompatible with sustainability aims. Especially so, as consumer society has elevated affluence as the universal scope and answer to hedonist drives. This is reflected in the round-the-clock availability of food which encourages inconsiderate consumption. The second oldest participant noted how this has not always been the case: *"Mir fällt einfach auf, dass wir noch nie so viel Essen hatten, wie wir jetzt haben. Wir können an jeder Ecke 24 Stunden essen und das war früher nicht so"*[110] (P12: 528-30). This increase in convenience and fast food offer caters to the busy lifestyles of people who wish to externalise the effort of cooking. One participant who barely ever cooks related how her consumption consists of impulsive purchases which she dislikes herself because they significantly contribute to her unhealthy nutrition. She elaborated how she experiences the affluence of food in both her surrounding and at home among her family:

> *"Wir haben eben an Bairam ein Familienessen gehabt und dort wurde eben auch sehr viel Fleisch serviert. Es war viel zu viel und ich meine, ich werde auch älter und mein Körper mag es vielleicht heute, dass ich vielleicht ein Gipfeli zum Znüni esse, ein Butterbretzeli und dann zum Mittagessen noch einen Burger reinhaue und zum Zvieri noch keine Ahnung was, aber in ein, zwei, drei, vier Jahre, oder fünf, sechs Jahre ist es eben auch mega*

[109] "That's blablabla, but who does something against it and who is supposed to support that? In the end we're all loud-mouths, just as I'm being right now, blablabla, but in the end, what do you really do? Not that much yet."

[110] "I notice that we have never had so much food available as today. We can eat 24/7 wherever we are, and that was not the case in earlier times."

> *ungesund und ich würde nicht einfach irgendetwas essen wollen. Und wir sind an dem Abend an diesem Tisch gesessen und es war so eine Völlerei, was eigentlich ab und zu mal okay ist, aber nicht für jeden Tag. Und ich habe das Gefühl, ich lebe jeden Tag so hey, ich habe Lust, ich hole mir das jetzt, was es eigentlich überhaupt nicht braucht. Ein Gipfeli jeden Tag braucht es nicht"*[111] (P6: 405-14).

P6 explained how the large quantities of meat and convenience food she eats are undesirable for multiple reasons. First, a pure pursuit of pleasure might, as she explains it, interfere with other personal goals, such as staying healthy. In fact, she perceives the round-the-clock availability of convenience food as cumbersome because it tempts her to make unhealthy food choices. Moreover, she recognised that the exaggerate amounts of food served at family celebrations overshoots the mark. She highlights how nowadays, not only the frequency of meat consumption is problematic, but also the amounts in which meat is consumed. In the quote above, P6 describes the family dinner at Bairam as a gluttony, to the point where the exorbitant quantity of food and especially meat served became unpleasant. This passage suggests that affluence might actually not be the best way to meet hedonist needs. Interestingly, P6 chose to describe a scene from Bairam, the most important Islamic holiday, comparable to Christmas. Most participants reported that meat is a staple at every festivity because it is a special day which requires a special menu. There is little to argue against such a mentality. In fact, it would be desirable to elevate meat to his former function again to be the food reserved for special occasions only, which even then is consumed in moderate quantities. It is important to highlight that there is a difference between affluence and seeking hedonist gratification. Even in a traditional hedonist sense, the level of consumption to achieve self-indulgence should be reconsidered as there are other self-promoting factors, such as health, which may suffer from over-engaging in unsustainable habits.

Unfortunately, pro-environmental behaviour is often framed as sacrifice, which leads to the problematic belief that a sustainable lifestyle, or in this case diet, is not desirable. The origin of this issue lies in the outlining of pro-environmental action as an act of altruism or, in other words, an act on behalf of the welfare of others which excludes the pursuit of any self-interest. This conceptualisation is, thus, inherently linked to the notion of personal sacrifice and a reduction in the quality of life, which goes against the core idea of hedonism and is unhelpful in convincing people to behave sustainably (Kaplan 2000: 494). Especially so, if people have a self-promoting rather than altruistic value orientation. The notion of relinquishment attached to pro-environmental behaviour and, by extension, plant-based eating might have also inspired a participant to describe this type of diet as being really extreme (P1: 255). People might interpret the public appeal to switch to a plant-based diet as a coercion to abandon their familiar diet and replace it with an unenjoyable one, although the actual aim is to motivate people to reflect their habits and look for more sustainable alternatives which are equally pleasurable. The notion of environmentally friendly behaviour implying personal renouncement was also present among some of the participants as the following example shows: *"Ich schätze [Nachhaltigkeitsziele] auch. Ich sage einfach, ich bin zu faul, um mich da nochmals wesentlich einzuschränken. Mir ist, provokativ gesagt, ein gemütlicher Lebensabend fast wichtiger. Also egozentrisch"* (P11: 344-6)[112]. Despite recognising

[111] "We had a family dinner to celebrate bairam and a lot of meat got served there. It was way too much, and I mean, I'm also getting older, and my body might take it now that I eat pastries for snack, pretzel later on, a burger for lunch and what do I know for afternoon snack, but in one, two, three, four or five, six years it will be super unhealthy, and I don't want to just eat whatever. And that evening we sat there at the table, and it was a real crapulence, which might be okay every once in a while, but not every day. And I had the impression I live every day based on my mood, like hey I'm in the mood for that so I'm going to get it which is really unnecessary. You don't need pastry every day."

[112] "I do appreciate the engagement in sustainability. I'm just saying that I'm too lazy to substantially limit myself. To put it in provocatory words, it matters more to me to have a comfortable evening of life. I'm being egocentric."

the importance of the environmentalist agenda, P11 refuses to change his eating habits because in his opinion, a more sustainable diet is mutually exclusive with indulgence. He associates sustainable behaviour with personal limitations which he is unwilling to accept. The issue of pro-environmental discourse is that often, the abandonment of environmentally unideal action is not placed in the context of replacing an unfavourable habit with a more sustainable alternative. People are not required to become vegan in order to contribute to the lessening of the environmental impact of food. On the contrary, unsustainable diets which are characterised by a high volume of meat could already be improved by just reducing the amount of meat or replace beef by a different type of meat which has a lower environmental footprint, such as poultry, for instance. As such, a shift towards plant-based eating and sustainable behaviour in general should not be seen as a call for ascetism but rather as an appeal to find pleasurable, sustainable alternatives.

Even more important, it is key to foreground that hedonist pleasure deriving from food must not be dependent on the amount of meat consumed or consumption in general as pleasure can be derived from a variety of different sources. Put differently, environmental protection cannot be reconciled with the mainstream notion of hedonism long-term, even if consumerism is scaled down, so a new, alternative conceptualisation of hedonism is needed. A different framing of pleasure and self-gratification is crucial because hedonism is one of the superordinate goals which informs personal values and informs motivations and attitudes of each individual, though to varying degree (Schwartz 2012). The term "alternative hedonism" was coined by Scoper and denotes the "moving away from the obsession with consumerist gratifications and pursuing a less work-driven, and materially acquisitive, way of life" (2012: 101). This conceptualisation of hedonism is reconcilable with environmentalist scopes. Instead of focusing on consumption, celebrating the experience of cooking, eating and sharing the pleasure of food with other people, to name a few, constitute sources of joy in line with the core idea of alternative hedonism.

The interviews yielded evidence that alternative hedonist goals had already been assumed by some of the respondents, especially by those who eat plant-based. In fact, it is incorrect to assume that to people adhering to a plant-based diet are not interested in satisfying hedonist values. The participants adhering to a plant-based diet emphasised just as much the importance of eating well. *"Essen ist doch ein Vergnügen, das ist etwas sehr Sinnliches"* (P8: 5-6), stated one participants who eats only little meat. Contrary to the perspective that everything besides meat is boring and only qualifies as a side dish, one participant explains how his family eventually stopped cooking meat at Christmas and how the new meals were just as pleasurable, even though he had liked the former tradition too:

> *"Im Jahr drauf [haben wir] die ganzen tierischen Produkte, also Fisch und Fleisch, weggelassen. Und man kann deshalb genauso schön kochen und auch lange kochen und was Spezielles auf den Tisch bringen. Und das ist immer noch eigentlich der gleiche Spirit und dementsprechend hat sich das für mich so ein bisschen ergeben, dass es nicht zwingend Fleisch geben muss"*[113] (P5: 174-93).

P5 shared his opinion that meat is not decisive to render a meal special. Rather, what matters to him is the effort one puts into preparing the food. P5 likes meat and was at first against a change of menu. In the end, however, he realised that it did not come down to the meat to make a Christmas dinner special because it does not have to be the central element of a nice dish. Hence, his example suggests that the assumption that satisfaction can only be reached through meals containing meat might be linked to habits and cultural learnings rather than being an absolute truth. One participant adhering to a plant-based diet

[113] "The year after, we left away all animal products, so both fish and meat. But it was still possible to cook nicely and in a very elaborate way and prepare something special. And that incorporates the same spirit which showed me that you don't necessarily need meat."

explains what really matters to him in relation to food: *"Die Freude am Kochen und der Genuss"* (P10: 259-60). There is a plethora of aspects which renders eating pleasurable, and the taste of meat is only one of them. It is not purely the ingredients that are used to prepare a meal which determine the satisfaction one draws from food. Actually, both meat enthusiasts and plant-based eaters equally mentioned other aspects of eating which they highly value and which are representative of alternative hedonism:

> *"Ich [koche] dann schon ganz gerne auch vielleicht in einer Gruppe oder zu zweit mal etwas Aufwendiges"*[114] (P2: 179-80).
>
> *"Allgemein kochen wir schon und es ist auch allen mega wichtig. [Das Kochen] ist eine grosse Fühlerei in unserer Gemeinschaft hier, das wir recht zelebrieren"*[115] (P10: 62-3).
>
> *"Ich koche gerne. […] Ich war auch schon an Kochkursen"*[116] (P7: 86-91).
>
> *"Ich bin jemand, der sehr gerne isst, also auch geniesst und deshalb […] bin auch jemand, der sehr neugierig ist. […] Kochen hat mir immer Spass gemacht und ich finde, es hat so ein bisschen etwas […] Experimentelles an sich und etwas sehr Sinnliches. Ich finde, Kochen ist etwas sehr Sinnliches. […] Essen ist [deshalb] für mich mehr als einfach nur Nahrungsmittelaufnahme. Unsere Esskultur bei uns zuhause ist auch so, dass wir unser Essen teilen und das zelebrieren und gemeinsam am Tisch sitzen und darum ist [Ernährung] auch immer wieder ein Hauptthema"*[117] (P13: 172-5; 619-25).

These statements demonstrate that the celebration of cooking, being together and exploring new things, factors which are not directly related to consumption itself, essentially contribute to satisfying hedonist needs. In fact, most respondents mentioned that the social dimension of eating is one of the most important things they associate with food. Others explained that they like cooking and trying out new things because they perceive it as a sensual and exciting experience. P7 even explained how he is looking forward to visiting more cooking classes after his retirement. Attending a cooking class could present a good opportunity to discover the realm of plant-based food within an enjoyable setting. All these values surrounding food could be used reduce the conceptual importance of meat because they allow for a plant-based diet to also be framed and experienced as pleasurable. P13 acknowledged in her elaboration stated above that most of the positive aspects which she associates with eating and cooking are not inherently related to meat consumption, even though she describes herself as a thorough carnivore: *"Ich bin echt eine Karnivorin. Wenn es nach mir ginge, könnt ich tip top zweimal am Tag Fleisch essen, sieben Mal in der Woche"* (P13: 26-8). Despite her clear preferences, she refrains from eating meat as often as she would like to because she is aware of the adverse effects of meat consumption on the environment and because she is able to draw satisfaction also from other aspects related to food. From a psychological point of view, it is key to highlight alternative ways to satisfy hedonist needs in order to advert the focus from meat consumption and abolish the association between pro-environmental behaviour and renouncement. An alternative hedonism framing will be key to increase the motivation of people to adapt a sustainable diet, especially for those who have a rather self-promoting value orientation and want to experience self-gratification through eating.

---

[114] "I like cooking something elaborate when I'm in a group."

[115] "We usually cook, and it's a highly emotional topic in our community because we all celebrate it."

[116] "I like cooking […]. I've also been to a couple of cooking classes already."

[117] "I'm someone who really likes eating and highly enjoys it […] and, therefore, I'm also very curious. […] I've always liked cooking and I find both experimental and sensual. I find cooking something very sensual. […] Eating to me is more than just the intake of nutrients. Our eating culture at home entails the sharing of our food and the celebration of sitting together at the table, which is why nutrition is always an important topic for us."

6.5 Prioritisation of Investments

Most consumption choices entail a conflict of interest of some sort between personal values, self-promoting and environment goals. Whether someone will opt for the most sustainable choice depends on how compatible this option is with their personal values and self-serving aims. This chapters elaborates on how people explain their prioritisation of investments. Thus, this section draws on the attitude-behaviour-gap theory which aims at explaining why people engage in unsustainable behaviour despite having a positive attitude towards sustainability. Previous research on the topic has found that such a gap can result from high "behavioural costs" (Kaiser et al. 2010: 351) or personal investments, as I refer to them. In this context, an investment needs to be understood to go beyond financial means and also encompass aspects such as the investment of time and efforts, among others. The first subchapter investigates the openly stated reasons why the participants opted for or against assuming sustainable eating patterns. The second subchapter discusses how some participants tried to justify their engagement in unsustainable consumption with certain limitations in their capacity, although the outlined reasons constituted excuses for prioritising self-serving aims rather than actual barriers to pro-environmental behaviour. The outlined process of how people prioritise one viable option over another takes place outside the sphere of capacities. This chapter describes, therefore, an additional step in decision-making which was not considered in the original CEF framework, a shortcoming which I address in the conclusion.

6.5.1 Compatibility of Personal Values and Self-Serving Aims with Pro-Environmental Behaviour: "I don't want to eat meat, but my dietician told me I have to"

Eating needs to fulfil a multitude of personal needs and wishes but, unfortunately, these requirements on diets are neither always compatible with each other nor with the environmentalist agenda. Food is expected to properly fuel the body in a healthy way but also to satisfy hedonistic requirements and provide a pleasurable sensory experience. Such non-environmental motives are one of the most frequent barrier to engage in pro-environmental behaviour (Kollmuss and Agyeman 2002: 250). Especially a strong preference for the taste of meat, which serves to gratify hedonist drives, has been found to be one of the main reasons why people are reluctant to adopt a plant-based diet (Fehér et al. 2020: 11; Lea, Crawford, and Worsley 2006: 833-4; Stoll-Kleemann and Schmidt 2017: 1268). If discrepant motives are present, people must decide which aspects to prioritise. The resulting prioritisation depends largely on one's personal values. One participant described how he ranks the requirements his diet has to fulfill as follows: *"An erster Stelle steht natürlich, dass es mich halt satt macht und genug Energie gibt und dann an zweiter Stelle steht, dass es mir schmeckt und dann vielleicht an dritter Stelle irgendwo Preis und Nachhaltigkeit oder so"*[118] (P2: 495-8). This explains, on the one hand, which factors he weighs more in food choices and, on the other hand, which aspects he will prioritise if a food option cannot fulfil all the checkpoints equally. Given the above statement, P2 prioritises self-serving aims above environmental considerations in terms of dietary choices, especially because he seemed to mention sustainability only as an afterthought. Since P2 regards meat consumption as an essential part of rendering his diet fuelling and pleasurable, the gratification of his self-serving aims is not well-compatible with pro-environmental behaviour. In such cases where universalism is not the primary

[118] "The first priority is, of course, that it satiates me and provides me with enough energy and then on the second place is that I like it and maybe on the third place price and sustainability or so."

scope to inform action and where switching to a plant-based diet would result in fewer perceived benefits, it is unlikely that people will opt for a sustainable change.

It is more likely that people engage in pro-environmental behaviour if adhering to a sustainable lifestyle is reflective of personal values or if the benefits resulting from sustainable action outweigh those of the unsustainable alternative or serve to reach a self-promoting aim too. Research found, for instance, that people are more likely to adopt a plant-based diet if they believe that it also benefits their health because humans tend to prioritise their well-being (Eker et al., 2019; Fox and Ward, 2008; Kollmuss and Agyeman 2002: 256; Lea, Crawford, and Worsley 2006: 829). P5 explained how these two aspects converge in his case and jointly motivate him to eat organic, plant-based food:

> *"Bei der Ernährung steht für mich an erster Stelle eher die Gesundheit und danach der Aspekt der Nachhaltigkeit, was aber nicht heisst, dass das zweite nicht wichtig ist für mich. Das ist zum Beispiel ein Grund, wieso ich weniger bis hin zu gar kein Fleisch esse. Aber auch gerade bei den Milchprodukten, [ich verzichte] nicht wegen der Nachhaltigkeit auf sie, sondern wirklich aus gesundheitlichen Gründen. […] Es gibt eigentlich fast nichts, was ich nicht in Bio-Qualität einkaufe, […] weil ich auch da vom Qualitätsstandard überzeugt bin und weil ich nicht gespritztes Essen in der Menge essen möchte. Es geht mir weniger darum, dass das ganze Zeug schön aussieht, sondern eher, unter welchen Umständen es produziert wurde und was dahintersteht"*[119] (P5: 74-7; 61-8).

