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Healthy or Environmentally Friendly? Meat Consumption Practices of Green Consumers in Vietnam and Switzerland

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Abstract: High meat consumption is a phenomenon in both developed countries such as Switzerland and emerging countries such as Vietnam. This high meat consumption is associated with environmental, social, and health consequences. Drawing upon social practice theory, this study explores the influence of social practices on the meat consumption of green consumers, as a growing number of consumers in both countries want to eat healthy and sustainably but still have different needs and face different barriers. Data were collected from online group discussions. For green consumers, meat consumption was found to convey certain meanings and depends, among other things, on the information available. The consumption decision in Vietnam is strongly influenced by health and food safety, whereas negative environmental consequences are important in Switzerland. Social and cultural aspects also play a major part in the decision to eat or abstain from meat in both countries. Meat is a non-negotiable part of any special occasion meal in Vietnam and is often eaten at social gatherings in Switzerland. We argue that meat consumption is linked to social status in both countries, but family influence is stronger in Vietnam than in Switzerland. Interventions, such as policy measures that are adapted to regional, cultural, and consumer group specificities and focus on social practices rather than individual behavior, are a promising means to promote meat reduction.

Keywords: meat reduction; sustainable food consumption; green consumers; Switzerland; Vietnam



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1. Introduction

Global meat consumption is increasing due to population growth and a growing middle class in emerging and developing countries [1,2] (p. 58). More specifically, the consumption trend differs between emerging and developed countries. For instance, per capita meat consumption in Vietnam increased from 49.2 kg to 51.4 kg between 2011 and 2021, whereas the corresponding figure for Switzerland was a decrease from 57.3 kg to 51.3 kg [3]. This is in stark contrast to the recommended (maximum) 15.6 kg per capita per year of the Eat Lancet Commission's Planetary Health Diet [4]. The change in quantity has also been accompanied by changes in the types of meat consumed. In Switzerland, for example, the consumption of poultry has increased significantly in recent

years, whereas the consumption of pork, beef, and veal has decreased [5]. Meat alternatives only play a minor role, as they make up about 3 % of the meat market, with marginal growth rates [6]. Vietnam shows a similar trend. Between 2002 and 2018, the share of pork consumption per capita decreased, whereas the shares of poultry and beef increased, although pork still dominates the diet [7]. The high consumption of meat is associated with environmental problems, for example, regarding land and water use, health risks such as colorectal cancer, and ethical issues such as animal welfare, and is a major contributor to climate change [8–15]. When we use the term “animal welfare”, we define it, as does the American Veterinary Medical Association, as a state in which a farm animal is “healthy, comfortable, well-nourished, safe, able to express innate behavior, and (. . .) not suffering from unpleasant states such as pain, fear, and distress” [7]. We are aware that production systems vary from country to country. Therefore, animal welfare may be defined differently in different regions.

The high and growing consumption of meat, not only in the global North but also in emerging countries and the problems associated with it, are leading to increasing public debate and social struggle [14]. Furthermore, a growing number of consumers in Western societies are more aware than ever of the consequences of their consumption choices in terms of sustainability [16,17]. For example, a Swiss study [18] identified multiple consumer groups (clusters) who would be willing to reduce or have already reduced their meat consumption not only for health but also for environmental reasons. However, the sustainability aspects of meat consumption are also discussed in emerging countries. A study from Vietnam by de Koning et al. [19] (p. 608) found that *“the motivation to live healthy lifestyles and protect the planet for their future generations is rather high”*. Although the sustainability aspects of meat consumption have been raised in both developed and emerging countries, little is known about the extent to which consumers in these countries differ or are similar in their motivation to reduce meat consumption, given possible cultural differences in meat consumption [20]. Cross-country analyses are needed to identify such differences and develop interventions for sustainable meat consumption in both emerging and developed economies. To date, the discrepancies and similarities in consumer perceptions and behaviors regarding sustainable meat consumption between Vietnam and Switzerland have not been explored. We argue, in line with Bonnet et al. [12] (p. 9), that *“the policy discussion regarding the health, environmental and moral impacts of meat consumption mostly concern the developed countries. However, in our globalized world, it must also concern developing countries”*.

This study explores the needs of and the challenges faced by green consumers in Vietnam and Switzerland with regard to meat consumption in order to draw recommendations for cross-national and country-specific interventions such as political interventions to ban meat advertising. More specifically, we aim to answer the following research questions:

RQ1: What are the differences in meat consumption behavior between green consumers in Vietnam and green consumers in Switzerland? What are their main arguments for eating meat? What are their eating habits regarding meat?

RQ2: What are their main arguments for reducing meat consumption? What are the challenges in reducing meat consumption?

RQ3: How can meat consumption be reduced through country-specific interventions?

In this study, green consumers are defined as those who desire to consume meat in an environmentally friendly and socially responsible way. Hereafter, the two terms “sustainability-oriented consumers” and “green consumers” are used interchangeably. According to Evans [21], consumers can play a role in sustainable consumption policies. Green consumers, as role models for others, can greatly contribute to the successful implementation of such policies. A thorough understanding of their reasoning and challenges in terms of meat consumption would help answer the following question: How can sustainable meat consumption be motivated? However, Evans [21] shows that even this consumer group finds it difficult to implement their demands for sustainable consumption. Following Evans [21], we argue that we need to better understand the forms of knowledge for

sustainable consumption, the criteria for particular groups, the question of legitimacy, and the normalization of meat reduction.