The participant stated that health and sustainability are two of his priorities, although the former ranks slightly higher than the latter. P5 explained that he only buys organic produce because he believes it to be more salutary than conventional products, which have been treated with pesticides. Furthermore, he thinks that organic agriculture is also beneficial for the environment, meaning that he can address two of his personal aims with the same action, despite the choice being primarily informed by his interest to promote his health. Similarly, health aspects are the primary reason why P5 decided to relinquish dairy almost completely. Although his abstinence is mostly promoted by self-serving reasons, it is also favourable from an environmental point of view. Nonetheless, he clearly also encompasses values related to universalism. He stated to limit his meat consumption primarily because of its environmental impact and not because he dislikes meat or because he believes that it is unhealthy. It is, therefore, likely that his values entail a strong altruistic component, although he also pursues self-promoting aims. In his case, altruistic and self-serving motivations complement rather than compete with each other, explaining why he commendably adheres to a plant-based diet and almost exclusively buys organic products. P3 stated to feel physically worse after eating larger amounts of meat and added that this constitutes one of the reasons why she limits her meat consumption:

> *"Ich fühle mich auch wirklich schlechter, wenn ich viel Fleisch gegessen haben, nach so Feiertagen, wo du 3, 4 Mal nacheinander von Crevetten, Lachs bis Fleisch und weiss ich nicht was isst, dann merke ich das. […] Bei mir entzünden sich die Gelenke, das merk ich sofort"* (P3: 762-6)[120].

The palpable benefits P3 experiences when eating less meat also provide a convincing self-promoting reason to adhere to a plant-based diet, although she stated that environmental considerations also played

[119] "My first priority for nutrition is health and then the aspect of sustainability, which doesn't mean, though, that it's not important to me. That's for instance a reason why I eat little to no meat. But I don't renounce to dairy because of sustainability reasons but because of health reasons. […] There is almost nothing that I don't buy in organic quality. […] because I'm convinced of the quality standard, because I don't want to eat products that were treated with pesticides in such amounts. I don't really care about how that stuff looks like, but rather under which conditions they were produced and what they stand for."

[120] "I feel worse after eating a lot of meat, for instance after festivities during which you eat three or four times after another shrimps, salmon, meat and what not. It affects me. My joints inflame immediately."

a key role in her decision to reduce her meat consumption. Highlighting the adverse health effects of high meat consumption might not suffice to convince people to switch to a plant-based diet if they highly value the taste of meat or are not as preoccupied about their health because would they experience more drawbacks from limiting their meat consumption than from not doing so. However, both analysed passages suggest that emphasising self-promoting reasons to adopt a plant-based diet might increase the likelihood that people who do not perceive meat reduction as a significantly limiting change will do so if they can benefit on a personal level from a plant-based diet.

There were instances in which self-serving motives led to pro-environmental behaviour, even though the participants in question did not prioritise universalist values. The examples were most frequently related to food waste reduction. Efforts in reducing food waste were reported by all participants, although some admitted that they were not always successful in doing so. Among those who said that they try to reduce food waste were also some who refuse to engage in any other pro-environmental behaviour related to diets. A possible explanation why people tend to be opposed to food waste is that wasting food also means wasting money, which affects the self-promoting aim of saving money. One interview revealed how this motive might be the only reason for engaging in reducing food waste. P9 explained that one of his priorities is to save money on food by buying things on sale or when they are on special offer. He formed this habit out of necessity during a financially difficult situation in his life and adhered to the habit, despite not having to do so anymore. He repeatedly mentioned how he continues to make efforts to save money and waste as little food as possible, as the following example shows:

> *"Ich schaue auch immer auf die 50% Geschichten, das kennst du ja. Da sage ich auch Foodwaste; Foodwaste hasse ich extrem. […] Es ist nicht ökologisch, dass man sagt, es ist etwas abgelaufen, das Joghurt ist abgelaufen. Da gibt es Leute in meinem Umfeld, die Joghurt wegschmeissen, wenn es abgelaufen ist. Ich könnte denen geradewegs eine Faust ins Gesicht schlagen, weil das so keinen Unterschied macht"*[121] (P9: 82-3; 394-6).

The strong and aggressive language he used in the passage to describe how much he despises food waste might give the impression that he is a passionate advocate for the environment. During the interview, I gained the impression, however, that it was less the environmental impact of food waste which he tried to address and rather the indirect waste of money that accrues through wasting food which he felt strongly opposed to. The impression was substantiated by his stating that the only pro-environmental behaviour he engages in relates to not wasting food: *P: "Das Einzige, das ich mache, ist der Beitrag…" I: "Mit dem Foodwaste?" P: "Genau. No Foodwaste"*[122] (P9: 401-3). In this case, the participant seemed to use a pro-environmental practice to give his passion for saving money on food an ethical legitimation without showing any further interests in sustainable diets. Of course, his endeavour to reduce food waste serves an environmental purpose too, but it is important to see that, at least in his case, the motivation for engaging in pro-environmental behaviour is limited to this one practice, whereas everything else remains unchanged as it does not coincide with his priority to save money, although, arguably, he could save even more money if he also reduced his meat consumption. Kollmuss and Agyeman argue that financial and other incentives which appeal to self-serving aims can promote the engagement in pro-environmental behaviour (2002: 250-1). While installing such exterior incentives can motivate even people with low environmental concerns to act more sustainably, it is important to note that such engagement might be easily reversable once the incentive disappears because the

[121] "I always pay attention to things that are on special offer as you know. Here I also say food waste; I hate food waste. […] It's not ecological to say that something has gone off, that a cup of yoghurt has gone off. There are people in my social environment who throw yoghurt away if it has gone off. I could punch them straight in the face because it really doesn't make a difference."

[122] P: "The only contribution I make is…" I: "Reducing your food waste?" P: "Exactly. No food waste."

behavioural change is not motivated by personal values. Nonetheless, exterior incentives remain an option for policy makers to promote pro-environmental behaviour, and they also allow for framing meat and food waste reduction as a strategy to save money.

Some participants reported an inner conflict between a self-serving interest and their (intended) adoption of a plant-based diet. Health or rather dietary requirements for weight maintenance or loss were the most frequently mentioned factor to compete with the participants' intention to eat more sustainably. Four women argued that they find it difficult to further reduce their meat intake because they already limit their carbohydrate consumption in order to lose or maintain their weight. They described their predicament as follows:

> *"Auf der anderen Seite geht es mir mega auf die Nerven, weil ich finde, du kannst praktisch nichts mehr essen, weil wenn ich jetzt sage, […] dass ich mir schauen will und so essen möchte, wie es mir gut tut und ich die Kohlenhydrate weglasse, oder […] wenig Kohlenhydrate esse, dann bleibt einfach mega wenig übrig"*[123] (P13: 299-303).

> *"Aber auf der anderen Seite sind [Milchprodukte] eben wieder Proteine, die man haben sollte und darum ist es einfach ein bisschen schwierig, was isst du denn? […] Was ich jetzt noch an Fleisch esse, ist meistens Poulet und ich mache es jetzt einfach, weil es zu dieser Ernährungsumstellung gehört, dass ich das Fleisch essen muss"*[124] (P12: 179-87).

> *"Das finde ich auch das schwierigste an dieser ganzen Kohlenhydrat-Geschichte. Weil wenn du keine Kohlenhydrate isst, dann musst du Fleisch essen. Und das ist eben schlecht für die Umwelt, es ist teuer und ich habe Fleisch auch nicht so gerne"*[125] (P14: 401-3).

These quotes suggest that there is a strong emphasis on reducing carbohydrates and increasing animal protein intake in contemporary weight-loss advice, which competes with sustainability aims. The perceived difficulty to meet the personal demand of protein was found to constitute a barrier also in a different study (Reipurth et al. 2019: 290). It was impressive to hear that P12 and P14 do not even like meat as much and only eat it for weight-loss or -maintenance purposes. All four women reported that sustainability plays a role in their dietary choices but that their personal health requirements for weight management impedes them, especially in the case of P12 and P14, to eat how they would like to, not just from an environmental point of view but also from a hedonist one. Given this recurringly reported predicament, it might be of use to evaluate, whether different strategies for weight management, which do not focus as much on animal protein, might also be viable. Addressing such seeming incompatibilities might prove especially efficient because the people in question would be willing to further reduce their meat consumption.

This chapter showed how an attitude-behaviour-gap can result from a mismatch between personal values, self-promoting aims and pro-environmental requirements. Previous research suggests that people who have an altruistic value orientation which includes environmental goals and also believe that they could improve their health through a plant-based diet are likely to undergo a dietary change because they perceive the investment costs as relatively low (group 1 in *figure 6*). This was the case for one participant in the study and three other respondents explained their consumption of organic products

[123] "On the other side, it really annoys me because you can't eat anything anymore, basically, because if I want to look after myself and eat how it's best for me by avoiding […] or reducing carbohydrates, then there is only very little left."

[124] "But on the other hand, dairy is a protein source that you should consume and then it's kind of hard, what do you eat? […] What I mostly eat now in terms of meat is chicken and I only do it because it's part of this weight-loss diet which prescribes me to eat meat."

[125] "I find this the hardest part of this whole carbohydrate thing because if you don't eat carbohydrates, you have to eat meat. And that's bad for the environment, it's expensive and I don't like meat as much."

with the same reasoning. Likewise, people with a self-promoting value orientation who believe to gain more self-serving benefits from rendering their diet more sustainable are also likely to engage in pro-environmental behaviour, despite it not being motivated by environmental considerations (group 2). However, their engagement will be limited to the one action which provides them with personal advantages whereas the costs of investment will be deemed to high for practices which do not yield self-promoting benefits. The respondent who reported to put much effort in reducing food waste because he has an aversion of wasting money on food exemplifies this group of people. In contrast, even if someone has an altruistic value orientation, they might still refrain from adopting a plant-based diet if the change strongly contradicts their self-promoting aims and they perceive the costs of investment as being too high (group 3). This was the case for several participants who reported that eating meat was an essential part of their weight-management. In their case, losing control over their weight-management would have constituted to high of an investment cost, despite their favourable attitudes towards pro-environmental action. Lastly, people with a self-promoting value orientation are the least likely to assume a plant-based diet if this shift contradicts self-promoting aims in the slightest (group 4). This was the case for those participants who prioritise deriving pleasure from eating meat and stated that they do not care about a sustainable diet. The four outlined options can be situated in the diagram below (*figure 6*). It depicts the likelihood of adopting a plant-based diet as the function between the perceived investment costs and one's value orientation. This conceptualisation aligns with the findings of Yamoah and Acquaye who opine that:

> "The degree of difficulty or obstacles that a consumer overcomes to undertake a given behaviour is a function of the individual's commitment to the goals associated with the behaviour […]. An individual's involvement in a given attitude-relevant behaviour is an indicator of a person's general attitude" (2019: 175).

As such, *figure 6* explains the remaining attitude-behaviour-gap once the factors limiting individual capacity have been accounted for.

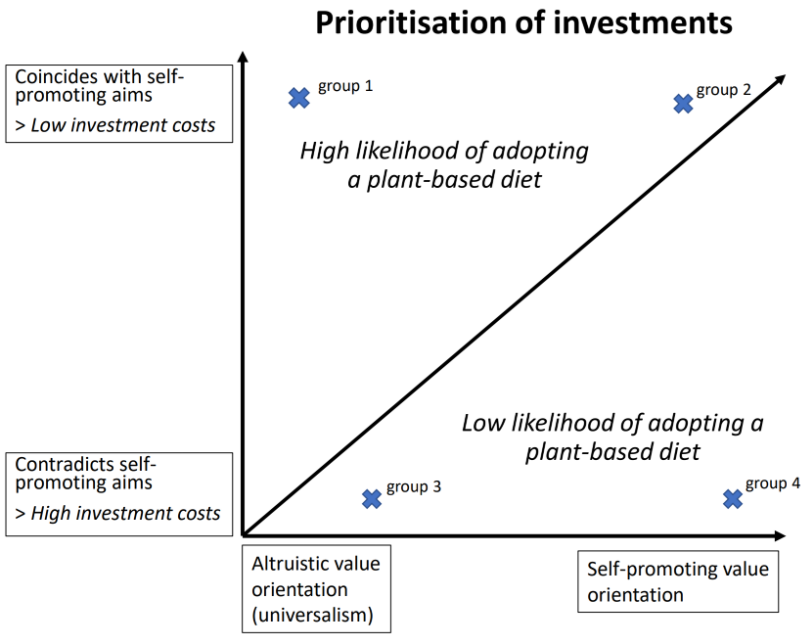

***Figure 6**: Visual representation of the attitude-behaviour-gap of adopting a plant-based diet once the factors limiting individual capacity have been accounted for.*

6.5.2 Excuses for Unsustainable Consumption: "I would buy more sustainable products if I only had the money to do so"

While the last subchapter discussed the openly stated fields of tension between self-serving aims and pro-environmental behaviour, this section analyses implicit legitimisation discourses for unsustainable consumption used by the respondents. Put differently, the participants often employed a specific rhetoric to justify the lack of pro-environmental action, which, on closer inspection, however, did not constitute a real barrier as depicted by them. The justification discourses mentioned during the interviews centred around limited financial means, limited time availability and being too old for major change. I will focus on the first identified pattern, financial means, as it was the most prolific discourse and because it suffices to exemplify how alleged barriers to one's capacity are used to justify the prioritisation of self-promoting action.

Three participants who reported a diet high in meat mentioned limited financial means as a constraint for eating more sustainably. They explained that organic and regional products as well as meat analogues are not affordable and, hence, it is impossible for them to render their diet more sustainable. What was not acknowledged, however, is that in a meat-rich diet, the largest cost factor is, which also happens to be the most environmentally detrimental aspect of diets. A study conducted in France revealed that animal products were considerably more expensive per gram than starchy foods, vegetables and fruit (although only starchy foods were also cheaper per calorie) (Masset et al. 2014: 865). One participant explained that receiving good value for money is his priority when buying food. He then added the following to explain why a sustainable diet is incompatible with his need to save money on groceries: *"Wenn du jetzt ein Stück Fleisch kaufst, das nur für einen Tag ist und du zahlst 10 Franken, aber du bekommst zwei Stück Fleisch für 5 Franken und die Qualität ist die gleiche, dann schaue ich nicht, dass es nachhaltig ist"*[126] (P1: 476-8). The interesting part of his rationale is his claim that he could not afford sustainable meat, thereby probably meaning organic and regional meat, while ignoring that the most sustainable option, replacing meat by a plant-based food, would actually result in the lowest costs. P1's quote reflects an unfounded belief that eating sustainably means spending more money on food, because it seems that people often associate organic products, which are indeed more expensive than conventional ones, with sustainable eating. This assumption neglects however, that the choice of food, independently of whether it is organic or not, plays an even more important role in determining overall groceries expenses and is also more decisive to lower the environmental impact of global food patterns. As such, eating more sustainable in terms of reducing meat consumption constitutes a viable option even for those who have limited financial means. In the case of P1, neither the food diary nor the interview provided evidence that he also limits his meat consumption to make ends meet, so the alleged money constraint cannot be as incapacitating as he made it out to be. A similar discourse was linked to how the prices of meat and dairy alternatives were perceived. Replacement products were often used to support the discourse of sustainable diets being too expensive to afford. As the following passages show, some participants criticised the price of vegetarian and vegan replacement products and argued that they would buy them more often if they were cheaper:

> *"Und natürlich [sind Fleischersatzprodukte] oft auch deutlich, deutlich teurer, also oft kosten die vegetarischen Ersatzprodukte einfach das Doppelte und Dreifache und dann sehe ich wie nicht für mich persönlich die Motivation, das zu kaufen"*[127] (P2: 531-3).

[126] "If you buy a piece of meat that suffices only for a day and you pay 10 CHF, but you get two pieces of meat for 5 CHF and the quality is the same, then I won't care whether the latter it's organic or not."

[127] "And of course [meat replacement products] are oftentimes considerably more expensive. Vegetarian replacement products often cost two or three times as much and then I don't have any personal reason to buy them."

> *"Ich finde, es ist auch noch recht teuer für einen Ersatz und darum habe ich so gefunden, ja, ich kaufe vielleicht lieber Poulet"*[128] (P14: 445-6).

> *"Ich glaube [der höhere Preis von Ersatzprodukten] schafft die falschen Anreize […]. Wenn ich sehen würde, es wäre günstiger als Fleisch, dann würde ich sicher das andere kaufen"*[129] (P6: 506-13).

There is of course a grain of truth in the participants' critique as meat substitutes are usually more expensive than the original products they imitate. However, in 2020, the mean price of meat in Switzerland was 5.1% more expensive than that of meat replacements. This is due to the fact that some meat products such as filet and other prestigious cuts are very expensive and affect the overall price averages in favour of vegetarian alternatives (Herrmann and Bolliger 2021: 19). Whether exchanging meat with replacement products would actually result in lower expenses depends, of course, on which meat cuts are usually consumed. Regardless of the price difference, however, what matters is that neither meat nor analogues are necessarily required for a balanced diet. Furthermore, the expensiveness of substitutes seemed to be an irrelevant argument because none of the participants who criticised the elevated price of meat analogues else argued that the implementation of substitutes would be decisive to allow them to change their dietary patterns. Also, blaming the costs of meat and dairy alternatives for not being able to shift towards a plant-based diet is in itself not a convincing reason, because replacement products are facultative, and because food expenses could significantly be reduced through a decrease in meat consumption. As one participant summarises it:

> *"Also der Unterschied ist brutal. Wenn du das Fleisch weglässt und wirklich bei den Basics bleibt so wie Tofu und Hülsenfrüchte, dann gibst du viel weniger aus. Die Fleischersatzprodukte sind manchmal gleich teuer wie Poulet. […] Aber wenn du dich traditionell vegetarisch ernährst, dann sparst du sehr viel"*[130] (P3: 450-4).

Nonetheless, it seems that the higher prices of meat analogues and dairy alternatives provide an additional barrier as they reinforce the notion that sustainable diets are more expensive than regular ones. An emphasis on "traditional" vegetarian options, as P3 calls them, might show that shifting to a plant-based diet is advantageous to saving money, especially if plant-based convenience foods are only consumed in limited amounts. Although it is possible that the participants were not aware of their flawed logic that sustainable diets do not have to be more expensive, the examples reveal how the high prices of organic products and meat analogues could easily be used to justify an unsustainable diet.

While limited financial means can indeed constitute a barrier which decreases one's personal capacity, it also provides a convenient excuse for unsustainable behaviour as the following two examples will show. I would like to note that this section is not meant to blame the participants for not engaging in potential sustainability strategies such as buying local or organic food but to highlight the discourses they applied to explain their rather unsustainable diets. The first case regards P6 who, as a student and part-time worker, has to budget her expenses. However, during the week in which she compiled her food diary, she bought all the food she ate to-go or in a restaurant, besides the four times in which she ate dinner at her parents' home. During the interview, she said that she barely ever cooks, and that this way of consumption is reflective of her usual eating habits. She even mentioned that this sort of consumption

[128] "I also think that it's quite expensive for a replacement product and that's why I thought, maybe I'd rather buy the chicken."

[129] "I believe that [the higher price of meat replacement products] creates the wrong incentives […] if I would see that it was cheaper then meat, I would definitely buy the other thing."

[130] "The difference is brutal. If you leave away the meat and stick to the basics like tofu and pulses, you spend considerably less. The meat replacement products are sometimes as expensive as chicken. […] But if you eat traditionally vegetarian, you save a lot of money."

considerably adds to her living costs. Indeed, Brunner and Casetti found that in Swiss diets, one of the largest contributors to expensive diets is the number of convenience products and fast food which is consumed (2014: 7). While P6 was dissatisfied with her additional expenses, she rationalised them differently than additional costs which might accrue from buying organic or regional products. The following passage exemplifies how money, in her case, is not the barrier she made it out to be:

> *P: "Wenn ich das Geld hätte, würde ich mich schon sehr gut darauf achten, dass etwas regional ist, aber da ich das Geld nicht habe, [nehme ich] das günstigste. "*
>
> *I: "Gut, da könnte man dafür aber auch sagen, dann lässt man dafür die Mango weg, denn die wird ja eingeflogen und ich nehme den Apfel, der von da ist und auch garantiert billiger ist."*
>
> *P: "Ich glaube in der Hinsicht entscheidet dann schon auch die Lust. […] Wenn es mich nach einer Mango gelüstet, die eingeflogen wird, aber daneben noch der Apfel aus der Schweiz ist, dann […] nehme ich die Mango"*[131] (P6: 615-22).

On the one hand, P6 argues that she always chooses the cheapest product in the shop because she cannot afford the more sustainable option. On the other hand, however, she would be willing to spend extra money on a more expensive product if that is what she wants to eat. The example suggests that her budget might be limiting her personal capacity to a certain level but not to the point where she could not opt for a more environmentally friendly diet. The described circumstance boils down to prioritising self-promoting hedonist needs rather than universalist values. For the time being, it seems like P6 favours convenience and enjoying the social aspect of food and, thus, prefers going to restaurants rather than cooking more herself and spending money on more sustainable products. P9 engaged in a similar discourse and mentioned from the beginning of the interview that he always tries to save money by buying special offers and sales items. At some point he mentioned the origin of this behaviour: *"Vor 20 Jahren habe ich die [Name der Partnerin] geschieden und hatte 4 Kinder. 2 Kinder noch unterstützungspflichtig und dann musste ich auf das Geld schauen"*[132] (P9: 127-8). At that time, money constituted a limiting factor in his life which limited his personal capacity. His financial situation has changed in the meantime, however. He now lives in a house of his own, had just returned from a month's long holiday before the interview and stated in the demographic questionnaire that his financial situation is above the Swiss average. Saving money on special offers can, therefore, be considered as having developed into a habit and source of personal enjoyment rather than still constituting a necessity. Nonetheless, he still used the argument of facing financial restrictions to justify not paying as much attention to a sustainable diet: *"Bio ist sehr oft, wenn du den normalen Preis anschaust, echt teurer. Es gibt Leute, bei denen ist es egal. Aber das ist bei uns jetzt nicht so. […] Es ist schon sehr oft price-driven"*[133] (P9: 522-9). As he points out, his shopping and consumption behaviour is primarily price-driven but not necessarily because money works as a limiting factor. This is also evident from the meat cuts he recorded in his food diary. He consumed salmon, tuna, roast beef, rib eye steak and five portions of beef filet, among other things. These meat cuts all belong to the higher price segment. It shows that

[131] P: "If I had the money, I would pay close attention to regionality, but since I don't have money, I take the cheapest product." I: "Well, in that case you could also say that you leave out the mango because that one has to be flown in and you take the apple which was grown in Switzerland and is certainly also cheaper." P: "I think in that respect it's my mood that decides what I will take. If I'm in the mood for mango, I will take the mango that had to be flown in even if there is the regional, cheaper apple next to it."

[132] "20 years ago I divorced my ex-wife, and we had four children. Two were still in need of financial support so I had to keep track of my expenses."

[133] "Organic products are often a lot more expensive. There are people for whom it doesn't make a difference. But that's not the case for us […]. It's mostly very price driven."

P9 prioritises buying good quality foods while saving on all other factors which could contribute to higher costs as the following passage shows:

> *P: "[Bei der Regionalität] bin ich vielleicht bei 60%. Also Hühnerfleisch aus vielleicht Ungarn oder so versus Schweiz. Und dann ist dort ein 50% Stempel darauf, dann zählt dann wieder der…"*
>
> *I: "Preis?"*
>
> *P: "Ja, oft"*[134] (P9: 512-5).

Put differently, if chicken is the product of choice for P9, he will not compromise on selecting a different product, even if it is cheaper (like tofu, vegetables or legumes, for instance), but he will probably select the least expensive option, regardless of whether it is also less sustainable (i.e. because of its origin or not being organic). Both examples suggested that financial means are not as much of a limiting factor of personal capacity as they are described to be and that it rather comes down to which investments are prioritised depending one's personal values and preferences. Given the financially privileged situation of most Swiss people, it is possible that other citizens too might use arguments which do not actually limit their capacity to engage in environmental action to legitimise their current consumption.

6.6 Interplay of Capacities

While dissecting the different factors which enable or disable capacities is helpful to ensure basic understanding of potential drivers and barriers for pro-environmental behaviour, it is key to understand these factors as being dynamically interwoven with each other. No single factor will function as a certain predictor for or against sustainable action, which is why the sum of them needs to be evaluated to understand people's behaviour. As Linneberg and Korsgaard explain, there is a danger that "coding splits the data into disjointed elements, and the holistic element so central to qualitative analysis is thus being lost" (2019: 267). I, therefore, decided to add this section to demonstrate the interplay of the different factors identified in this study. In the following, I delineate the portraits of four anonymised[135] participants. The portraits include both the participants' discourses as well as my personal interpretations of them to show which factors limited their capacity to adhere to a plant-based diet and how certain arguments employed by the respondents were used to justify unsustainable diets. The brackets indicate the factor and the corresponding capacity relevant for the passage in question. Not all codes used in the portraits correspond to a subchapter of this thesis, but additional information can be found in the appendix (chapter 9.5) where I list all interview codes. The four participants were chosen as examples because together, they not only cover a broad variety of different factors, but they also show how the interplay of different barriers and enablers can lead to different and also unexpected outcomes.

Belinda (25)

Belinda was born and raised in the city of Zurich in a family of Albanian migrants. As such, her cultural upbringing was heavily influenced by the Albanian culture to which she feels closely connected. Eating together with her family and friends is an important aspect of her cultural upbringing (*CC: cultural upbringing*). Although she moved out into a shared apartment, she dines

[134] P: "I pay attention [to regionality] about 60% of the time. For instance chicken from Hungary versus from Switzerland. If there is a 50% off sticker on it, what counts is…" I: "The price?" P: "Yes, often."

[135] The names were chosen deliberately to ensure anonymity, all other demographic details are unaltered.

most evenings at home where her mother cooks typical Albanian dishes, which she really likes. Meat is a key ingredient in the Albanian cuisine, and it is an imperative to serve meat to guests as it would be impolite not to do so (*CC: cultural importance of meat*). If she is not at her parents' home, Belinda is likely to go out for drinks or dinner with her friends (*Priorisation of Investments*), of whom most share her Albanian background. Among her friends and family, sustainability does not seem to be a relevant matter at all, and the topic is barely ever discussed (*OC: social environment*).

Belinda has a basic knowledge on climate change and environmental problems which were covered at school. Hence, she is aware of how sustainability issues are linked to the food sector (*PC: knowledge*). She also lived vegan for a couple of weeks during her exchange after having watched some documentaries on the cruelty of animal breeding (*PC: emotional investment*) and being paired with a vegan flatmate (*OC: living constellation*). She found the experience very interesting but returned to her old eating habits when she came back to Switzerland (*OC: social environment; CC: habits*). She has not paid attention to the topic ever after, although she did reconsider her eating habits during a period of time in which she decided to do more sports. That was quite a confusing experience for her as she was flooded with different information about healthy sports nutrition and even considered going to a dietician because she felt overwhelmed by the often conflicting pieces of advice she had found on the internet (*PC: uncertainty*).

Belinda dislikes her tendencies to base her dietary choices on lust-driven acquisitions at the supermarket, take-aways restaurants and so forth (*PC: convenience*). She has a very unsteady eating rhythm with dinner being the only meal she eats regularly. Whether she eats breakfast, lunch, snacks, a combination of these meals or none at all depends on her daily mood and menstrual cycle (*PC: health requirements*). She barely ever cooks herself and, therefore, has to buy the food she consumes throughout the day as she goes along. As she works and studies in town, this is not a problem but for the fact that she spends a lot of extra money and tends to buy mostly unhealthy snacks and meals (*PC: time, financial means, convenience*). Despite disliking her impulsive food shopping and her ongoing complaints about being on a tight budget, Belinda is not motivated to cook herself more often (*CC: habits; Prioritisation of investments*). She argues that her part-time studies and employment are too engaging to find time to go groceries shopping and prepare the meals. However, a tight schedule does not seem to be the real issue, as her student lifestyle grants her a high level of flexibility in her time management (*Prioritisation of investments*).

Belinda was surprised about her own meat consumption, which she would have expected to be much lower (*PC: awareness of consumption*). She explained that she would like to be more considerate of eating regionally, seasonally and organically, but is unable to do so at the moment due to her tight student's budget. Nonetheless, she also admits that she would not hesitate to buy a costlier food option if that were what she would like to eat at that moment. Similarly, she always finds the necessary resources to eat out at restaurants. Thus, she uses her undoubtedly limited financial situation to justify an unsustainable diet which includes a lot of meat, although it is rather a question of priorities that leads her to spend her money and time on social activities (*Prioritisation of investments*).

Belinda acknowledges that her eating habits are widely informed by the common understanding of hedonism as being intrinsically related to consumerism (*PC: personal values*). She recognises that her current eating patterns are unfavourable from a health perspective and that the exuberant amounts of food and meat that are sometimes prepared by her family at special occasions are unnecessary and undesirable. Furthermore, she agrees that the social aspect of eating is actually more important than the consumption of food itself (*PC: alternative hedonism*).

Ajdin (36)

Ajdin grew up in Zurich in a Bosnian family. His parents had migrated to Switzerland before he was born, and they raised him according to their Bosnian background (*CC: cultural upbringing*). Ajdin, however, never liked any of the Bosnian dishes, which he finds too greasy (*PC: preferences*). His parents never learned about healthy and sustainable diets (*PC: knowledge*) and let Ajdin choose freely what to eat from a young age on. Unsurprisingly, his diet mostly consisted of highly processed, energy dense convenience food and sugary drinks for most of his infancy and adolescence. Only when he started going to the gym, he was taught some basics about healthy diets (*PC: knowledge*). Moreover, he never learned how to cook because as a son of Bosnian parents, he was never expected to help in the household (*CC: gender; PC: cooking skills*).

Sustainability was not a topic he ever came in touch with until his late twenties. His family and his social environment never engaged in healthy and sustainable diets (*OC: social environment*), and it was not something he learned about at school either (*PC: knowledge*). This changed when he met his current partner Laura who had been eating plant-based for some years already. Ajdin learned most of his current knowledge on healthy and sustainable diets through her, especially when they moved in together (*OC: social environment; living constellation*). Documentaries which displayed the cruelty against animals also helped to increase his empathy for them (*PC: emotional investment; hands-on experiences*). He eventually decided to switch to a plant-based diet too. Unlike his partner, he transitioned to the new diet without adequately informing himself about the consequences and important aspects of such a change because it felt too complicated and too much of an effort to him (*Prioritisation of investments; PC: uncertainty*). As a consequence, he lost quite some weight which neither went unnoticed by himself nor by his social environment. His Bosnian family does not understand his attitude as they consider meat to be a symbol of wealth and believe that slight overweight is a sign of health, which is why they see his weight loss as proof for plant-based diets being unhealthy and undesirable (*CC: cultural upbringing; cultural importance of meat; PC: knowledge*).

Despite the negative comments he and Laura received from their families about their differing eating habits, they continue to eat plant-based. They also consume almost exclusively organic products and try to eat local food because they value a sustainable lifestyle (*PC: personal values*). Ajdin realised that he could not go back to his old eating habits now that he has this additional knowledge. However, he never managed to engage more deeply with the dietary change, also because he is not interested in cooking (*PC: interest in cooking*). For him, preparing food is an annoyance and he would rather have take-away food and limit the dishes he cooks to pasta (*PC: convenience*). This attitude has slightly changed since he became a father, however. He is motivated to broaden his cooking repertoire in order to be able to provide healthy and well-balanced dishes to his daughter (*OC: living constellation*). Ajdin and Laura continue to eat a plant-based diet and they are currently looking into raising their daughter vegan.

I chose to juxtapose Belinda's and Ajdin's portraits because they share a similar background but developed in completely opposite directions. Both participants were raised by Baltic migrants and according to their parents' original culture. Their parents had never learned about sustainability concerns related to the food system, so they were never discussed at home. Belinda and Ajdin were taught little to nothing at all about sustainability issues and were never confronted with such topics through their social environment either until they met someone who had a radically different perspective. These

encounters paired with documentaries which depicted the shocking flip side of their consumption so far led them to adopt a plant-based diet. The crucial difference, however, is that Belinda's confrontation with her vegetarian roommate was only temporary and she soon fell back to old habits when she returned to her original social environment. Ajdin, in contrast, moved together with his partner Laura who had introduced him to plant-based eating and, thus, he adhered to his dietary changes. As they live together in the same household and Laura is the main responsible for cooking, it is self-evident that he was more likely to stick to the plant-based diet. The birth of their daughter strengthened this decision as both agree that they would like to raise her plant-based too.

The two portrait shows how one's social environment and especially those to whom one feels very close can have an impact on one's diet, regardless of one's upbringing. Both respondents started in a very unfavourable situation of low knowledge, confrontation and emotional engagement and used to a meat-rich diet. While Ajdin changed his eating patterns irrevocably, Belinda fell back to old consumption habits and now uses a discourse of lacking time and financial means to justify her current diet.

Thomas (62)

Thomas is the son of a butcher's family which is why meat has always played a central role in his diet and why he learned to value the nose-to-tail approach from early on (*CC: cultural importance of meat; cultural upbringing*). He too grew up in a rather conservative environment in which sustainability issues were neither known nor discussed (O*C: social environment*). His first marriage resulted in a divorce which took a high financial toll on him. As a consequence, he was forced to be very considerate with his expenses, including those for groceries. During this time he acquired a habit of chasing good bargains at the supermarket and being very careful not to waste any food in order to save money (*PC: financial means*). Both habits outlasted the financially precarious situation he found himself in for some years after the divorce, even though he would not need to do so anymore (*Prioritisation of investments; CC: habits*).

He then met his Moroccan wife who shares his passion to eat generous amounts of meat. In her culture, meat is the focal point of each dish, and it is crucial to serve meat to guests and at every special occasion in order to be perceived as a good host (*CC: cultural importance of meat*). Thus, meat is eaten almost on a daily basis in their household. Although it is mostly his wife who cooks, he prepares lunch every once in a while. He usually falls back on café complet or cooking meat because he finds that easiest to prepare given his moderate cooking skills (*CC: cultural upbringing; habits; PC: cooking skills*).

Even though sustainable eating is not a topic that is frequently discussed in his social environment (*OC: social environment*), he is aware of the impact the current food system has on the environment (*PC: knowledge*). He recognises that high meat consumption is problematic and states not to be indifferent to the issue, regardless of the absence of pro-environmental behaviour in dietary choices (*PC: personal values*). He is not convinced that humanity will be able to avert the negative consequences of climate change and environmental degradation as the main polluters, people living in the global North, lack both motivation and pressure to adapt their eating behaviour (*PC: self-efficacy*). Thomas acknowledges that he is also part of the problem and that he belongs to the group of people who would know better but does not act accordingly (*PC: awareness; Prioritisation of investments*).

He believes that organic products as well as regional and seasonal ones are preferrable from an environmental perspective but justifies his deviant consumption by arguing that he is not in the financial position to do so. Given the fact that he reported his financial means to be above the Swiss

average, that he can afford going on long holidays and that he lives in a self-owned house, it seems that the alleged lack of financial means does not constitute an actual barrier to his capacity to consume a sustainable diet and that the absence of pro-environmental behaviour is rather linked to his personal priorities (*Prioritisation of investments*). This notion was reinforced by him recurringly emphasising that his main goal is to save money on food which is not always compatible with sustainability goals. The only pro-environmental behaviour on which he insists adamantly is not wasting any food. This aligns with his other priority not to waste money on food (*Prioritisation of investments*). He argues that the only reason why there might be food waste occasionally, is that he cannot always account for the food his spouse buys and wastes (*OC: living constellation*).

Karin (70)

Karin was born as a farmers' daughter in a rural area. Despite animal products playing an important role in the diet of her family (*CC: cultural upbringing; importance of meat*), she has never liked meat (*PC: preferences*). She vividly remembers the traumatic scenes every time an animal was slaughtered on their farm (*PC: hands-on experience*). Karin has always had a hard time eating meat because she was reminded of the emotional attachment she had to the farm animals (*PC: emotional investment*). Her attitude was never understood or accepted in the conservative environment she grew up in as stock farming was seen as being part of their livelihood (*CC: cultural upbringing; OC social environment*). Despite developing an intuitive preference for a plant-based diet well before it became a trend, she cooked and ate meat for most of her life because she was expected to cater to the likings of her ex-husband who was a meat-enthusiast (*OC: living constellation*).