Vietnam and Switzerland provide an interesting context for exploring the differences in consumer behavior toward sustainable meat consumption. The current meat consumption per capita is high and similar in both countries, but it shows opposing trends and different underlying drivers. In Vietnam, the increased meat consumption is driven by the rise of the middle class, the income improvement of the population as a whole, the increasing availability of meat, and the influence of Western-style diets [19]. In contrast, meat consumption in Switzerland has gradually decreased due to concerns about health, the environment, and animal welfare [22]. Sustainability-oriented consumers reduce their meat intake to make their lifestyles more ecologically and socially responsible [18,23,24]. “Pro”, “low”, and “no” meat initiatives are common in Switzerland [25] but not in Vietnam. The lack of information might explain Vietnamese consumers’ unfamiliarity with the “sustainable” concept, as shown in a study by de Koning [26]. Although there are concerns about the sustainability of meat consumption in Vietnam, such concerns mainly come from the middle class who are increasingly interested in healthy and sustainable lifestyles [19]. We argue that in order to reduce the high global meat consumption, it is also necessary to understand the global phenomenon of green consciousness in different countries with different cultures. In this study, we analyze and compare this global phenomenon for the first time in two culturally different countries.

1.1. Meat Consumption in Switzerland and Vietnam—Culture and Meat Needs

According to the sociologist Barlösius [27] (p. 19), food consumption is more than just the intake of food: “*Societies are the way they eat*”. Our diet reflects our physical and psychological needs, as well as social, economic, and political factors. Our social status can be seen in our preferences, tastes, and habits [28]. Meat consumption, in particular, is seen as strongly linked to our social status [29], and “*in mankind’s evolutionary past, those who consumed meat were strong and powerful*” [30] (p. 257). The sociologist Norbert Elias studied the importance of meat in society as early as the Middle Ages and was able to identify a connection between social status and the amount of meat consumed. While the highest social class consumed the most meat, the lowest consumed none [31,32]. In addition, meat consumption is related to traditions, for example, how to prepare a meat dish [14]. Meat consumption has also always been subject to different moral and cultural taboos, as well as regulations [25,33]. For instance, specific religions or traditions do not allow certain types of meat to be eaten, such as beef and veal being banned in Hinduism. Finally, meat consumption is linked to gender aspects, as it is associated with masculinity and patriarchalism [34]. Sobal [35] argues that there are three types of male meat consumers: the man who eats meat to be “strong”, the one who reduces his meat intake to be “healthy”, and, finally, the one who considers meat as a status symbol (“wealthy man”). Winter [36] illustrates that this picture is changing under the neoliberally influenced health discourse and that masculinity also shows itself in veganism.

The public discourse about meat consumption in Switzerland “(...) shows the particular place of meat in our societies: as a symbolic food with roots in our affective economies, as involved in the creation of a shared culture and national identity, and as a political object used to defend different views in society” [25] (p. 9). Sahakian et al. [25] argue that there is an emotional discourse about changing consumer habits toward less and better meat consumption in Switzerland. The authors emphasize that understanding emotions and moralities is important to explore different possibilities of healthy and sustainable food practices [25]. According to Jaisli [37], the reduction of meat production and consumption has the highest potential to make the Swiss food system more sustainable due to the meat sector’s high consumption of resources and greenhouse gas emissions. In Switzerland, meat consumption per capita and year has been slowly declining for 30 years [3,38]. The main reasons for the decline are health, well-being, animal welfare, and the environment [22]. However, meat consumption differs across sociodemographic backgrounds; for example,

men are more likely to be uncompromising meat eaters, whereas women are more likely to be health conscious and therefore avoid meat in favor of meat alternatives [18]. It was also found that consumers who eat a lot of meat have a lower knowledge of food and nutrition, a lower education level and household income, and a lower interest in health and sustainability than consumers who are environmentally conscious and health-oriented [18].

In Switzerland, meat is mainly purchased in supermarkets or consumed in restaurants but it is also available in butchers' shops and food markets or can be purchased directly from farms [39,40]. According to a survey in Switzerland, the most important purchasing criterion for meat is that it should be of Swiss origin [40–42]. Although meat consumption is still strongly anchored in Swiss society, more consumers are changing to a vegan or vegetarian diet, as a study by MACH shows [43]. The MACH Consumer Study is the largest and most comprehensive continuous consumer media study in Switzerland, providing detailed information about the consumption behavior of the Swiss population. In 2021, 4.1 percent of people living in Switzerland and Liechtenstein were vegetarians, 0.6 percent were vegans (with more women, younger people, and people with a university degree following a meatless diet), and 24 percent were flexitarians (who consciously reduce their meat consumption).

In Vietnam, especially in urban areas and within the growing middle class, meat consumption has increased over the last few decades [19]. According to de Koning et al. [19] (p. 614), *“people feel that meat is an essential part of their meal. (...) It is also believed to give you energy (...) A lot of men consider meat to be the main part of the meal; their wives find it hard to change that”*. A few decades ago, meat in Vietnam was eaten only on special occasions, but today, meat is an important part of daily menus [44]. In response to growing demand among the population, the agri-food sector has transformed from mainly smallholder farming to large-scale commercial farming [45], leading to increased availability of meat.