Only when Karin divorced her ex-husband was she able to cook to her liking (*OC: living constellation*). However, this freedom did not last long as she increasingly put on weight over the years and, eventually, decided to embark on a weight-loss journey. The dietary changes proposed by her dietician mainly consisted of a reduction of carbohydrates and an increase of protein intake. In other words, the diet she is adhering to prescribes her a daily intake of five portions of protein, which are mostly derived from animal sources. Karin herself is not exhilarated about this prescription but still acquiesced to the dietary change as it proved to be a successful method in losing weight (*Prioritisation of investments*).

Karin is aware that her current diet is not well reconcilable with her ethical preservation about meat consumption and her personal values (*CC: personal values*). She believes, however, that she could not lose weight without eating meat (*PC: health requirements =/ sustainability, Prioritisation of investments*). These believes are fuelled by certain unscientific theories, including the blood-type-diet, that she came across or has been told about by alternative health practitioners (*PC: uncertainty; knowledge*). As an alternative, she started experimenting with tofu, tempeh and meat analogues. She dislikes the fact that many meat substitutes also constitute convenience products, such as vegetarian nuggets and burgers. This poses an issue because she is not allowed to eat convenience food in her diet (*IC: vegetarian replacement products and alternatives*). Karin hopes that one day she will have the opportunity to change to a vegan diet but right now she prioritises her weight loss journey (*Prioritisation of investments*).

Again, the portraits of Thomas and Karin mirror each other's baseline but display stark differences in their outcome, which rendered them interesting for comparison. Both participants grew up in a

traditional Swiss environment in a conservative family where meat had a high cultural importance. Both had insight into the meat industry from early on but with very different results: while Thomas inherited his parents' preference for meat, Karin was so deeply engaged emotionally with the farm animals that she developed an aversion for meat which made her the outsider of the family. The two participants also share the lack of a social environment in which topics such as sustainable diets are discussed. The last parallel between the portraits consists in both participants marrying people who highly value meat and are or were in favour of a regular consumption of it.

Contrary to the social environment and set up they were born in, their attitudes towards meat differ starkly. What for one constitutes a welcome delicacy represents a despised necessity for the other. Both are good examples that only because sustainability was not taught at school, it is possible to be up to date on the matter and recognise the severity of the glooming consequences of unsustainable diets onto the environment. However, Thomas decided to ignore the matter and continue to eat how he is used to and how it fits best with his spouse's dietary preference and his strong self-promoting aim to save money on groceries, whereas Karin followed her intuition and reduced her meat consumption after her divorce. Unlike Thomas, her problem was not a lack of willingness or an unfavourable value orientation which led her to consume meat again but the fact that her dietitian advised her to increase her intake of animal protein sources so Karin would lose weight. As this strategy proved successful, she will continue to eat meat until she has reached her target weight, even if she would rather not do so.

7 Conclusion

In conclusion, this study was able to shed light on an array of factors enhancing and limiting the capacity of residents of Zurich to adopt a plant-based diet. The first research aim was answered in the third chapter in which the average consumption of different food groups was compared with the intake recommendation provided by the EAT-Lancet Commission. The juxtaposition revealed a massive overconsumption of red meat which clearly exceeds the range allowable in a sustainable diet. Other animal products such as dairy and eggs are also eaten in too high amounts, whereas vegetable protein sources such as legumes, peanuts and soy are widely neglected. Vegan, vegetarian and plant-based diets remain the exception, with a majority of Swiss people still adhering to traditional, meat-rich diets. These findings were reflected in the recorded diets of the study participants. Due to the limited scope of the thesis, I mainly focused on meat consumption rather than also investigating other unfavourable aspects of the average Swiss diet.

The three meal plans I designed were an attempt to put the intake ranges suggested by EAT-Lancet Commission into practice. The resulting menus address the second research question and can be found attached in the appendix (chapter 9.1). The design of the menus was complicated because many staple products of modern consumption are processed to a certain degree and were difficult to account for. The development process highlighted that while the recommendations provided by the commission are useful as a reference tool to evaluate diets in terms of sustainability and in order to provide orientation for a target diet, they are not practical for the every-day use. Practicality could be increased by developinturning their study findings into an application which could help users gain insight into their diets and keep track of the consumption of environmentally less friendly products while also ensuring that their diet is well-balanced. The three meal plans were a success in terms of acceptability and showed that a plant-based diet could also cater to the tastes of meat enthusiasts. They also fulfilled their purpose of providing a starting point for discussion about sustainable nutrition.

The third research aim focused on revealing the barriers and enabling factors to adopt a plant-based diet. Cultural capacity seemed to play an important role as serving meat was equated with politeness and hospitableness. However, while the opinion prevailed that a special event requires a special menu which

includes meat, it was mostly agreed that meat is not an every-day necessity. Clear differences in meat consumption manifested in the food diaries with male participants eating considerably more meat than female respondents. While gender has been found to influence consumption, there was not enough evidence resulting from the interviews to suggest that the male participants affirm their masculinity through meat consumption. The interviews showed, however, that gender norms may influence one's cultural upbringing, especially in terms of cooking. One's cultural upbringing also shapes the importance associated to meat. The analysis suggests that meat still cherishes a special status, especially in hospitality, although there were signs of a decrease in expectations to be served meat when being invited to a normal lunch or dinner. A recurring pattern revolving around personal diets was the role of habits and convenience. Many participants adhered to certain routines which diminished mental load, and made both the eating cooking process more efficient, quick and enjoyable. These habits were often learned at home as part of their cultural upbringing. The interviews revealed that the participants displayed routinised eating habits of which the respondents might not even have been aware before and never took the time to reflect upon. Both environmentally favourable and unfavourable habits were reported. Despite most respondents growing up in a household where meat was celebrated as the culinary epitome, about half of them were still able to recognise the environmental implication of animal products and adapt their diets accordingly. Most participants reported a generational shift towards sustainable diets becoming a more prevalent topic, especially among the younger generations, although this impression might differ depending on the social milieu. No clear-generational difference could be detected in the present study as each age group entailed respondents who were more or less affine to sustainable dieting. There is hope that an increasing social focus on plant-based diets might shift the public perception of meat as a necessity and status symbol towards a treat reserved for special occasions. Public institutions could help normalising plant-based diets and, thus, increase their visibility and acceptability.

Organisational capacity was mostly influenced by the participant's social environment and additional considerations resulting from living together with a family. All but one participant with a high meat consumption reported little opportunity for confrontation with the topic as their social environment was either unaware of the problematics of certain diets or indifferent towards them. There was a tendency that the more a participant cared about eating sustainably, the more their social environment also engaged in the topic. This pattern, however, does not say anything about causality, and it is just as possible that people who value a plant-based diet and a sustainable lifestyle in general actively seek likeminded people. Nonetheless, there were a couple of examples of relatives or friends functioning as role models and leading to a dietary shift. This suggests that community building and the spreading of the topics through a variety of different channels in order to reach as diverse an audience as possible might be a fruitful strategy to promote plant-based diets. In terms of living constellation, it seemed that especially the dietary requirements of children and other family members seemed to pose a challenge to those in charge of cooking. While preparing meals for a family was often described as a challenge, it could also provide an opportunity not only to re-evaluate one's diet in terms of health aspects, but also in regard to sustainability. Providing a healthy and sustainable diet for one's children should be framed as catering to salutary needs as well as contributing to securing a safe and liveable environment for the children's future.

Only few barriers could be found to limit infrastructural capacity. The participants unanimously agreed that the access to vegetarian food options in restaurants, take-aways, canteens and supermarkets has become acceptable, if not perfect, in recent years. Thus, it is not the lack of plant-based products in itself which decreased people's infrastructural capacity, but rather the scarcity of convincing alternatives. Although meat and dairy replacement products are not an absolute necessity to switch to a plant-based diet, they can help people transitioning. As such, most participants supported the idea of developing further products, including such which are traditionally vegetarian and do not aim at substituting an

animal product. The main issue mentioned regarded the highly processed nature of meat substitutes, which was often associated with unhealthy eating, especially if they contain additives. The results suggested, however, that replacement products might be rashly prejudiced for being unhealthy and unsustainable, although there are vast differences in these respects. Furthermore, it was argued that the current pricing of meat and other replacement products provide the wrong incentives, as they are oftentimes more expensive than the originals. As a niche product segment, meat alternatives still have room to improve, grow and reach a wider range of people and hopefully adapt their pricing eventually. It might be useful to inform people about differences in the nutritional profile of substitutes and also emphasise that such products are not a necessity for a successful switch to a plant-based diet, even though they can be helpful to some consumers.

Personal capacity constituted the most prolific chapter within the results section. It is key to note that I added aspects in the discussion which do not quite fit the original CEF framework as conceptualised by Middlemiss but which seemed too relevant to be left out. I, therefore, provide a more thorough discussion of the suitability of the framework later on in this chapter, as it is key for the analysis to acknowledge the adaptations I made. A clear barrier to making informed consumption choices and which limited personal capacity was a general insecurity surrounding nutrition and which factors matter more in terms of sustainability. The plethora of available information contributed to the inability to correctly prioritise different aims for rendering a diet more sustainable and in some cases led to inertia because it was too much information for the respondents to process. A common issue seemed to lie therein that the participants were unaware of the magnitude of the impact meat consumption has on the environment compared to other factors. Practical knowledge on which products to prioritise or a health and sustainability scoring might be helpful in providing guidance in making sensible consumption choices. Participants who reported a deeper emotional investment resulting from hands-on-experiences were more likely to care about the environment and limit their meat consumption. This implies that a simple transfer of knowledge is not sufficient and that more participatory action could be beneficial to foster emotional involvement, although a one-time exposure might not suffice to leave a lasting impression either. Another factor which increased the likelihood of respondents adhering to a plant-based diet was their perception of self-efficacy. Participants with a low perception of their self-efficacy were considerably less motivated to assume sustainable eating habits because they did not believe in their action being able to bring about change. This finding supports the need to focus on the transmission of practical knowledge instead of factual information as the latter might be discouraging if not paired with action strategies. Personal values were also found to play a key role in determining the extent of pro-environmental engagement. The respondents were more likely to opt for sustainable choices or make a compromise on other personal goals if their personal values were informed by universalism rather than being oriented toward self-promotion. Since personal values are acquired during the early stages of life in which both the parental upbringing and the first years of institutional education play a key role, there is an overlap with cultural capacity. Lastly, it is key to divorce the idea of pleasure from excessive consumerism. All participants independently of their diet stated that eating is something from which they derive pleasure and satisfaction. The findings of this thesis suggest that heavy meat eaters overemphasise the role of meat consumption to gratify their hedonist needs, thereby neglecting that pleasure can also be derived from means unrelated to consumption. Such aspects include the joy of cooking, eating good tasting food, enjoying the social aspect of eating together, increasing one's cooking skills, trying out new dishes and putting effort in preparing elaborate meals for special occasions. These aspects were also mentioned by meat enthusiasts, showing that only a moderate shift in mindset would suffice to find alternative ways to cater to hedonist values. In fact, the common conception of meat being special and an essential part of celebratory occasions could help reframe meat as a food that is exactly reserved for such extraordinary events so that it can be cherished the more when it is consumed. Being able to understand that adhering to a plant-based diet is not mutually exclusive with deriving satisfaction

and pleasure from eating is essential to motivate people to change their diets. Hence, framing sustainable diets as dire, boring and characterised by renouncement is neither helpful to convince people to eat more sustainably nor does it depict the reality. This false representation of pro-environmental engagement should therefore be replaced by a positive conceptualisation of plant-based diets reflective in line with the idea of alternative hedonism.

Despite the presence of certain factors inhibiting the capacity of some participants to adopt a plant-based diet, more often than not it came down to the participants prioritising self-serving aims over sustainable behaviour. Put differently, their capacity to act pro-environmentally would have allowed for pro-environmental engagement but the respondents sometimes favoured to invest their financial means, time and energy in the pursuit of other goals. I, therefore, added a chapter on the prioritisation of investments which explains the relationship between one's values, self-serving aims and engagement in pro-environmental behaviour. The interviews suggested that the prevalent reason for the remaining attitude-behaviour-gap, which could not be explained by one of the factors limiting the capacity of the respondents, was either a general self-promoting value orientation or a perceived incompatibility between pro-environmental action and self-promoting aims. Both issues could, nonetheless, be addressed to a certain extent. The study results hint that if self-serving aims comply with pro-environmental behaviour, it is more likely that participants display environmentally favourable behaviour and adhere to it on the long-term. It is therefore, of major importance to reconcile commonly stated conflicts of interest between self-serving interests and sustainable action. For instance, several female participants reported having difficulties to reconcile a sustainable diet with personal health, or rather weight-management requirements. All participants who mentioned this conflict of interests believed that an increase in animal protein combined with a decrease in carbohydrate consumption was the only viable model for weight management. Thus, I would urgently suggest that health expert investigate how such goals could be met through a more plant-based diet and that the gained insight is spread among dieticians as well as the Swiss population. A further option would be to promote how to save money and time with easy plant-based recipes and show the overlap between health, sustainability self-promoting benefits which accrue from following a plant-based diet. In the end, however, what seems to be lacking most, is a stronger sense of ecological citizenship. Emphasising large-scale collective action could address many of the outlined factors which work as barriers to adhering to a plant-based diet. Giving people a sense of being equally affected by the future consequences of climate change as well as being equally responsible to mitigate the anthropocentric effect on the environment could prove valuable in all domains where a shift towards sustainable practices is required. The topic has to gain in prevalence among all social groups and provide the opportunity for community action. While there is still potential to lower the barriers even further in order to heighten the capacity of residents living in Zurich, I suggest focusing future efforts and research onto closing the residual attitude-behaviour gap and motivating people to assume their share of responsibility and become ecological citizens who prioritise the common good over the pursuit of short-lived self-promoting aims.

The CEF exceeded other frameworks in terms of being straightforward, easy to understand and well adaptable to the present topic of interest, but the basic assumption on which it is based proved to be naïve. I chose the CEF as a framework as it provided a clear structure on which I could base the sampling process of the participants, the interview script and the analysis of the qualitative data. A majority of studies exploring potential barriers and enablers for adopting a plant-based diet simply discuss certain issues without further grouping related topics together which makes it difficult to gain an overview of the many relevant factors. The advantage of Middlemiss' framework is that it distinguishes four separate categories of factors which facilitates study design and the visual representation of the findings. However, the CEF only considers actual barriers and does not account for people who are unwilling to assume their share of responsibility to act and consume sustainably once these barriers are removed. The present study suggests that this circumstance cannot be neglected when analysing the engagement

in sustainable behaviour of a certain population. Conducting this study in Zurich provided an opportunity to see how highly privileged people who, from an environmental justice perspective, should assume a larger share of responsibility, sometimes refuse to do so, despite having the capacity. Even people with favourable attitudes may engage in unsustainable consumption and display an attitude-behaviour-gap which is motivated by an unsustainable prioritisation of self-serving needs. Based on my criticism of the CEF, I propose altering the visual representation of the CEF as depicted in *figure 7*. The diagram has been adapted to fit the aim of this thesis and includes the main factors which were identified to impact the capacity of people living in Zurich to assume and adhere to a plant-based diet. I added the prioritisation of investments as an additional barrier to pro-environmental behaviour which separates capacities from actual behaviour. This amendment in *figure 7* demonstrates that even under ideal circumstances people might still opt for unsustainable consumption. *Figure 6* in chapter 6.5.1 visualises in which circumstances people are more or less likely to display an attitude-behaviour-gap which cannot be explained by an objective limitation of capacity. Furthermore, the evaluation of the results showed that the identified factors influencing capacities are sometimes ambiguous and not as clearly attributable to only one of the four capacities. The blurring of the boxes is meant to symbolise the fuzziness and dynamic interplay of the four capabilities. As the results suggested an especially close relationship between personal and cultural capacity, I decided to visualise this circumstance by overlapping the two boxes, although arguably, all capacities are all interwoven with each other.