Meat consumption has also increased in Vietnam, partly because of the adoption of various intensive meat consumption habits from other countries, because Vietnamese people tend to eat out more often, and because of the social status associated with meat consumption [2]. Noticeably, there are concerns about the social sustainability aspect of meat consumption, that is, the unequal distribution of food in the Vietnamese population [45]. While poor people are still undernourished, a proportion of wealthier people consume more than they need, and some suffer from overweight and obesity [45].

Statistics on vegetarians and vegans are not available for Vietnam but the percentage of vegetarians is assumed to be low [45]. However, the number of Vietnamese who eat a meat-free diet is growing, and many Buddhist Vietnamese have meat-free meals on a few days each month [46]. A survey by de Koning et al. [19] showed that 55 percent of Vietnamese respondents are willing to consume less meat. In terms of food quality, there are growing concerns among consumers about food safety, particularly pesticide residues in vegetables and growth hormones in meat [47]. In response, a proportion of urban consumers buy vegetables and meat from supermarkets or food stores that sell branded foods, as branding is perceived to guarantee food safety. A larger proportion of Vietnamese urban consumers, who are unable to afford fresh food in supermarkets, choose traditional markets (e.g., farmer markets or street markets) and rely on personal trust in the sellers as a strategy to ensure food safety [48]. In general, strong family ties in Vietnam result in a strong family influence on food consumption [49]. When it comes to food safety, consumers value family values and health [49]. Meat consumption differs between rural and urban regions, with urban households spending more on beef but less on pork and poultry than their rural counterparts. Older households spend more on fish than on pork, and larger households tend to spend more on less expensive products such as pork and fish [50].

1.2. Interventions in Switzerland and Vietnam

The Swiss Federal Council addresses sustainable consumption and production in its strategy “Sustainable Development 2030” [51]. The aim is to make the food system more sustainable by reducing environmental impacts, improving social conditions, and

increasing animal welfare. The awareness campaign “*Less meat—but from animal-friendly husbandry*” informs consumers about these connections, especially the link between less meat and better animal welfare [52]. In addition, various motions have been proposed for a plan of action to reduce meat consumption, ensure that edible meat products are no longer destroyed in the retail sector, reduce food waste, and implement dietary recommendations for sustainable, animal-friendly, regionally produced, and reduced amounts of meat in collective catering. In a motion, a member of the Swiss Parliament requests the Federal Council to formulate an amendment to the law or take measures to address a specific problem. For the Federal Council to act, however, the motion must first be approved by the entire Swiss parliament [53].

In addition, the Swiss Federal Food Safety and Veterinary Office aims to ensure that the recommendations of the Swiss food pyramid will be even better known in the future by targeting different age groups with appropriate information material (motion 20.3653 of 17 June 2020. Massnahmenplan zur Reduzierung des Fleischkonsums (Plan of action to reduce meat consumption)). The Swiss food pyramid and Swiss nutrition recommendations are under ongoing revision while continuing to be health- and sustainability-oriented and adapted to cultural habits [54]. Furthermore, the Swiss federal government is currently working on a new climate strategy, which will address meat consumption, among other issues [55].

In Vietnam, the law on animal husbandry issued in 2018 addresses the sustainability aspect of meat production (Law on Animal Husbandry, No. 32/2018/QH14 of the 19th of November 2018. National Assembly). In this law, one of the principles of livestock production is “*to apply science and technology (...) to ensure food safety, epidemic safety, environmental protection, and coping with climate changes*” (Law on Animal Husbandry, No. 32/2018/QH14 of the 19th of November 2018. National Assembly, p. 4). Noticeably, the law also addresses the animal welfare issue by including a section on the humane treatment of animals. However, the enforcement of the law is ineffective [56], and awareness of animal welfare is low among workers at slaughterhouses and consumers [57]. However, meat reduction has not been mentioned in any legislative document. For instance, the National Strategy on Nutrition for the period 2021–2030 and a vision for 2045 (Decision: Approving the national nutrition strategy for the 2021–2030 period with a vision toward 2045, No. 02/QD-TTg of the 5 January 2022. Prime Minister) does not state any goals with regard to the consumption of meat but includes targets for increasing vegetable and fruit consumption. The law also sets a goal for controlling overweight and obesity as a response to unhealthy eating habits such as high fat, salt, and sugar intake and high meat and low vegetable consumption among Vietnamese people [45,58]. Although national policies exist that aim to promote healthy eating and the nutritional status of Vietnamese people, such policies neither directly mention meat nor provide suggestions on adequate meat consumption to citizens. This lack is reflected in other policy documents such as the dietary guidelines developed by the Vietnamese Ministry of Health (MOH) [59]. These guidelines make no specific recommendations about meat consumption, except for suggestions about restricting the consumption of fast food, which uses meat with high levels of salt and preservatives.

2. Theory: Interventions on Social Practices

Lang et al. [60] argue that health, environment, and social justice should be targeted by food policies equally and that food policies must be reassessed in this context. Meier et al. [61] review different studies of policy interventions and conclude that standard interventions, which are aimed at simplifying and guiding consumption decisions through specific policy-mandated choices, can reduce meat consumption. Bonnet et al. [12] (p. 7) argue that meat consumption is more than the behavioral action of eating meat, being “*a largely psychological phenomenon affected by cognition, culture, history, emotions, personality, and morality*”. Furthermore, our consumption behavior is based on social practices and is affected by routines [62–64]. Social practices are societal values and culture (“meanings”),

existing infrastructure (“materials”), and individual knowledge (“competences”) [65–68] (Figure 1). For example, how we prepare meals is composed of social practices. Shove et al. [67] (p. 24) define practices as “interdependent relations between materials, competences and meanings”, whereas Reckwitz (2002, 249f.) defines them as:

“A ‘practice’ (Praktik) is a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice—a way of cooking, (...) forms so to speak a ‘block’ whose existence necessarily depends on the existence and specific interconnectedness of these elements, and which cannot be reduced to any one of these single elements”.

Policies to reduce meat consumption are complex and challenging [12,69]. Spurling et al. (2013, p. 4) observed that “understanding the dynamics of practices offers us a window into transitions towards sustainability”, whereas according to James et al. [70], policy interventions to reduce meat have drawn the attention of the scientific community and media. Such interventions could take the form of control of advertising (e.g., banning the advertising of meat products), information campaigns on the environmental impact of meat consumption, nutrition education, menus with information about nutrition and environmental scores, taxes, or the end of subsidies on meat [61,71–73]. However, sustainable development policies often target individual behavior by introducing new technologies to produce products more efficiently or by changing consumer behavior and product choices [68]. Instead of focusing only on individual behavior or technological innovations, we apply a social practice approach by asking which interventions are needed to “shift everyday practices [associated with meat consumption] to be more sustainable” [62,68] (p. 4). In order to transform social practices sustainably, Spurling et al. [68] identify three possibilities for related interventions: “re-crafting practices,” “substituting practices,” and “changing the ways practices interlock.” These can be illustrated in terms of meat consumption (Figure 1). “Re-crafting practices” means that we use less resource-intensive practices to produce meat, for example, reducing water use. “Substituting practices” means utilizing more sustainable practices than those currently in use (e.g., replacing meat with meat alternatives). Finally, interventions should not only consider the various elements of social practices but also the ways in which such practices “interrelate, erode and reinforce each other” [74] (p 476). For example, the food that we buy can be influenced by the choice of meat alternatives. This, in turn, can influence how we prepare food at home. On the one hand, Rust et al. [75] describe that in this context, more effective interventions, such as there being no meat choices available, for example, in canteens, would often have the highest impact but be less feasible and less socially accepted. On the other hand, providing information about meat consumption is easier to implement but less effective in reducing meat consumption [75].

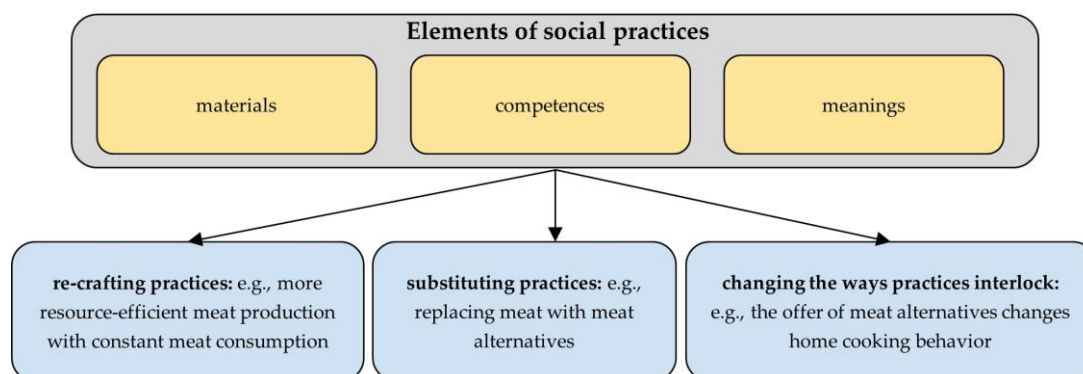


Figure 1. Policy interventions on social practices (own illustration based on [65–68,74]).

3. Materials and Methods

Group discussions (GDs) were selected as an appropriate data collection method. According to Schulz [76], GDs are suitable, among other things, for analyzing the diversity of opinions on a particular topic and as an instrument for acceptance analysis. We were interested in how green consumers in Switzerland and Vietnam perceive meat consumption, and we wanted to know not only which topics regarding meat are discussed consensually (the “lighthouse” topics) but also which ones are controversial. In the context of the COVID-19 pandemic, all GDs were held online and organized through MS Teams.

3.1. Organizing Online Group Discussions

The process of our online GDs was based on Schulz [76]; hence, the problem, research question, and appropriate participants were defined in the first step. Before the participants were recruited, we jointly created the semi-structured interview guide in English and then translated it into German, French, and Vietnamese, the languages spoken in the respective GDs. The guide was designed with the aim of answering the research questions and contained several topic blocks about meat consumption. In line with Vogl [77], we formulated open and broad questions, and the guide was kept flexible to enable us to react to other aspects that came up. The interview guide covered questions such as the following:

- What is important to you when you consume meat? Why is it important to you?
- What are the challenges in reducing meat consumption? How do you deal with these challenges?
- What are your arguments in favor of meat?
- What are your arguments against meat?

We systematically discussed with participants the reasons behind their statements to capture their perspectives correctly. Based on the social practice approach, we were interested not only in the “meaning” of meat consumption but also in the related individual knowledge (“competences”). We were also interested in how meat consumption is organized, for example, where meat is consumed or bought (“materials”). Schulz [76] states that in GDs, there is often a deliberate and homogeneous selection of participants, for example, in terms of sociodemographic characteristics, to minimize group effects based on status or seniority. In such cases, the participants identify with each other and might thus respond more honestly and openly [76]. In this study, the homogeneity was provided by the group being composed of green consumers, but participants brought different perspectives to the discussions as diets varied among them.