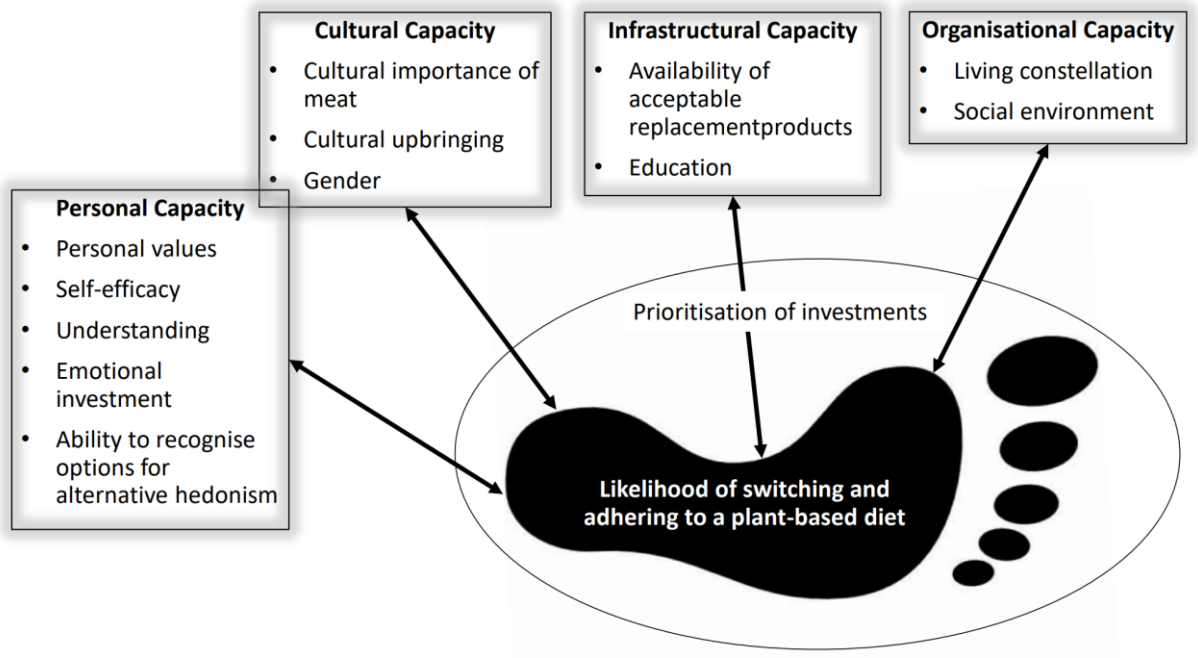

Figure 7: *The adapted version of the CEF to better suit the scope of this thesis (the relevant findings of the study are summarised in the diagram and the prioritisation of investments has been added as an overarching barrier).*

Certain limitations need to be acknowledged for the present thesis. Due to the qualitative nature of this study, the results cannot be extrapolated and used to make generalising assumptions and statements about all residents living in Zurich or the Swiss population as a whole. With only 15 participants, I have probably not fully reached saturation yet, which denotes the point from which additional data gathering will not yield any new significant insights (Newing 2011: 75). It is, therefore, possible that certain barriers and enablers have been neglected while others might have been over-emphasised. Due to the population of interest for this thesis being very broad and including all residents of the canton of Zurich,

more interviews would have been necessary to reach saturation. The scope of this thesis, unfortunately, limited the time available to spend on data collection. Nonetheless, the identified patterns gave precious insight into consumption patterns and attitudes towards plant-based eating and the difficulties related to a dietary shift which could be used as a starting point for quantitative research or as a template for similar studies in other regions of Switzerland. Bochud et al. found that there are considerable differences in eating habits between the German-, French- and Italian-speaking regions in Switzerland, so other aspects might be relevant depending on the canton or region that is researched (2017). Another clear limitation of the study is the imprecise estimate of consumption based on the food journals compiled by the study participants. Given the fact that I could not financially compensate for the study participation, I did not deem the effort to meticulously weigh and measure everything that was consumed during the recording week reasonable. This additional burden would have also increased the likelihood of the participants altering their diets for the sake of simplicity, which would have been contrary to my goal of recording their habitual eating patterns. As such, I had no other option than to compromise on precision. I explained how I proceeded in estimating the approximate amounts of animal products in the methodology section but there remains a certain level of uncertainty regarding the participants' consumption. Even more so as the participants themselves might have been inaccurate with their documentation or have eaten differently than they would have normally, thus leading to a distorted representation of their actual eating patterns. Nonetheless, there is no reason to suspect that any of the participants intentionally falsified their reports, so the food diaries should still present an adequate tool for the scope of this study. A further limitation constituted the selection of participants. In retrospection, it seems rather unlikely that I found so many people who were as considerate about eating sustainably by accident. Rather, the 15 participants reflect, to a certain level, my personal social environment in which a regard for the environment is considered normal. This is unsurprising as I recruited most candidates from my own or extended social network or asked people whom I knew whether they could suggest a possible candidate. A similar bias also regards the socio-economic status and level of education of the participants. I would argue that most participants belong to the middle or upper class. Although I included people with low financial means, they were mostly students whose limited financial situation is only temporary and who do not necessarily belong to the working class. Similarly, a majority of the participants had some sort of additional education. Overall, people from the lower working class with limited financial means and no academic background were underrepresented. This shows the drawback of the sampling method I chose, which could have potentially been avoided with a larger sampling size in conjunction with a randomised sampling method. Lastly, the youngest participant was 25 years old, which means that a considerable age section was not included in the study. There is evidence resulting from other research, however, that especially teenagers have very strong opinions on meat consumption (Pohjolainen, Vinnari, and Jokinen 2015: 1160), which might have yielded an additional perspective on the topic. A clear majority of the participants stated that sustainable diets were never thematised during their education and emphasised the importance of furthering adequate knowledge transfer from early on in school. However, much has changed in the meantime, with the last major change in the school curriculum having taken place in 2017 when the "Lehrplan 21" was accepted as the new syllabus for kindergarten, elementary and secondary schools in Zurich. Topics such as environmental degradation, climate change, the anthropologic causes thereof and strategies for sustainable action are now anchored in the school curriculum on all school levels and are discussed in different subjects (Bildungsdirektion des Kantons Zürich 2017). It remains open how this will impact the consumption of the younger generations and how the acceptability of plant-based diets will develop over time.

The findings of this thesis might help decision-makers to evaluate which measures could be useful to motivate more people to adopt a plant-based diet. What is more, studies could explore the generational differences, which have been mentioned by the study participants, with a special focus on children and teenagers and investigate how their attitudes and consumption change over time. This might be useful

to survey how effective the new emphasis on topics related to the environment and sustainability are and whether more opportunities to directly experience nature and the implications of unsustainable consumption might be required as suggested by my results. While much research has focused on the mechanisms of decision-making and the potential factors which limit and enable pro-environmental behaviour, I would propose to shift efforts onto implementing the findings of this and previous studies into actual strategies and tools to convince people of the benefits resulting from shifting to a plant-based diet and assume their share of responsibility. Such a tool could entail the provision of direct experiences of the consequences of unsustainable consumption, showing the positive effect of one's action with the aim of raising people's perception of their self-efficacy and lower the psychological distance to environmental degradation. Furthermore, it is key to provide practical knowledge and clear guidelines on preferrable dietary choices, emphasise alternatives rather than renunciation and establish plant-based diets as the new norm. On a governmental level, previous findings could help to determine how the agricultural system in Switzerland could be adapted to provide a predominately plant-based diet and limit cattle breeding to areas which cannot be used efficiently otherwise. This would also entail reconsidering whether the heavy subsidy of the meat industry is constructive in the light of wanting to become climate neutral until 2050 and whether a redistribution of monetary incentives would constitute an opportunity to reward the adoption of a plant-based diet. This could prove effective as self-promoting motives were found to play a key role in motivating the study participants, and especially those who else do not care about environmental protection. Despite depicting a broad variety of attitudes and degrees of sustainable engagement, the thesis suggests that plant-based eating is increasingly gaining public attention in Zurich. While the awareness about the interlacement of the modern food system and sustainability challenges seems to be spreading, it remains open whether this sensitivity will suffice to translate to altered food consumption or whether other factors feeding the attitude-behaviour-gap need to be addressed first to motivate a large-scale shift towards a plant-based diet and the establishment of an ecological citizenship mindset among society.

8 Bibliography

Agristat. 2021. "Statistische Erhebungen und Schätzungen über Landwirtschaft und Ernährung 2020: Nahrungsmittelbilanz."

American Anthropological Association. 2022. "Principles of Professional Responsibility." <www.americananthro.org/LearnAndTeach/Content.aspx?ItemNumber=22869&navItemNumber=652>.

Agrarmarkt Austria Marketing GmbH. 2012. "Konsumverhalten." <www.ama.at/marktinformationen/vieh-und-fleisch/konsumverhalten>.

Benningstad, Nora C.G., and Jonas R. Kunst. 2020. "Dissociating Meat from Its Animal Origins: A Systematic Literature Review." *Appetite* 147 (November 2019): 104554. https://doi.org/10.1016/j.appet.2019.104554.

Biasini, Beatrice, Alice Rosi, Francesca Giopp, Rana Turgut, Francesca Scazzina, and Menozzi. 2021. "Understanding, Promoting and Predicting Sustainable Diets: A Systematic Review." *Trends in Food Science and Technology* 111 (March): 191–207. https://doi.org/10.1016/j.tifs.2021.02.062.

Bicchieri, Cristina, Ryan Muldoon and Alessandro Sontuoso. 2018. "Social Norms." *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta. <plato.stanford.edu/archives/win2018/entries/social-norms/>.

Bildungsdirektion des Kantons Zürich. 2017. "Lehrplan 21." <zh.lehrplan.ch/>.

BIOaktuell.ch. 2022. "Biofisch." <www.bioaktuell.ch/markt/biomarkt/markt-biofleisch-allgemein/fisch.html>.

Bochud, Murielle, Angéline Chatelan, and Juan-Manuel Blanco. 2017. "Anthropometric Characteristics and Indicators of Eating and Physical Activity Behaviors in the Swiss Adult Population: Results from MenuCH 2014-2015." *Report on Behalf of the Federal Office of Public Health and the Food Safety and Veterinary*.

Bohr, Jeremiah. 2014. "Barriers to Environmental Sacrifice: The Interaction of Free Rider Fears with Education, Income, and Ideology." *Sociological Spectrum* 34 (4): 362–79. https://doi.org/10.1080/02732173.2014.917250.

Bohrer, Benjamin M. 2019. "An Investigation of the Formulation and Nutritional Composition of Modern Meat Analogue Products." *Food Science and Human Wellness*. Elsevier B.V. https://doi.org/10.1016/j.fshw.2019.11.006.

Bourke, Brian. 2014. "Positionality: Reflecting on the Research Process." *The Qualitative Report* 19: 1–9. https://doi.org/10.46743/2160-3715/2014.1026.

Brunner, Thomas, and Luca Casetti. 2014. "Kosten Gesunder Ernährung," no. August: 134.

Bundesamt für Gesundheit (BAG). n.d. "Diabetes." <www.bfs.admin.ch/bfs/de/home/statistiken/gesundheit/gesundheitszustand/krankheiten/diabetes.html>.

———. 2020. "Diabetes." <www.bag.admin.ch/bag/de/home/krankheiten/krankheiten-im-ueberblick/diabetes.html>.

Bundesamt für Lebensmittelsicherheit und Veterinärwese (BLV). 2017. "Die Bevölkerung der Schweiz isst unausgewogen." <www.edi.admin.ch/edi/de/home/dokumentation/medienmitteilungen. html.msg-id-66016.html#:~:text=Die%20Schweizer%20Bev%C3%B6lkerung%20konsumiert% 20durchschnittlich,wie%20Frauen%20(570%20g)>.

———. 2019. "Welche Arten von Frühstück werden in der Schweiz eingenommen?" *Schweizer Ernährungsbulletin 2019*.

———. 2021. "Schweizer Lebensmittelpyramide." <www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/ernaehrung/empfehlungen-informationen/schweizer-lebensmittelpyramide.html>.

Bundesamt für Umwelt (BAFU). 2020. "Indikatives Ziel 2050." <www.bafu.admin.ch/bafu/de/home/themen/klima/fachinformationen/emissionsverminderung/verminderungsziele/ziel-2050.html>.

Campbell, Steve, Melanie Greenwood, Sarah Prior, Toniele Shearer, Kerrie Walkem, Sarah Young, Danielle Bywaters, and Kim Walker. 2020. "Purposive Sampling: Complex or Simple? Research Case Examples." *Journal of Research in Nursing* 25 (8): 652–61. https://doi.org/10.1177/1744987120927206.

Chai, Bingli Clark, Johannes Reidar Van Der Voort, Kristina Grofelnik, Helga Gudny Eliasdottir, Ines Klöss, and Federico J A Perez-cueto. 2019. "Which Diet Has the Least Environmental on Our Planet ? A Systematic Review of Vegan , Vegetarian and Omnivorous Diets." *Sustainability* 11 (15): 4110.

Chiles, Robert M., and Amy J. Fitzgerald. 2018. "Why Is Meat so Important in Western History and Culture? A Genealogical Critique of Biophysical and Political-Economic Explanations." *Agriculture and Human Values* 35 (1): 1–17. https://doi.org/10.1007/s10460-017-9787-7.

Clark, Michael A., Marco Springmann, Jason Hill, and David Tilman. 2019. "Multiple Health and Environmental Impacts of Foods." *Proceedings of the National Academy of Sciences of the United States of America* 116 (46): 23357–62. https://doi.org/10.1073/pnas.1906908116.

Coop Genossenschaft. 2020. "Unternehmensprofil Der Coop-Gruppe."

Cusack, Leila, Emmy De Buck, Veerle Compernolle, and Philippe Vandekerckhove. n.d. "Blood Type Diets Lack Supporting Evidence: A Systematic Review 1-3." https://doi.org/10.3945/ajcn.113.058693.

Data Commons. 2020. "Switzerland." <datacommons.org/place/country/CHE?utm_medium=explore&mprop=amount&popt=EconomicActivity&cpv=activitySource%2CGrossDomesticProduction&hl=en>.

Dobson, Andrew. 2007. "Environmental Citizenship: Towards Sustainable Development." *Sustainable Development* 15 (5): 276–85. https://doi.org/10.1002/sd.344.

Eker, Sibel, Gerhard Reese, and Michael Obersteiner. 2019. "Modelling the Drivers of a Widespread Shift to Sustainable Diets." *Nature Sustainability* 2 (8): 725–35. https://doi.org/10.1038/s41893-019-0331-1.

England, Kim V.L. 1994. "Getting Personal: Reflexivity, Positionality, and Feminist Research." *Professional Geographer* 46 (1): 80–89. https://doi.org/10.1111/j.0033-0124.1994.00080.x.

FAO, IFAD, UNICEF, WFP and WHO. 2021. "The State of Food Security and Nutrition in the World 2021: Transforming food systems for food security, improved nutrition and affordable healthy diets for all." *FAO*, Rome.

Fehér, András, Michal Gazdecki, Miklós Véha, Márk Szakály, and Zoltán Szakály. 2020. "A Comprehensive Review of the Benefits of and the Barriers to the Switch to a Plant-Based Diet." *Sustainability (Switzerland)* 12 (10): 1–18. https://doi.org/10.3390/su12104136.

Fox, Nick, and Katie Ward. 2008. "Health, Ethics and Environment: A Qualitative Study of Vegetarian Motivations." *Appetite* 50 (2–3): 422–29. https://doi.org/10.1016/j.appet.2007.09.007.

Gerber, P.J., Steinfeld, H., Henderson, B., Mottet, A., Opio, C., Dijkman, J., Falcucci, A. and Tempio, G. 2013. "Tackling climate change through livestock: A global assessment of emissions and mitigation opportunities." *Food and Agriculture Organization of the United Nations (FAO)*, Rome.

Gerling, Chris. 2011. "Conversion Factors: From Vineyard to Bottle." *Cornell Viticulture and Enology Program* 8. <grapesandwine.cals.cornell.edu/newsletters/appellation-cornell/2011-newsletters/issue-8/conversion-factors-vineyard-bottle/>.

Grauerholz, Liz. 2007. "Cute Enough to Eat: The Transformation of Animals into Meat for Human Consumption in Commercialized Images." *Humanity & Society* 31 (4): 334–54. https://doi.org/10.1177/016059760703100404.

Hackett, Conrad, and David McClendon. 2017. "World's Largest Religion by Population Is Still Christianity." Pew Research Center. <www.pewresearch.org/fact-tank/2017/04/05/christians-remain-worlds-largest-religious-group-but-they-are-declining-in-europe/>.

Hall, Stuart. 1990. "Cultural identity and diaspora." In *Identity: Community, culture, difference*. Edited by Jonathan Rutherford. London: Lawrence & Wishart.

Harvard T. H. Chan. 2022. "The Nutrition Score: The Science of Snacking." *Harvard School of Public Health*. <www.hsph.harvard.edu/nutritionsource/snacking/#:~:text=About%20a%20quarter%20of%20Americans,snack%20foods%20were%20easily%20available>.

Hercberg, Serge, Galan, Pilar, Egnell, Manon and Julia Chantal. 2019. "Misunderstandings and fake news about Nutri-Score. How to try to destabilize a disturbing public health tool…?" *Equipe de Recherche en Epidémiologie Nutritionelle (EREN)*. <nutriscore.blog/2019/04/21/misunderstandings-and-fake-news-about-nutri-score-how-to-try-to-destabilize-a-disturbing-public-health-tool/>.

Herrmann, Cornel, and Conradin Bolliger. 2021. "Der Schweizer Fleischersatz-Report." Bern.

Hirschberger, Gunther and Manuel Trummer. 2013. "Essen und Trinken." *Europäische Geschichte Online*. <ieg-ego.eu/de/threads/hintergruende/essen-und-trinken>.

IHME. 2019. "New study finds poor diet kills more people globally than tobacco and high blood pressure." <www.healthdata.org/news-release/new-study-finds-poor-diet-kills-more-people-globally-tobacco-and-high-blood-pressure#:~:text=Poor%20diets%20were%20responsible%20for,followed%20by%20cancers%20and%20diabetes>.

IPCC. 2019. "Technical Summary." *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*.

Jackson, Tim. 2006. "Sustainable Consumption." In *Handbook of Sustainable Development*, edited by Giles Atkinson, Simon Dietz, and Eric Neumayer, 254–68. Cheltenham and Newhampton: Edward Elgar.

Kaiser, F., Byrka, K. 2011. "Environmentalism as a trait: gauging people's prosocial personality in terms of environmental engagement." *International Journal of Psychology* 46 (1), 71-79.

Kaplan, S. 2000. "Human Nature and Environmentally Responsible Behavior." *Journal of Social Issues* 56 (3): 491–508. https://doi.org/10.1111/0022-4537.00180.

Kirk-Mechtel, Melanie. 2022. "Gegen Fake News und Ernährungsmythen: Interesse an seriösen Ernährungsinformationen wächst. " *Bundeszentrum für Ernährung (BZfE)*. <www.bzfe.de/service/news/aktuelle-meldungen/news-archiv/meldungen-2022/maerz/gegen-fake-news-und-ernaehrungsmythen/>.

Kollmuss, Anja, and Julian Agyeman. 2002. "Mind the Gap: Why Do People Act Environmentally and What Are the Barriers to pro-Environmental Behavior?" *Environmental Education Research* 8 (3): 239–60. https://doi.org/10.1080/13504620220145401.

Kumar, Pavan, M. K. Chatli, Nitin Mehta, Parminder Singh, O. P. Malav, and Akhilesh K. Verma. 2017. "Meat Analogues: Health Promising Sustainable Meat Substitutes." *Critical Reviews in Food Science and Nutrition* 57 (5): 923–32. https://doi.org/10.1080/10408398.2014.939739.