In Vietnam, online GD participants were recruited via social media, including the researchers’ personal Facebook network and Facebook’s consumer groups. The participants identified themselves as green-eating individuals. In Switzerland, participants were recruited via flyers that were shared widely in the researchers’ networks and via email with organizations and groups focusing on sustainable consumption. The flyers briefly described the project and the criteria for participation. In Vietnam, GD participants living in the regions of Hà Nội (northern Vietnam), Hồ Chí Minh City (southern Vietnam), and Đà Nẵng, Thanh Hóa, and Nghệ An (central Vietnam) were selected so that green consumers could be investigated in different geographical regions. In Switzerland, six online GDs were conducted with consumers living in the regions of Bern, Zürich, Lausanne, and Geneva to cover both French- and German-speaking regions.

3.2. Conducting Online Group Discussions

Prior to the formal GDs, an online pre-test was conducted in each country to assess whether the interview guide covered all the important aspects and to identify other areas for improvement. Thereafter, six online GDs were carried out in Switzerland and seven in Vietnam between November 2021 and March 2022. Hennink [78] recommends six to eight participants and five to ten GDs, and our groups consisted of six to eight participants. In total, 42 discussants participated in Switzerland and 44 in Vietnam. The online GDs lasted about 120 min, and each was led by an experienced moderator and someone who took

notes. The moderator ensured inclusive and equal participation and supported the dialogue and discussion [76]. Prior to the GDs, participants had been instructed to use MS Teams by the research team. Participants were informed that the GDs would be recorded, and recording started only once the participants had given their agreement. It was important that the participants felt comfortable and could express their opinions honestly, without being socially judged by the other participants. Additionally, confidentiality agreements were sent to the participants beforehand.

About two-thirds of the participants in Switzerland were female. Likewise, more German speakers (67%) participated in the GDs than French speakers because we had more GDs in German-speaking cities (4 out of 6). Furthermore, more than half of the participants were young (between 18 and 39), and about half had a medium income and a university degree. Most of the Swiss participants lived in a household with one to three people. Regarding meat consumption, there was a balanced ratio between participants who completely avoid meat and those who eat it. Among meat eaters, there were also many who consume meat twice a week or less frequently. In Vietnam, as in Switzerland, female and younger participants were over-represented in the GDs. It should be noted that households are larger in Vietnam (where it is generally more common for two or more generations to live in one house). While about half of the participants in Switzerland abstain from meat, just 9 percent of Vietnamese participants do so.

3.3. Data Analysis and Interpretation

We conducted the online GDs in German, French, and Vietnamese and transcribed them verbatim. Two GDs were translated into English (one from Vietnam and one from Switzerland) and the researchers in the two countries exchanged the transcripts to compare coding. The GDs were analyzed and coded both deductively and inductively following Mayring's (2000) content analysis; thus, on the one hand, the main categories were built upon the literature and desk research, and on the other hand, we went through the material exploratively to determine the subcategories [79]. We defined the main categories, took examples from the transcripts, and established a category system according to Mayring [79] (an example is shown in Table 1). The computer software MAXQDA (version 2022) was used to support the coding process.

Table 1. Extract from our category system following Mayring [79].

Category	Explanation	Examples	Coding Rules
Personal behavior	Behavior of GD participants. What value they place on meat, what type of meat they eat, and where they go shopping.	<p>Vietnam: <i>"When I go to markets to buy meat, I will buy it from an acquaintance who I know sells meat raised by her family, not from large-scale farms".</i></p> <p>Switzerland: <i>"Simply (...), the Sunday roast groove (...) which is very important to me with meat. (...) I think it's really about eating meat consciously and not just the prime cuts".</i></p>	This category is coded when discussing personal behavior in relation to meat.
Challenges in reducing meat consumption	Challenges in reducing meat consumption. These include personal challenges, such as one's own health, and also social challenges, such as the desirability of serving meat on social occasions such as weddings.	<p>Vietnam: <i>"I cannot give up meat completely because I enjoy eating it."</i></p> <p>Switzerland: <i>"A piece of meat at the center of the plate is a Swiss tradition".</i></p>	This category is coded when challenges regarding meat consumption are discussed in the GD. It does not matter what diet the individual participants follow.

3.4. Strengths and Limitations

In this study, sharing and learning about cultural specificities regarding meat consumption constituted a strength not only in the GDs but also among the researchers. Many discussions about the results went beyond just reading the transcripts. A good atmosphere among the researchers enabled them to approach the topic openly. The researchers conducted the GDs in their own countries, as they knew the cultural particularities and were able to respond to them in a targeted way. In this way, cultural particularities were considered and respected.

In addition, for the first time, we were able to analyze a global phenomenon of green consciousness in two culturally different countries.

Given the virtual nature of the GDs, not all non-verbal cues (such as body language, facial expressions, and gestures) could be picked up, and the group effects could not be fully grasped [76]. Moreover, it cannot be ruled out that participants were more inhibited online or did not express their opinions as freely as they would have if the GDs had taken place in person.

Older participants and low-income participants were under-represented in the discussions. This should be addressed in future research since sustainable diets are also a matter of financial resources. Moreover, there was a gender imbalance in our sample, which could be partly explained by the fact that in both countries, it is still mainly women who are responsible for the preparation of food in households. This could also be explored in future studies.

4. Results

In the following section, the results of the GDs in Vietnam are presented first, followed by those in Switzerland.

4.1. Meat Consumption Behavior and Needs in Vietnam and Switzerland

About one-third of the Vietnamese GD participants eat meat one to three times per day, and more than one-third do so four to six times a week. The remainder eat meat less often (one to three times a week) or never. Pork is the most popular type of meat due to its taste, cooking convenience, and higher availability. Food safety and freshness are considered the most important buying criteria. Buying from supermarkets or safe food stores that sell branded meat that is known to be safe, fresh, and traceable is a strategy to ensure food safety among high-income participants. One participant described his purchasing strategy as follows: *"I go to a supermarket that sells safe foods. I think they must follow certain procedures in production to keep up their prestige, maintain the reputation and business"* (man, 47 years old, Nghệ An).

When participants choose to buy meat at traditional markets, its color, smell, and texture are important cues for judging its freshness. Given the lack of refrigeration in traditional markets, some participants buy their meat early in the morning to ensure it is fresh, accepting the need to pay higher prices at that time of day. To ensure food safety, some respondents buy meat from regular acquaintances who are smallholder farmers. Meat from these farmers is highly valued by the GD participants because of its perceived superior quality and safety. A female respondent from Đà Nẵng (33 years old) describes her purchasing process as follows: *"When I go to markets to buy meat, I buy it from an acquaintance who sells meat raised by her/his family, not from large-scale farms. I believe that home-raised pork will not be fed industrial feed or growth stimulators. In fact, I don't have the knowledge to distinguish between meat which is industrially raised and home-fed"*.

Meat consumption and preference vary according to age and income, as mentioned by a middle-aged participant: *"Pork shoulder at traditional markets is sold for only 120,000 VND/kg, but VIN (a supermarket chain) sells it at 180,000 VND/kg (so only the rich can buy from supermarkets) (...) My family's rule is only boiled food. Consuming high amounts of fat (from fried foods) is not suitable at my age. But young people, like my children, prefer grilled and stir-fried things"* (woman, 38 years old, Hà Nội). Consumption

behavior also differs across geographical regions. The GD in Đà Nẵng, a coastal province, revealed that meat is not consumed frequently in this city because seafood is very abundant and local people are used to eating it. Suburban respondents seemed to find it easy to buy meat and their concerns about food safety were not as high as those living in the city center: “Especially for me, living in a suburban district near the countryside, having safe, fresh, and traceable food is very simple (. . .). Meat producers are people who have lived in the same village as me for a long time, so it’s definitely reassuring. It’s not like you guys who live in cities are worried about food, but for me, it’s not a problem” (woman, 36 years old, Hà Nội). It is worth noting that in this suburban district of Hà Nội, a significant proportion of the population are farmers.

The Swiss GD participants had quite different meat consumption profiles compared to the Vietnamese ones, ranging from meat consumers to flexitarians, vegetarians, and vegans. Meat is purchased from a variety of sources: local farmers, local butchers, and supermarkets. As in Vietnam, the need to have a personal relationship with producers was mentioned as important several times in different GDs. Several participants mentioned that they want *“the animal to come from a farm that I know very well”* (man, 36 years old, Zürich). Some even wanted to know the name of the animal and where it was slaughtered. This information allows them to find out how the meat was produced (*“100 percent kept in conditions as good and appropriate to the species as they can be”*, man, 36 years old, Zürich). In this context, participants also discussed the importance of supporting local farmers and their families rather than multinational food corporations, using the argument of the redistribution of power.

Meat is also consumed in restaurants, with some Swiss GD participants stating that restaurant meals are the only occasions on which they eat meat. For most participants, it is important that the restaurants they visit offer Swiss meat or meat from neighboring countries and that they can trust the restaurant owner to carefully select his/her meat producers. Finally, some participants stated that they only eat meat in restaurants with friends or when they are asked out, for example, when family or friends offer meat dishes. Meat eaters mentioned quality and origin as important purchasing criteria. Some also mentioned labels in this context. Knowing the origin of the meat does not mean the same thing to all participants. For some, it is important to know that the meat comes from the region; for others, it is important to know the animal the meat comes from. It is also important for most respondents to know the conditions of production, for example, the size of the farm, the type of farming, and the level of animal welfare. Animal husbandry (i.e., the way farm animals are kept) is a key issue for the GD participants, and mass production using soy feed is seen as one of the main problems.

4.2. Arguments for Reducing Meat Consumption in Vietnam and Switzerland

Animal welfare was mentioned as an important argument against meat consumption in the Vietnamese GDs. Animal welfare was often discussed not only from a religious perspective (Buddhism) but also in response to certain practices that were perceived as cruel. One participant said that her attitude toward killing animals is shaped by the scientific information she has seen and that this attitude subsequently influences her food choices: *“According to research, plant-based foods are more suitable for humans (...) people should eat plants and avoid killing”* (man, 30 years old, Hồ Chí Minh City). One participant developed sympathy for animals and decided to become a vegetarian after she observed what was happening in a slaughterhouse. *“I am not religious (. . .) we visited a slaughterhouse, and I felt sympathetic to the animals because of the brutality of the practices. I know meat is essential to many people, but the cruelty I saw made me change to a vegetarian diet”* (woman, 21 years old, Hà Nội).

The Vietnamese GD participants also mentioned the high price of meat, especially pork and beef. One vegan participant said that meat is much more expensive than vegetables (man, 40 years old, Hà Nội) and that this reinforced his decision to become a vegan. Some participants with lower incomes stated that they have reduced their meat consumption in

response to a sharp increase in the price of meat. However, the price of meat did not seem to be a concern for wealthier participants.