Lea, Emma J., D. Crawford, and A. Worsley. 2006. "Public Views of the Benefits and Barriers to the

Consumption of a Plant-Based Diet." *European Journal of Clinical Nutrition* 60 (7): 828–37. https://doi.org/10.1038/sj.ejcn.1602387.

"Legume". 2022. Britannica. <www.britannica.com/science/legume>.

Linneberg, Mai Skjott, and Steffen Korsgaard. 2019. "Coding Qualitative Data: A Synthesis Guiding the Novice." *Qualitative Research Journal* 19 (3): 259–70. https://doi.org/10.1108/QRJ-12-2018-0012.

Lourenco, Carlos Eduardo, Nadine Marques Nunes-Galbes, Riccardo Borgheresi, Luciana Oranges Cezarino, Flavio Pinheiro Martins, and Lara Bartocci Liboni. 2022. "Psychological Barriers to Sustainable Dietary Patterns: Findings from Meat Intake Behaviour." *Sustainability (Switzerland)* 14 (4): 1–16. https://doi.org/10.3390/su14042199.

Loy, Laura S., and Alexa Spence. 2020. "Reducing, and Bridging, the Psychological Distance of Climate Change." *Journal of Environmental Psychology* 67: 101388. https://doi.org/10.1016/j.jenvp.2020.101388.

Macdiarmid, Jennie I., Flora Douglas, and Jonina Campbell. 2016. "Eating like There's No Tomorrow: Public Awareness of the Environmental Impact of Food and Reluctance to Eat Less Meat as Part of a Sustainable Diet." *Appetite* 96: 487–93. https://doi.org/10.1016/j.appet.2015.10.011.

Machovina, Brian, Kenneth J. Feeley, and William J. Ripple. 2015. "Biodiversity Conservation: The Key Is Reducing Meat Consumption." *Science of the Total Environment* 536: 419–31. https://doi.org/10.1016/j.scitotenv.2015.07.022.

Maiteny, Paul T. 2002. "Mind in the Gap: Summary of Research Exploring 'inner' Influences on pro-Sustainability Learning and Behaviour." *Environmental Education Research* 8 (3): 299–306. https://doi.org/10.1080/13504620220145447.

Malher, Xavier, Coudurier, Bernard and Barbara Redlingshöfer. 2015. "Food losses and waste in the poultry production chain: from farm to retail." *16. European Symposium on the Quality of Eggs and Egg Products*.

Marchioni, Dirce Maria, Leandro Teixeira Cacau, Eduardo De Carli, Aline Martins de Carvalho, and Maria Cristina Rulli. 2022. "Low Adherence to the EAT-Lancet Sustainable Reference Diet in the Brazilian Population: Findings from the National Dietary Survey 2017–2018." *Nutrients* 14 (6). https://doi.org/10.3390/nu14061187.

Masset, Gabriel, Louis Georges Soler, Florent Vieux, and Nicole Darmon. 2014. "Identifying Sustainable Foods: The Relationship between Environmental Impact, Nutritional Quality, and Prices of Foods Representative of the French Diet." *Journal of the Academy of Nutrition and Dietetics* 114 (6): 862–69. https://doi.org/10.1016/j.jand.2014.02.002.

Mcpherson, Miller, Lynn Smith-lovin, and James M Cook. 2001. "Birds of a Feather : Homophily in Social Networks." *Annual Review of Sociology* 27: 415–44.

Middlemiss, Lucie. 2010a. "Community Action for Individual Sustainability: Linking Sustainable Consumption, Citizenship and Justice." *Managing Environmental Justice*, 71–91. https://doi.org/10.1163/9789042029385_006.

———. 2010b. "Reframing Individual Responsibility for Sustainable Consumption: Lessons from Environmental Justice and Ecological Citizenship." *Environmental Values* 19 (2): 147–67. https://doi.org/10.3197/096327110X12699420220518.

Migros Genossenschaft. n.d.a. "Migrolino: Portrait." <www.migrolino.ch/de/portrait/>.

———. n.d.b. "M-Check." <corporate.migros.ch/de/nachhaltigkeit/nachhaltige-produkte/tipps-tricks/m-check/fragen-antworten.html#heading-editorial-id8b50e86b-1>.

———. 2020. "Migros Zahlen Und Fakten."

Milfont, Taciano L., Nicole Satherley, Danny Osborne, Marc S. Wilson, and Chris G. Sibley. 2021. "To Meat, or Not to Meat: A Longitudinal Investigation of Transitioning to and from Plant-

Based Diets." *Appetite* 166: 1–9. https://doi.org/10.1016/j.appet.2021.105584.

Ministère de la Santé et de la Prevéntion and Ministère des Solidarités, de l'Autonomie et des Personnes Handicapées. n.d. "Nutri-Score. " <solidarites-sante.gouv.fr/prevention-en-sante/preserver-sa-sante/nutrition/nutri-score/>.

Moberg, Emma, Hanna Karlsson Potter, Amanda Wood, Per Anders Hansson, and Elin Röös. 2020. "Benchmarking the Swedish Diet Relative to Global and National Environmental Targets-Identification of Indicator Limitations and Data Gaps." *Sustainability (Switzerland)* 12 (4): 1–22. https://doi.org/10.3390/su12041407.

Muller, Adrian, Christian Schader, Nadia El-Hage Scialabba, Judith Brüggemann, Anne Isensee, Karl Heinz Erb, Pete Smith, et al. 2017. "Strategies for Feeding the World More Sustainably with Organic Agriculture." *Nature Communications* 8 (1): 1–13. https://doi.org/10.1038/s41467-017-01410-w.

Newing, Helen. 2011. *Conducting Research in Conservation: A Social Science Perspective*. New York: Routledge.

Nitzko, Sina, and Achim Spiller. 2019. "Comparing 'Leaf-to-Root', 'Nose-to-Tail' and Other Efficient Food Utilization Options from a Consumer Perspective." *Sustainability (Switzerland)* 11 (17): 1–21. https://doi.org/10.3390/su11174779.

Oreg, Shaul, and Tally Katz-Gerro. 2006. "Predicting Proenvironmental Behavior Cross-Nationally: Values, the Theory of Planned Behavior, and Value-Belief-Norm Theory." *Environment and Behavior* 38 (4): 462–83. https://doi.org/10.1177/0013916505286012.

Paulitz, Tanja, and Martin Winter. 2019. "Ernährung Aus Kultursoziologischer Perspektive." In *Handbuch Kultursoziologie*, edited by S. Moebius, F. Nungesser, and K. Scherke, 319–36. Wiesbaden: Springer VS. https://doi.org/10.1007/978-3-658-07645-0_23.

Peters, Uwe. 2020. "What Is the Function of Confirmation Bias?" *Erkenntnis* 87 (3): 1351–76. https://doi.org/10.1007/s10670-020-00252-1.

Pettenati, Giacomo, Alessia Toldo, and Tomaso Ferrando. 2018. "The Food System as a Commons." *Routledge Handbook of Food as a Commons*, 42–56. https://doi.org/10.4324/9781315161495-3.

Pohjolainen, Pasi, Markus Vinnari, and Pekka Jokinen. 2015. "Consumers' Perceived Barriers to Following a Plant-Based Diet." *British Food Journal* 117 (3): 1150–67. https://doi.org/10.1108/BFJ-09-2013-0252.

Poore, Joseph and Thomas Nemecek. 2018. "Reducing food's environmental impacts through producers and consumers." *Science* 360 (6392): 987-992.

Proviande. 2020. "Pro-Kopf-Verbrauch." <www.proviande.ch/de/der-fleischmarkt-in-zahlen>.

Pura Verdura. 2022. "Gemüsekooperativen/abos im Kanton Zürich & Region." <www.puraverdura.ch/links/>.

Rabès, Anaëlle, Louise Seconda, Brigitte Langevin, Benjamin Allès, Mathilde Touvier, Serge Hercberg, Denis Lairon, Julia Baudry, Philippe Pointereau and Emmanuelle Kesse-guyot. 2020. "Greenhouse Gas Emissions, Energy Demand and Land Use Associated with Omnivorous, Pesco-Vegetarian, Vegetarian, and Vegan Diets Accounting for Farming Practices." *Sustainable Production and Consuption* 22: 138–46. https://doi.org/10.1016/j.spc.2020.02.010.

Raphaely, Talia, and Dora Marinova. 2014. "Flexitarianism: Decarbonising through Flexible Vegetarianism." *Renewable Energy* 67: 90–96. https://doi.org/10.1016/j.renene.2013.11.030.

Reipurth, Malou F.S., Lasse Hørby, Charlotte G. Gregersen, Astrid Bonke, and Federico J.A. Perez Cueto. 2019. "Barriers and Facilitators towards Adopting a More Plant-Based Diet in a Sample of Danish Consumers." *Food Quality and Preference* 73 (June 2018): 288–92. https://doi.org/10.1016/j.foodqual.2018.10.012.

Restaurant Guru. 2022. "Die besten vegetarischen Restaurants in Zürich." <de.restaurantguru.com/vegetarian-Zurich-c93>.

Ritchie, Hannah and Max Roser. 2021. "Environmental Impacts of Food Production." *Our World in Data*. <ourworldindata.org/environmental-impacts-of-food>.

Rockström, Johan, Will Steffen, Kevin Noone, Åsa Persson, F. Stuart Chapin, Eric Lambin, Timothy M. Lenton, et al. 2009. "Planetary Boundaries: Exploring the Safe Operating Space for Humanity." *Ecology and Society* 14 (2). https://doi.org/10.5751/ES-03180-140232.

Rosi, Alice, Mena, Pedro, Pellegrini, Nicoletta,Turroni, Silvia Nevini, Erasmo, Di Cagno, Raffaella, Ruini, Luca et al. 2017. "Environmental Impact of Omnivorous, Ovo-Lacto-Vegetarian, and Vegan Diet." *Scientific Reports* 7 (6105). https://doi.org/10.1038/s41598-017-06466-8.

Ruby, Matthew B., and Steven J. Heine. 2011. "Meat, Morals, and Masculinity." *Appetite* 56 (2): 447–50. https://doi.org/10.1016/j.appet.2011.01.018.

Schwartz, Shalom H. 1992. "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries." *Advances in Experimental Social Psychology* 25 (C): 1–65. https://doi.org/10.1016/S0065-2601(08)60281-6.

———. 2003. "A Proposal for Measuring Value Orientations across Nations." *Questionnaire Development Package of the European Social Survey* 259 (290): 259–319.

———. 2012. "An Overview of the Schwartz Theory of Basic Values." *Online Readings in Psychology and Culture* 2 (1): 1–20. https://doi.org/10.9707/2307-0919.1116.

Sharma, Manika, Avinash Kishore, Devesh Roy, and Kuhu Joshi. 2020. "A Comparison of the Indian Diet with the EAT-Lancet Reference Diet." *BMC Public Health* 20 (1): 1–13. https://doi.org/10.1186/s12889-020-08951-8.

Shrader-Frechette, Kristin. 2002. "Environmental Justice: Creating Equality, Reclaiming Democracy." New York: Oxford UP.

Siegrist, Michael, and Christina Hartmann. 2019. "Impact of Sustainability Perception on Consumption of Organic Meat and Meat Substitutes." *Appetite* 132 (September 2018): 196–202. https://doi.org/10.1016/j.appet.2018.09.016.

Soper, Kate. 2012. "Beyond the Scarcities of Affluence: An 'alternative Hedonist' Approach?" *Architectural Design* 82 (4): 100–101. https://doi.org/10.1002/ad.1437.

Spaargaren, Gert. 2003. "Sustainable Consumption: A Theoretical and Environmental Policy Perspective." *Society and Natural Resources* 16 (8): 687–701. https://doi.org/10.1080/08941920309192.

Steffen, Will, Katherine Richardson, Johan Rockström, Sarah E. Cornell, Ingo Fetzer, Elena M. Bennett, Reinette Biggs, et al. 2015. "Planetary Boundaries: Guiding Human Development on a Changing Planet." *Science* 347 (6223). https://doi.org/10.1126/science.1259855.

Stokstad, Erik. 2010. "Could Less Meat Mean More Food?" *Science* 327 (5967): 810–11. https://doi.org/10.1126/science.327.5967.810.

Stoll-Kleemann, Susanne, and Uta Johanna Schmidt. 2017. "Reducing Meat Consumption in Developed and Transition Countries to Counter Climate Change and Biodiversity Loss: A Review of Influence Factors." *Regional Environmental Change* 17 (5): 1261–77. https://doi.org/10.1007/s10113-016-1057-5.

Sun, Cuixia, Jiao Ge, Jun He, Renyou Gan and Yapeng Fang. 2021. "Processing, Quality, Safety, and Acceptance of Meat Analogue Products." *Engineering* 7 (5): 674–78. https://doi.org/10.1016/j.eng.2020.10.011.

Swissinfo.ch (SWI). 2019. "Heart diseases and cancer still biggest causes of death." <www.swissinfo.ch/eng/mortality_heart-disease-and-cancer-still-biggest-causes-of-death/45437780>.

Szczebyło, Agata, Krystyna Rejman, Ewa Halicka, and Wacław Laskowski. 2020. "Towards More Sustainable Diets: Attitudes, Opportunities and Barriers to Fostering Pulse Consumption in Polish Cities." *Nutrients* 12 (6): 1589.

Templin, Tara, Tiago Cravo Oliveira Hashiguchi, Blake Thomson, Joseph Dieleman, and Eran Bendavid. 2019. "The Overweight and Obesity Transition from the Wealthy to the Poor in Low- And Middleincome Countries: A Survey of Household Data from 103 Countries." *PLoS Medicine* 16 (11). https://doi.org/10.1371/JOURNAL.PMED.1002968.

Terlau, Wiltrud, and Darya Hirsch. 2015. "Available Online at Www.Centmapress.Org." *Int. J. Food System Dynamics* 6 (3): 159–74.

The food and agriculture organization of the United Nations (FAO). 2010. "Greenhouse Gas Emissions from the Dairy Sector: A Life Cycle Assessment." Rome. https://doi.org/10.1017/S0020818300006688.

———. 2017. "Save Food for a Better Climate." *FAO.Org*. Rome.

Tichenor Blackstone, Nicole, and Zach Conrad. 2020. "Comparing the Recommended Eating Patterns of the EAT-Lancet Commission and Dietary Guidelines for Americans: Implications for Sustainable Nutrition." *Current Development in Nutrition* 4 (3): 1–5.

Tilman David. n.d. "Energy Gains and Greenhouse Gas Reductions from Food-Based versus Biomass-Based Biofuels." Washington DC.

Trummer, Manuel. 2015. "Die Kulturellen Schranken Des Gewissens: Fleischkonsum Zwischen Tradition, Lebensstil Und Ernährungswissen." In *Was Der Mensch Essen Darf*, edited by G. Hirschfelder, A. Ploeger, J. Rückert-John, and G. Schönberger, 63–79. Wiesbaden: Springer VS. https://doi.org/10.1007/978-3-658-01465-0_5.

Tucci, Massimiliano, Daniela Martini, Cristian Del Bo', Mirko Marino, Alberto Battezzati, Simona Bertoli, Marisa Porrini, and Patrizia Riso. 2021. "An Italian-Mediterranean Dietary Pattern Developed Based on the EAT-Lancet Reference Diet (EAT-IT): A Nutritional Evaluation." *Foods* 10 (3). https://doi.org/10.3390/foods10030558.

United Nations Department of Economic and Social Affairs. 2019. <www.un.org/development/desa/en/news/poulation/world-population-prospects-2017.html>.

Vermeir, Iris, and Wim Verbeke. 2006. "Sustainable Food Consumption: Exploring the Consumer 'Attitude - Behavioral Intention' Gap." *Journal of Agricultural and Environmental Ethics* 19 (2): 169–94. https://doi.org/10.1007/s10806-005-5485-3.

Weber, Christopher L., and H. Scott Matthews. 2009. "Response to Comment on 'Food-Miles and the Relative Climate Impacts of Food Choices in the United States.'" *Environmental Science and Technology* 43 (10): 3984. https://doi.org/10.1021/es901016m.

Weinrich, Ramona. 2018. "Cross-Cultural Comparison between German, French and Dutch Consumer Preferences for Meat Substitutes." *Sustainability (Switzerland)* 10 (6). https://doi.org/10.3390/su10061819.

Whitton, Clare, Diana Bogueva, Dora Marinova, and Clive J.C. Phillips. 2021. "Are We Approaching Peak Meat Consumption? Analysis of Meat Consumption from 2000 to 2019 in 35 Countries and Its Rela-Tionship to Gross Domestic Product." *Animals* 11 (12). https://doi.org/10.3390/ani11123466.

Wild Foods. n.d. "Über uns." <www.wildfoods.ch/uber-uns>.

Willett, Walter, Johan Rockström, Brent Loken, Marco Springmann, Tim Lang, Sonja Vermeulen, Tara Garnett, et al. 2019. "Food in the Anthropocene: The EAT–Lancet Commission on Healthy Diets from Sustainable Food Systems." *The Lancet* 393 (10170): 447–92. https://doi.org/10.1016/S0140-6736(18)31788-4.

World Health Organization (WHO). 2020. "Healthy Diet." <www.who.int/news-room/fact-sheets/detail/healthy-diet>.

———. 2021a. "Malnutrition." <www.who.int/news-room/factsheets/detail/malnutrition#:~:text=1.9%20billion%20adults%20are%20overweight,while%20462%20million%20are%20underweight>.

———. 2021b. "Obesity and Overweight." <www.who.int/news-room/fact-sheets/detail/obesity-andoverweight#:~:text=In%202016%2C%20more%20than%201.9%20billion%20adults%20aged%2018%20years,women)%20were%20obese%20in%202016>.

Yamoah, Fred A. and Adolf Acquaye. 2019. "Unravelling the attitude-behaviour gap paradox for sustainable food consumption: Insight from the UK apple market." *Journal of Cleaner Production*, 217: 172-184.