While discussing the health problems associated with meat consumption, many Vietnamese GD participants indicated that red meat contains an elevated level of cholesterol. Some participants pointed to food safety aspects such as the use of preservatives and growth stimulators. Most participants agreed that high meat consumption leads to an elevated risk of being overweight and having many diseases. Some vegan participants reported having suffered from various diseases such as stomach problems or allergies when eating meat in the past. Other participants reported gaining weight due to high meat consumption. Most participants were also aware that imbalanced diets could result in health problems. However, the level of health concerns varied among participants. Middle-aged participants were more worried about health issues related to meat consumption. As meat, particularly red meat, is perceived as unhealthy, many had made efforts to reduce their red meat consumption, replace it with seafood and poultry, and increase their consumption of vegetables and protein-rich nuts. Participants who had sick family members or who were vegetarians or flexitarians consumed limited to no meat. One woman said: *“My husband has high cholesterol and suffers from gout, so he has no need for meat. That’s also something that my family has greatly cut down on”* (woman, 40 years old, Hà Nội).

Only three Vietnamese GD participants mentioned the environmental consequences of meat consumption, all of whom had a high education level (Master’s degree). One said: *“If we continue to consume a lot of meat, particularly red meat, it will lead to a degraded environment, and it can affect the future of the next generation”* (man, 30 years old, Hồ Chí Minh City). Other participants projected that eating less meat will become more popular in the future because *“COVID-19 reminds us to slow down, think about how to protect the natural environment”* (man, 30 years old, Hồ Chí Minh City). In general, the environmental aspects of meat consumption are not as important as the health aspects. As one participant stated, *“We have to care about both health and the environment, but of course place more importance on health (when consuming food)”* (woman, 21 years old, Hà Nội).

Some of the Swiss GD participants who eat no or little meat explained that they do not like its taste and texture. For one person, the idea of eating a dead animal triggers disgust. Another person mentioned having an intolerance to an enzyme found in red meat. One participant explained that not eating meat was a strategy to avoid deciding on a case-by-case basis, especially if asked out, whether the meat served was acceptable. She explained that if she lives as a vegetarian, it is clear to everyone that she does not eat meat, and therefore she does not have to justify her decision. One woman said that she gave up meat consumption temporarily during her studies for financial reasons.

Several Swiss GD participants mentioned ethical motives as reasons for renouncing meat. Some of them find it unjustifiable to kill animals or see meat production as a form of animal exploitation that they do not want to support. Some of the participants consider the husbandry methods (the way farm animals are kept) used in Switzerland to be unethical. Transport by truck to the slaughterhouse is perceived as stressful for the animals and thus unacceptable. Farm slaughter could be one solution, as suggested by one participant. One person also stated not being capable of killing an animal and therefore not eating meat. Others considered the degradation of the planet’s health (due to meat production) as an ethical issue.

The GDs in Switzerland highlighted that the level of knowledge was perceived as important by most participants when deciding to abstain from meat consumption. Three participants stated that they had gained knowledge about nutrition and related health issues during their studies or through personal research and reduced their meat consumption as a result. Recommendations from nutritionists to consume more plant-based products also played a role in some cases. Knowing that there are good alternatives to meat, such as lentils and various other substitutes, some of which have recently entered the market, makes it easy to replace meat, as some study participants explained. Furthermore, they argued that, from a scientific point of view, eating too much meat is unhealthy and a factor

in the development of many diseases or that eating meat more than twice a week is not justifiable from a health perspective.

The participants mentioned various arguments against meat consumption that are related to ecological sustainability. One argument is that it is more efficient to produce food instead of feed on arable land: *“With today’s consumption, a lot is produced with feed that has grown on arable land. This means that one could eat this food directly [instead of feeding it to cattle], and the losses due to the conversion of fodder into meat and dairy products are simply so inefficient that we can no longer afford this in times of climate crisis”* (woman, 30 years old, Zürich). Livestock-based agriculture is very intensive in terms of land use, as it affects the environment and leads to biodiversity loss. One participant cited the deforestation of rainforests to produce soy for animal feed as a justification to avoid eating meat: *“I think it comes down to animal husbandry. These mass productions, where you cut down rainforests and feed [the] soy [produced in these areas]”* (woman, 47 years old, Bern). As another participant put it: *“The best signal I can send is to eat as vegan as possible”* (woman, 30 years old, Zürich). The Swiss group discussants argued that, within the context of the climate crisis, cutting down meat consumption is one of the most important levers for consumers to adopt a sustainable lifestyle. The Sunday roast was mentioned as an example of a time when meat was only eaten on Sundays (for financial reasons) and was appreciated for its true value. Many GD participants shared the opinion that industrial meat production must be changed—by moving away from factory farming and from today’s feed production, which in many countries, has negative consequences for the environment and society—and individual meat consumption must be reduced.

4.3. Challenges in Reducing Meat Consumption

Meat was perceived as a central part of daily meals by the Vietnamese GD participants. In particular, meals on special occasions such as weddings or family gatherings must include meat and this is a tradition. The absence of meat from important meals would not be socially acceptable: *“I think it’s because of childhood habits, the way of life of our Vietnamese people, in daily meals, even [more] for food served at celebrations (...), the meal must have meat, a celebration must have meat to be highly enjoyable. (. . .). Meat cannot be replaced; it can only be limited”* (man, 40 years old, Hà Nội).