Zuberbuehler, Christine Anne, and Esther Camenzind-Frey. 2021. "Sind Snacks in Aller Munde? Einblicke in Die Schweizer Zwischenmahlzeiten." *Schweizer Ernährungsbulletin 2021*.

9 Appendix

9.1 Meal Plans and Weekly Macronutrient Counts

Essplan 1: Schweizer Gerichte

	Montag	**Dienstag**	**Mittwoch**	**Donnerstag**	**Freitag**	**Samstag**	**Sonntag**
Früh-stück	Nussbrot mit Brie und Birne	Müesli	Birchermüesli	Haferbrei mit Beeren	Joghurt-Becher mit Granola	Veganer Zopf mit Erdnussbutter	Räucherlachs auf Kernebrot
Mittag-essen	Pilzrisotto	Linsensalat	Bohneneintopf	Vegane Gerstensuppe	Vegetarische Schupfnudel-pfanne	Käse-Spätzli mit Gemüse	Veganes Gehacktes mit Hörnli
Snack	Apfelschnitze mit Erdnussbutter	Joghurt mit Apfelkompott	Geröstete Kichererbsen	Gemüse mit Joghurtdipp	Fruchtsalat mit Baumnüssen	Müesliriegel	-
Abend-essen	Minestrone	Veganes Zürcher-geschnetzeltes	Ofenlachs an Dill-Wein-Sauce mit Spinat und schwarzem Reis	Riz Casimir mit Poulet	Älpler-maggeronen mit Apfelmus	Gemischter Hackbraten mit Erbsen und Stampf	Vegetarische Capuns mit Räuchertofu-Füllung
Dessert	Panna Cotta	Apfelwähe	Schoggi-Mousse	Luzerner Lebkuchen	Coupe Belle Hélène	-	Rüeblitorte

Week	Macronutrient intake [g/day]	Control [g/day]	Total [g/day]
Whole grains	232	3248	3172
Tubers/starchy vegetables	50	700	700
Vegetables	300	4200	4724
Fruits	200	2800	3437
Dairy foods (whole milk equivalents)	250	3500	5151
Dairy [kcal]	153	2142	2127
Beef/Lamb	7	98	100
Pork	7	98	100
Poultry	29	406	400
Eggs	13	182	180
Fish	28	392	400
Legumes	125	1750	1961
Beans, Lentils, Peas	50	700	802
Soy foods	25	350	341
Peanuts	25	350	203
Tree nuts	25	350	632
Palm Oil	6.8	95.2	8
Unsaturated oils	40	560	542
Dairy fats	0	0	0
Lard/Tallow	5	70	0
All Sweeteners	31	434	435
Calories	2500	35000	35007

Table 7: *Weekly macronutrient count for the Swiss meal plan.*

Essplan 2: Europäische Gerichte

	Montag	Dienstag	Mittwoch	Donnerstag	Freitag	Samstag	Sonntag
Früh-stück	Hirsebrei mit Kirschen	Pumpernickel mit Erdnussbutter	Nuss-Fruchtbrot mit Erdnussbutter	Frühstücks-muffins	Overnight-Oats	Gebackener Porridge	Belgische Waffeln mit Schoko-Bananen-Sauce
Mittag-essen	Vegetarische Spaghetti Bolognese	Vegi-Wiener-Schnitzel mit Rahmlauch	Griechischer Salat Variation	Gulasch mit Kartoffel-Blumenkohl-Stampf	Gemüse Gnocchi	Pasta e Fagioli (italienische Bohnensuppe)	Mais-Kidney-Bohnen Salat
Snack	Griechischer Joghurt mit Früchten	Tassen-Küchlein	Gazpacho	Grüner Smoothie	Nuss-Frucht-Bällchen	Haferkekse	Pizzabrötchen
Abend-essen	Gemüse-Lasagne	Gemüse-Quiche	Kürbissuppe mit Tomaten-Crostini	Vegetarischer Flammkuchen	Kabeljau an mediterraner Sauce mit Beluga Linsen	Gebratene Garnelen mit roten Linsen	Paella
Dessert	Himbeereis	Vanille-Pudding	Veganer Tiramisù	-	Zwetschgen-becher	Erdbeer-Mousse	Schokoladen-kuchen

Week	Macronutrient intake [g/day]	Control [g/day]	Total [g/day]
Whole grains	232	3248	3190
Tubers/starchy vegetables	50	700	675
Vegetables	300	4200	8077
Fruits	200	2800	3103
Dairy foods (whole milk equivalents)	250	3500	6191
Dairy [kcal]	153	2142	2180
Beef/Lamb	7	98	200
Pork	7	98	0
Poultry	29	406	400
Eggs	13	182	180
Fish	28	392	420
Legumes	125	1750	1941
Beans, Lentils, Peas	50	700	902
Soy foods	25	350	290
Peanuts	25	350	320
Tree nuts	25	350	429
Palm Oil	6.8	95.2	0
Unsaturated oils	40	560	587
Dairy fats	0	0	0
Lard/Tallow	5	70	0
All Sweeteners	31	434	307
Calories	2500	35000	35100

Table 8: *Weekly macronutrient count for the European meal plan.*

Essplan 3: Internationale Gerichte

	Montag	Dienstag	Mittwoch	Donnerstag	Freitag	Samstag	Sonntag
Früh-stück	Bananen-Matcha-Smoothie	Ziegenkäse Toast mit karamelli-sierten Zwiebeln	Pancakes mit Birnen-Schoko-Sauce	Chia-Pudding mit Nektarinen	Peanutbutter-Jelly-Toast	Avocado Toast mit Spiegelei	Bananenbrot
Mittag-essen	Vegetarische Pulled Planted Wraps	Couscous-Salat	Asiatische Sommerrollen	Rotes Gemüsecurry mit Quorn-Geschnetzeltes	Poké-Bowl mit Lachs	Fajitas mit Garnelen und Planted	Satai-Spiesse mit Reis und Brokkoli
Snack	Baba Ganoush mit Gemüsesticks	Hummus mit Gemüsesticks	Guacamole mit Cracker	Mango-Lassi	Kale-Chips	Gesalzenes Edamame	Süsskartoffel-Wedges mit Joghurtdipp
Abend-essen	Chili sin Carne	Spinat-Feta-Taschen	Steak und Wasser-melonensalat	Vegi-Burger mit Salat	Daal-Curry	Asiatische Nudelsuppe	Vegetarische Wok-Pfanne
Dessert	Flambierte Bananen mit veganem Glace	Chocolate-Chip-Cookies	Frozen Yoghurt mit Beeren	Erdnuss-Schoko-Becher mit Pfirsich	Cheesecake	Brownies	-

Week	Macronutrient intake [g/day]	Control [g/day]	Total [g/day]
Whole grains	232	3248	3965
Tubers/starchy vegetables	50	700	600
Vegetables	300	4200	7867
Fruits	200	2800	3327
Dairy foods (whole milk equivalents)	250	3500	3877
Dairy [kcal]	153	2142	2257
Beef/Lamb	7	98	200
Pork	7	98	0
Poultry	29	406	400
Eggs	13	182	180
Fish	28	392	400
Legumes	125	1750	2055
Beans, Lentils, Peas	50	700	573
Soy foods	25	350	519
Peanuts	25	350	325
Tree nuts	25	350	638
Palm Oil	6.8	95.2	0
Unsaturated oils	40	560	486
Dairy fats	0	0	0
Lard/Tallow	5	70	0
All Sweeteners	31	434	350
Calories	2500	35000	35015

Table 9: *Weekly macronutrient count for the international meal plan*.

9.1.1 Replacement Products Used in the Meal Plans

Food Group	Animal Product	Plant-based Alternative
Red meat	Minced meat	Soy-wheat protein mince (Coop, Prix Garantie "Veganes Hack")
	Meat strips	Tofu (Migros, Bio)
	Bacon cubes	Smoked wheat protein stick (Coop, Festivo "geräucherter Stick vegan")
	Pulled pork	Seasoned pea protein strips (Coop/Migros, Planted "Pulled BBQ")
	Wiener Schnitzel	Vegetarian Wiener Schnitzel (Coop, Cornatur "Vegi Wiener Schnitzel")
Poultry	Chicken strips	Pea protein chunks (Coop/Migros, Planted "vegane Filets nature")
Eggs	Egg white	Aqua faba (chickpea water)
Dairy	Milk	Oat milk (Migros, Alnatura "Haferdrink ungesüsst") Soy milk (Coop, Karma "Bio Sojadrink")
	Yoghurt	Soy Yoghurt (Migros, V-Love Vegurt Soja Classic) Coconut Yoghurt (Migros, Alnatura)
	Cream	Soy Cream (Migros, Alnatura "Sojacuisine")
	Sour cream	Cashew nut cream (Coop, New Roots "Fraîche")
	Whipping cream	Oil-soy mixture (Coop, Rama "Schlagcrème 15%")
	Ice cream	Coconut milk ice cream (Coop, Karma "Kokos Freeze Chocolate Chips")
	Cream cheese	Cashew nut spread (Coop, New Roots)
	Grated cheese	Seasoned grated nuts mixture (Coop, Chopf-Nuss "Nussmesan classic")
	Butter	Oil (canola, olive and peanut oil)
Conventional cookies	Egg/Dairy	Vegan cookies (Migros, YOU "Protein Cookies")

Table 10: *Meat, eggs and dairy replacement products used in the meal plans.*

9.1.2 Evaluation of Processed Foods Used in the Meal Plans

Product	Product Name (if relevant)	Food group of interest	Method
Ajvar	Migros, Podravka Ajvar mild	Vegetables Unsaturated fats	Vegetables percentage Unsaturated fatty acid content
Aqua Faba		Calories	Caloric content[136]

[136] Gesünder Leben. (n.d.). gesuender-abnehmen.com/abnehmen/naehrwerte-kalorien-aquafaba-selbst-gemacht-44617.html.

Bread		Whole cereals	Weight equivalent
Buckwheat Noodles	Coop, Saitaku Soba Noodles	Calories	Caloric content
Canned legumes (cooked)		Legumes (dry)	Water content difference
Canned sweet corn		Whole cereals	Water content difference
Caper	Migros, Alnatura Kapern	Calories	Caloric content
Chocolate		Sugar Tree nuts	Sugar content Total weight minus sugar content
Concentrated Pear Juice	Naturaplan Bio Birnelsaftkonzentrat	Sugar	Sugar percentage
Cracker	Migros, Blévita Original	Whole cereals Calories	Whole cereals percentage Caloric content
Dairy products		Dairy products	Caloric equivalent
Dried fruit		Fruit	Water content difference
Dried tomatoes		Vegetables	Water content difference
Grated cheese alternative		Tree nuts	Almond content percentage
Green beans		Legumes	Water content difference
Harissa	Migros, Al Fez Harissa	Vegetables Unsaturated fats	Vegetable percentage Unsaturated fats content
Miso paste	Migros, Saitaku Miso Paste	Soy	Soy percentage
Naan bread	Migros, Namaste India Naan Bread	Calories	Caloric content
Natural sweeteners (Dates, honey, maple sirup)		Sugar	Sugar content
New Roots products (cream cheese and sour cream alternatives)	Coop, New Roots Fraîche/Alternative zu Frischkäse Knoblauch	Tree nuts	Cashew nut content percentage
Oat milk	Migros, Alnatura Haferdrink ungesüsst	Whole cereals	Oat content percentage
Pasta		Whole cereals	Weight equivalent
Peanut butter		Peanuts	Weight equivalent
Pesto	Migros, Alnatura Pesto Basilico	Vegetables Unsaturated fats	Vegetable percentage Unsaturated fat content
Planted products (chicken chunks and pulled pork alternatives)	Coop/Migros, Planted vegane Filets nature/pulled BBQ	Legumes Unsaturated fats	Pea content percentage Unsaturated fat content
Pumpernickel	Migros, Bio Pumpernickel Brot in Scheiben	Calories	Caloric content

Quorn strips	Migros, Cornature Quorn Geschnetzeltes	Calories	Caloric content
Red Curry Paste	Migros, Thai Kitchen Rote Curry-Paste	Calories Sugar	Caloric content Sugar content
Rice Noodles	Coop, Mei Yang Brown Rice Noodles	Calories	Caloric content
Rice Vermicelli	Coop, Mei Yang Rice Vermicelli	Calories	Caloric content
Sambal Olelek	Migros, Chop Stick Sambal Oelek	Calories Vegetables	Caloric content Vegetables percentage
Sauce thickener (corn base)		Whole cereals	Weight equivalent
Sauces		Unsaturated fats Sugar	Unsaturated fat content Sugar content
Soy cream	Migros, Alnatura Sojacuisine	Soy Unsaturated fats	Soy content percentage Unsaturated fat content
Soy milk	Coop, Karma Bio Sojadrink	Soy	Soy content percentage
Soy Yoghurt	Migros, V-Love Vegurt Soja Classic	Soy	Soy content percentage
Spring roll rice paper	Coop, Mei Yang Spring Roll Paper	Calories	Caloric content
Tahin		Tree nuts	Weight equivalent
Tomato purée		Vegetables	Assumption of 3-fold concentration
Tortillas	Migros, El Sombrero Tortilla Whole Wheat 8 Stk	Whole cereals	Wheat percentage
Vegan Cookies	Migros, YOU Protein Cookies	Tree nuts	Tree nuts percentage
Vegan bacon	Coop, Festivo geräucherter Stick vegan	Whole cereals Unsaturated fats	Wheat content percentage Unsaturated fat content
Vegan burger	Coop, Prix Garantie veganer Burger	Calories	Caloric content
Vegan ice cream		Sugar Unsaturated fats	Sugar content Unsaturated fat content
Vegan mince	Coop, Prix Garantie Veganes Hack	Soy/whole cereals Unsaturated fats	Soy/wheat content percentage Unsaturated fat content
Whipping cream alternative	Coop, Rama Schlagcrème 15%	Unsaturated fats Palm oil	Unsaturated fat content Palm oil content

Table 11: *Processed foods and the methods used to determine food group equivalents.*

9.2 Participant Information

Universität Zürich[UZH]

Geographisches Institut

Universität Zürich
Geographisches Institut
Giulia Zambelli

Informationen zum Interview: *Masterarbeit: Ernährungsgewohnheiten in Zürich*

Sehr geehrte Dame, sehr geehrter Herr

Ich bin Masterstudentin am Geographischen Institut der Universität Zürich. Für meine Masterarbeit benötige ich Teilnehmer:innen für ein etwa einstündiges Interview rund ums Thema Ernährung, weshalb ich Sie um eine Teilnahme gebeten habe.

Als Vorbereitung auf das Interview, bitte ich Sie Ihre vollständige Ernährung für eine Woche mittels Handybildern oder per Text festzuhalten. Dabei stehen nicht die genauen Mengen oder verwendeten Zutaten im Vordergrund, sondern die ungefähre Portionsgrösse (z.B. ein handgrosses Steak, zwei Fäuste Gemüse etc.) und ob sie tierische Lebensmittel (rotes Fleisch, Geflügel, Fisch, Milchprodukte und Eier) verzehrt haben. Sofern auf den Bildern erkennbar ist, um welche Speisen es sich ungefähr handelt und ob tierische Lebensmittel und in welchen Portionsgrössen ungefähr verwendet wurden, bedarf es keiner schriftlichen Ergänzung mehr. Sollten Sie nicht alle Ihre Mahlzeiten (inklusive Zwischenverpflegungen und allen Getränken ausser Wasser) auf Bildern festgehalten haben, so können Sie schriftlich den Bildbericht ergänzen. Die Bilder und schriftlichen Ergänzungen können sie mir laufend oder spätestens nach Ablauf der Woche per Whatsapp, E-Mail oder Telegram zukommen lassen. Aus Datenschutzgründen bitte ich Sie, die Fotos so aufzunehmen, dass keine Personen darauf zu sehen sind.

Ihre Daten und Angaben werden selbstverständlich anonymisiert und vertraulich behandelt. Die Ergebnisse werden in meiner Masterarbeit auf der Webseite der Universität Zürich im gegen Ende dieses Jahres öffentlich zugänglich gemacht. Wenn Sie Fragen haben, können Sie gerne mich oder meine Betreuungspersonen Mollie Chapman und Norman Backhaus kontaktieren.

Ich möchte mich bereits im Voraus für Ihr Mitwirken bedanken.

Freundliche Grüsse,

Giulia Zambelli
+41 78 718 84 22
giulia.zambelli@uzh.ch

Dr. Mollie Chapman
+41 78 664 58 92
mollie.chapman@uzh.ch

Prof. Dr. Norman Backhaus
+41 44 635 51 72
norman.backhaus@uzh.ch

Universität Zürich[UZH]

Geographisches Institut

Universität Zürich
Geographisches Institut
Giulia Zambelli

Informationen und Einverständniserklärung: *Masterarbeit: Ernährungsgewohnheiten in Zürich*

Sehr geehrte Damen und Herren,

Mit diesem Brief möchte ich Sie gerne über meine Masterarbeit zum Thema Ernährungsgewohnheiten im Kanton Zürich informieren. Gerne stehe ich Ihnen für weitere Fragen zur Verfügung.

Wer bin ich?
Ich bin Masterstudentin am Geographischen Institut an der Universität Zürich. Für meine Masterarbeit benötige ich Teilnehmer:innen für ein etwa einstündiges Interview rund ums Thema Ernährung. Dabei stehen die Ernährungsweisen der Zürcher Bevölkerung im Vordergrund.

Was bedeutet es für Sie, wenn Sie teilnehmen?
Ich werde mit Ihnen ein Gespräch führen, das etwa eine Stunde dauern wird. Ich möchte mit Ihnen gerne über Ihre Essgewohnheiten und Ihre Meinung zu verschiedenen Ernährungsweisen sprechen. Als Vorbereitung würden Sie für eine Woche lang Ihre Mahlzeiten mittels Fotos oder Texten dokumentieren. Ihre Teilnahme ist freiwillig und Sie können jederzeit sagen, wenn Sie eine Frage nicht beantworten wollen.

Wenn Sie zustimmen, würde ich das Interview gerne aufnehmen. Das hilft mir bei der Analyse, damit ich im Nachhinein genau rückverfolgen kann, was Sie mir gesagt haben. Nur Mitglieder des Forschungsteams dürfen die Interviews anhören bzw. die (anonymisierte) Abschrift lesen. Alle Ergebnisse werden so präsentiert, dass Ihre Identität vertraulich bleibt. Die Fotos Ihrer Mahlzeiten werden ebenfalls anonymisiert und vertraulich behandelt. Sie dienen lediglich der Analyse Ihrer Ernährungsgewohnheiten, werden aber nicht in meiner Arbeit erscheinen.

Was sind die Vor- und Nachteile einer Studienteilnahme?
Sie bekommen die Gelegenheit sich mit Ihrer Ernährung auseinanderzusetzen und allenfalls neue Gedankenanstösse zum Thema Ernährung zu gewinnen.

Ein möglicher Nachteil ist, dass die Studie allfällige Essstörungen triggern könnte. Bitte nehmen Sie nicht an der Studie Teil, falls Sie an einer Essstörung leiden oder Sie das Thema Ernährung besonders belastet.

Was passiert mit den Ergebnissen?
Die Ergebnisse werden in meiner Masterarbeit auf der Webseite der Universität Zürich gegen Ende dieses Jahres öffentlich zugänglich gemacht. Wenn Sie Fragen haben oder mehr über die Resultate wissen möchten, können Sie mich gerne kontaktieren. Für weitere Fragen stehe ich und auch meine Betreuungspersonen Mollie Chapman und Norman Backhaus Ihnen gerne zur Verfügung.

Freundliche Grüsse,

Giulia Zambelli
+41 78 718 84 22
giulia.zambelli@uzh.ch

Dr. Mollie Chapman
+41 78 664 58 92
mollie.chapman@uzh.ch

Prof. Dr. Norman Backhaus
+41 44 635 51 72
norman.backhaus@uzh.ch

9.3 Interview Questions

Zunächst möchte ich mich bei Ihnen bedanken für die Zeit, die sie sich im Vorfeld und auch heute genommen haben, um an meiner Studie teilzunehmen. Das heutige Interview besteht aus drei Teilen. Zuerst schauen wir Ihren Essbericht an und sprechen über Ess- und Kochgewohnheiten. Anschliessend werde ich Ihnen ein paar Esspläne zeigen, zu denen mich Ihre Meinung interessiert. Anschliessend besprechen wir einige der Mahlzeiten aus den mitgebrachten Menu-Plänen und deren Zutaten etwas genauer. Zuletzt werde ich noch einige Fragen zum Thema Ernährung im Allgemeinen stellen. Das Interview wird, wie ich schon erwähnt habe, etwa 60min dauern. Ganz am Ende werden Sie noch einen kurzen Fragebogen ausfüllen.

Diskussion 1: Essbericht

1. Zuerst widmen wir uns ihrem Essbericht, durch den Sie mich gleich mal führen können. Was ist Ihnen aufgefallen bei der Dokumentation? Wie würden Sie Ihre Essgewohnheiten beschreiben? Auf was achten Sie beim Produktekauf? Ist diese Woche repräsentativ für Ihre Essgewohnheiten?
    - Gesundheitsaspekte: Achten Sie darauf, dass Ihre Ernährung gesund ist? Was bedeuted für Sie gesund?
    - Nachhaltigkeitsaspekte: Versuchen Sie sich nachhaltig zu ernähren? Was bedeutet für Sie nachhaltig?
    - Convenience-Aspekte: Gibt es Tricks, die Sie anwenden, um Ihr Leben hinsichtlich Ernährung zu erleichtern? z.B. mehrere Portionen, leicht mitzunehmen, schnell zu kochen, Take-away, Mikrowelle etc.
    - Präferenzen: Wie wird entschieden, was gekocht wird? Planen Sie im Vorhinein oder entscheiden Sie spontan?
    - Aufgabenteilung: Wer ist zuhause für Einkauf und kochen verantwortlich? Wer hat die Gerichte aus ihren Berichten gekocht? Wer kocht allgemein in Ihrem Haushalt?
    - Interesse am Thema Ernährung und Kochen/Kochskills: Kochen Sie gerne? Von wem haben Sie kochen gelernt?

Ein wichtiger Faktor der persönlichen Ernährungsweise ist der eigene kulturelle Hintergrund. Ich koche sehr viele italienische Gerichte, weil ich das so von meinen Eltern und Grosseltern kenne. Trotzdem habe ich auch schweizer Gewohnheiten angenommen, zum Beispiel überbacke ich Essen sehr gerne mit Käse.

2. Wie würden Sie Ihren kulturellen Hintergrund beschreiben? Wo in ihren Gerichten spiegelt sich dieser Hintergrund?
3. Spielen bei Ihnen Käse- und andere Milchprodukthaltige Gerichte auch eine Rolle?
4. Fleisch wird in vielen Kulturen als zentrales Element der Gerichte angesehen. Ist das bei Ihnen auch so?
    - Denken Sie dazu z.B. an typische Festgerichte, die bei Ihnen in der Familie zu Weihnachten etc. gegessen werden.

Diskussion 2: Esspläne

Ich habe hier drei eigens zusammengestellte Esspläne zur Auswahl. Der eine hat sich an typisch schweizerischen Gerichten inspiriert, der zweite besteht aus einem Mix von europäischen Gerichten und der letzte beinhaltet hauptsächlich asiatische, amerikanische und orientalische Gerichte. Welcher dieser Pläne spricht Sie rein vom Titel her am meisten an zum Besprechen? Bitte entscheiden Sie sich für einen, der kompatibel ist mit Ihren allgemeinen Präferenzen.

1. Schauen Sie sich doch mal den Plan an. Was fällt Ihnen auf? was ist Ihre Meinung zum Plan? Was gefällt Ihnen und was stört Sie daran?

- «Vegetarisierte/veganisierte» Rezepte
- Wenig Fleisch
- Aufwändig zum Kochen

Eine Charakteristik der Pläne besteht darin, dass weniger tierische Produkte verwendet wurden, als Schweizer im Durchschnitt konsumieren: *Fotos zeigen*

- 100g Rind oder Schwein
- Je 200g Geflügel und Fisch
- 250g Milch/Joghurt/Quark oder 40g Käse oder 0.5dl Rahm

2. Wo sehen Sie Unterschiede zwischen Ihren Essgewohnheiten und den Essplänen? Könnten Sie sich vorstellen sich so zu ernähren? Was wäre schwierig oder nicht erstrebenswert umzusetzen?
    - Zu wenig Fleisch/Milchprodukte
    - Zu aufwändig
    - Kochskills nicht vorhanden
    - Mengenmässig zu viel/zu wenig
    - Entspricht nicht den eigenen Essgewohnheiten

Dieser Essplan ist auf der Basis einer Studie entstanden, die berechnet hat, wieviel Lebensmittel jeder Person auf der Welt zustehen würde, wenn man sämtliche nachhaltig produzierten Ressourcen auf die Weltbevölkerung aufteilen würde. Gemäss dieser Studie wäre das also sozusagen der faire Anteil Essen, das man konsumieren kann, sodass jede Person gleichviel hat und die Natur nicht zu Schaden kommt.

3. Was halten Sie nun von den Plänen mit diesem zusätzlichen Wissen?
4. Glauben Sie, dass wir als Gesellschaft durch unsere Ernährungsart etwas bezwecken können? Und als Individuen?

Diskussion 3: Gerichte aus dem Essplan

1. Ich möchte nun mit Ihnen 3 Mahlzeiten aus dem Essplan genauer besprechen. Wie Sie sehen, werden hier teilweise Ersatzprodukte für tierische Lebensmittel verwendet. Haben Sie solche Produkte schon gesehen, z.B. im Supermarkt? Haben Sie solche Produkte schon mal gegessen oder gekocht? Wenn nicht, können Sie sich vorstellen, solche Produkte auszuprobieren? Was ist Ihre Meinung zu Fleisch- und Milchalternativen?
    - Gesundheitsaspekt
    - Nachhaltigkeitsaspekt
    - Preis
    - Motivation sich damit auseinanderzusetzen
    - Kochskills vorhanden
    - Unterschiedliche Präferenzen von anderen Leuten im Haushalt
2. Stellen Sie sich vor, Sie gehen in ihren gewohnten Lebensmittelläden einkaufen. Hat es dort solche Produkte? Würden Sie sich ein breiteres Sortiment wünschen?
3. Würden Sie so ein Gericht Ihren Gästen auftischen? Also z.B. Ihren Freunden, Eltern oder Ihrem Chef?

Diskussion 4: Nachhaltigkeit

Wie Sie vielleicht bereits gemerkt haben, spielt in den Essplänen, die wir angeschaut haben, auch das Thema Nachhaltigkeit eine Rolle.

1. Sie haben vorhin erwähnt, dass Sie auf xy achten bei Ihrer Ernährung. Gibt es weitere solche Faktoren, die Ihnen in den Sinn kommen, wenn Sie an nachhaltige Ernährung denken? (Einige Leute achten auf yz, tun Sie das auch?)

- Regionalität
- Bio
- Head-to-Tail
- Keine Lebensmittelverschwendung
- Reduktion von tierischen Produkten
- Reduktion von verarbeiteten Produkten/Fastfood
- Essen selber kochen
- Palmöl

2. Dann haben Sie auch noch yz erwähnt. Gibt es weitere Sachen, die Ihnen zum Stichwort gesunde Ernährung in den Sinn kommen, auf die Sie achten?
   - Ausgewogenheit
   - Reduktion von tierischen Produkten
   - Reduktion von verarbeiteten Produkten/Fastfood
   - Essen selber kochen
   - Zucker/(Trans-, Ungesättigte) Fette
   - Kalorien
3. Ist das Thema nachhaltige und/oder gesunde Ernährung etwas, mit dem Sie sich öfters beschäftigen?
4. Wo kommen sie mit dem Thema gesunde und nachhaltige Ernährung in Berührung? Aktiv nachfragen:
   - Kultureller Kontext
   - Studium
   - Beruf
   - Freunde und Familie
   - Medien
   - Vereine/Organisationen
   - Verkaufsstellen
   - Politik
5. Denken Sie an Ihre früheren Essgewohnheiten. Haben Sie das Gefühl da hat sich was verändert? Hat Sie vielleicht einer der vorhin genannten Punkte dazu motiviert oder Ihre Perspektive verändert?

Wir sind bereits am Ende des Interviews, möchten Sie noch etwas zum Thema hinzufügen, was noch nicht zur Sprache kam?

Haben Sie noch Fragen zur Studie?

Dann würde ich Sie zum Abschluss noch bitten, Ihre demographischen Angaben auszufüllen.

Vielen herzlichen Dank für Ihre Teilnahme.

9.4 Demographic Questionnaire

Demographische Angaben

Name:_____

Geschlecht:_____

Geburtstag:_____

Bitte kreuzen Sie die passende Antwort an:

Ich lebe:
In der Stadt O
Eher städtisch O
Auf dem Land O
Eher ländlich O
Möchte ich lieber nicht beantworten O

Verglichen mit dem Schweizer Durchschnitt ist meine finanzielle Situation:

Unterdurchschnittlich O
Durchschnittlich O
Überdurchschnittlich O
Möchte ich lieber nicht beantworten O

Bitte tragen Sie Ihre politische Positionierung im Strahl ein:

Links Mitte Rechts
I----------I----------I

Ich habe keine politische Positionierung O
Möchte ich lieber nicht beantworten O

9.5 Interview Codes

Capacity	Code	Explanation
Cultural Capacity	Upbringing	How did they grow up? What values, traditions and habits were passed on to them by their parents?
	Importance of meat	What value is assigned to meat? Which personal relevance does meat have?
	Importance of dairy	What value is assigned to dairy? Which personal relevance does dairy have?
	Social importance of sustainability topics	Are sustainability and sustainable diets perceived to be of social relevance?
	Gender differences	How is gender linked to consumption pattern and engagement in pro-environmental action? Are gender differences in relationships mentioned? Who is responsible for the household, cooking etc.? Did gender play a role in their upbringing?
	Generational differences	Is there a change in attitude and behaviour distinguishable between generations? What do the participants say about their parents'/their peers'/their children's behaviour? How are attitudes changing?
	Habits	What eating habits do the participants have? Do they question them? Are the habits favourable for sustainable consumption or not? How do the participants justify their habits? What values are attached to them?
Organisational Capacity	Living constellation	In what constellations do they live? How does cohabiting with other people influence the participants' eating behaviour? Where do they have to compromise?
	Social environment	Is their social environment interested in sustainable diets? Do they have vegetarian/vegan family members or friends? Do they discuss such topics with them?
	Working/study environment	Are sustainable diets discussed in their working/study environment? Is their work/study field related to the food sector or sustainability? Does their work/study place take measures in the canteen etc. to promote sustainable diets?
	Other associations	Are the participants part of an association in which sustainable diets are discussed or thematised?
	Perception of federal/political engagement	How do they perceive the engagement of the government/politics to render diets more sustainable?
	Perception of retailer engagement	Do they perceive an engagement of the retailers to sensitise people for eating more sustainably?
Infrastructural Capacity	Availability of sustainable alternatives	Are sustainable products, including meat and dairy alternatives, organic, local or regional products available to the participants? Do they have access to plant-based options in restaurants etc.?

	Opinion on meat/dairy substitutes	What do they like/dislike about substitutes? Do they use them? What would they like to be different?
	➢ Artificiality	Do the participants perceive them as being artificial, highly processed, unnatural etc.? Why so?
	➢ Unhealthy/ unsustainable	Do the participants perceive substitutes as unhealthy because they are highly processed, include hidden ingredients and mysterious E-numbers etc.?
	Guiding	How would they want to be supported in making better dietary choices? Who should provide the guiding?
	Labels	Do they consider labels? Do they believe in them? Do labels make their consumption choices easier?
Personal Capacity	Preferences	What are their culinary preferences? What is important to them when eating?
	Awareness of own consumption	Are they aware of their habits/consumption? Do they know about the consequences of unsustainable consumption?
	School education	What did the participants learn about healthy and sustainable diets at school? Do they perceive a change in their children's education? What do they say about the importance of adequate education on sustainability topics?
	Financial means	What do the participants say about the influence of their financial means on their diets? Do they think that eating sustainably is cheaper or more expensive? Why so? Do they claim that financial means are limiting their ability to eat sustainably?
	Time	Do the participants mention limited time availability as having an impact on their diet? What do they resort to in order to make it work?
	Cooking skills	Do the participants have the necessary cooking skills to cook a diverse, healthy and sustainable diet? Are their cooking skills limited to certain types of dishes? Would they trust themselves to be able to cook vegetarian dishes and handle meat and dairy replacement products? Who taught them to cook?
	Knowledge on sustainable diets	How well are the participants informed about sustainable diets? Do they know what an adequate consumption could look like?
	Uncertainty	Are they uncertain about which options are actually better? Is there competing information on what is sustainable and what is not? Are they confused by theplethora of opinions, advises, information etc.?
	Health requirements	Which health requirements must their diets meet? How does that impact their consumption?
	➢ Health =/ sustainability	Do they perceive their personal health requirements and sustainability goals to be at conflict or even mutually exclusive? What do they prioritise?

	➢ Health = sustainability	Do the participants perceive their personal health requirements to be aligned with sustainability goals? Why so?
	Relevance of sustainability topics	What importance do sustainability topics and pro-environmental behaviour have to the participants? Why does the topic matter? Do the participants engage in pro-environmental practices for the sake of sustainability or are there underlying self-serving motives?
	Ethical reservations	Do the participants feel pity for the animals? Do they feel guilty about their consumption? Do they question the social aspects of agriculture? How do these reservations impact their consumption? Do they tell an emotional story?
	Hands-on experience	What are their direct experiences? Do they have personal experiences in agriculture, with animals? Did they witness environmental degradation or social/animal misery? How did that change their behaviour?
	Interest in cooking/eating (new things)	Do the participants like cooking? Would they be interested to learn new dishes and experiment with plant-based dishes? Are they curious to try new things?
	Convenience	Do the participant prioritise the convenience factor in their diet? Do they eat convenience food or buy ready-to-eat food in order to make their lives easier? In what moments do they opt for more convenient options?
	Conflict of interests	What excuses do the participants mention to justify a lack of pro-environmental behaviour? What are the conflicting interests?
	Priorities	What are the participants' priorities in their diet? Are they upfront about their priorities or do they find excuses? Which discourse do they use to justify their personal prioritisation?
	Self-efficacy	Do the participants feel empowered to bring about change or do they feel helpless in regard to environmental problems? Who do they see as holding the power to instigate change?
	➢ Social self-efficacy	Do the participants believe that collective action can bring about improvement?
	➢ Personal self-efficacy	Do the participants believe that their dietary choices can bring about change?
	Alternative hedonism	Are there things other than eating meat from which the participants derive pleasure? Do they say something about the joy of eating well/cooking/being together etc.? What satisfies people about eating?
Miscellaneous	Other efforts	What other efforts do the participants make to render their diets more sustainable?

	➢ Nose-to-tail	Do the participants eat a variety of meat cuts including offal and other, less expensive cuts? What is their opinion about offal?
	➢ Organic products	Do the participants consume organic products? Do they believe that organic products are better?
	➢ Food waste	Do they actively try to reduce food waste? What are their strategies? Are they even aware that this is a pro-environmental behaviour?

Table 12: *Exhaustive listing of all the codes and their meaning used in the analysis of the interviews*.

9.6 Statement of Authorship

Personal declaration:

I hereby declare that the material contained in this thesis is my own original work. Any quotation or paraphrase in this thesis from the published or unpublished work of another individual or institution has been duly acknowledged. I have not submitted this thesis, or any part of it, previously to any institution for assessment purposes.

Zurich, 26.08.2022 Giulia Zambelli