The sensory pleasure of meat is one of the main reasons for meat attachment among some Vietnamese participants, even though they are aware of the potential health risks associated with meat. One said: *“I cannot give up meat completely because I enjoy eating it. If I don’t eat meat, I feel like something is missing. (...) The habit of eating meat makes me feel this way.”* Another woman indicated: *“Fried meat is one of my favorites, though I know it is not good for my health. I can change the way I cook or eat less, but I will never give up eating meat”* (40 years old, Hà Nội).

Health was a debated issue. While some Vietnamese group discussants think meat is unhealthy (see Section 4.2), others think it is healthy. They consider meat to be an important source of protein. One woman said that *“vegetables provide vitamins, but they cannot replace the protein that would be supplied by the meat intake”* (47 years old, Hồ Chí Minh City). Some GD participants also said that meat helps to build muscle mass, which is a sign of masculinity and feeling strong for (young) men. Therefore, the consumption of meat is considered important for these participants. Meat is additionally perceived as an essential source of protein for children’s development, as frequently mentioned by participants who are parents. One participant mentioned feeling tired and some felt less productive after having a meal without meat (woman, 38 years old, Hà Nội).

The economic impact of the meat industry was discussed by a few Vietnamese GD participants. Meat production is considered an important industry that provides the main income for many smallholder farmers: *“Vietnamese agriculture is developed (...). The pig farming industry is an important source of income for farmers. In the future, people will continue to use pork and other traditional meats because they are the favorite food sources”* (woman, 33 years old, Đà Nẵng). Some GD participants questioned why they should renounce

eating traditional meat when Vietnam has many advantages (e.g., climate conditions and variety of breeds) in terms of producing meat, particularly pork and chicken.

Several barriers were mentioned by the Vietnamese GD participants in relation to the intention to give up meat. The participants who understand meat alternatives to be unprocessed plant-based foods, such as vegetables, cashews, or almonds, refuse to adopt these, arguing that these foods are expensive, unavailable in the market, or do not meet their sensory expectations as well as meat. Meanwhile, someone who regards meat alternatives as highly processed plant-based foods explained that these products are not yet available in Vietnam. Others tend to be afraid of plant-based meat because of its (perceived) unnatural or artificial characteristics: *“In foreign countries, people have already consumed plant-based meat alternatives. In Vietnam, however, I think this food is not available yet (...). Natural meat is always better than the plant-based type. Although plant-based meat is well researched, I am not very in favor of using this food”* (woman, 44 years old, Hồ Chí Minh City).

Various Swiss GD participants mentioned consuming meat because they like it and enjoy the taste and texture. They admitted to craving meat, even though they want to eat less of it. The participants discussed how meat is traditionally the center of the meal in Switzerland. Someone said that in Switzerland, this center of the meal needs to be better designed, for example, in restaurant cooking, to create more variability, including in terms of texture and taste. The lack of cooking knowledge and the unavailability of meat alternatives were mentioned as two barriers to reducing meat consumption. Meat alternatives in this context mean tofu, seitan, or Quorn.

The GD participants also agreed that meat was culturally deeply embedded as a symbol of status and reputation: *“Whoever can share meat with other people has high prestige and reputation”* (man, 66 years old, Bern). For some participants, meat consumption is rooted in childhood; their family attached great importance to it, and meat consumption was considered something good. For the parents of some participants, a meal without meat was not a proper meal. However, some participants considered meat consumption to be natural. The challenges of following a purely vegan diet were discussed, such as the fact that supplements are necessary and that not all humans are equal when it comes to deficiencies (someone mentioned the case of a person suffering from severe depression because of a vitamin B₁₂ deficiency). Several participants mentioned health as an argument in favor of meat. Meat is perceived as an important component in the nutrition of the whole family. Children need more protein in some cases. Moreover, one respondent said that he had not yet found a reasonable substitute for meat.

Finally, it was argued that meat production has its place in Swiss agriculture. Several participants mentioned areas such as the Swiss mountains, where animal husbandry is the most appropriate form of agriculture. For these participants, it makes sense to produce meat in Switzerland from an agronomic point of view, but meat consumption must still be reconsidered and *“should be produced where it makes sense. (...) And that also means consuming less, but more consciously”* (woman, 46 years old, Bern).

5. Discussion

The high consumption of meat in Switzerland and Vietnam is part of today's social practices, as evidenced by the findings that GD participants in both countries agreed that meat is seen, by many, as an integral part of the meal. However, according to the Eat Lancet Commission, meat consumption should be reduced to eliminate the environmental impacts of agriculture and feed a growing world population [69]. Moving toward an effective reduction of meat requires adjustments to the policy framework, as well as new interventions such as new policy interventions [61,80,81]. We argue, in line with Spurling et al. [68], that these interventions should also take social practices into account.

5.1. Meat Culture and Needs—Pro-Meat Attitudes as Barriers to Meat Reduction

In line with Bonnet et al. [12], our study confirms that meat consumption is influenced by psychological, cultural, emotional, economic, and social factors. Eating meat was seen

as a tradition by Vietnamese, as well as Swiss, GD participants. As stated in the Vietnamese GDs, meat has always been eaten on special occasions, such as weddings, and is seen as something valuable, special, and non-negotiable. The Swiss participants perceived meat consumption as a status symbol, a topic they addressed directly. Social status was not directly addressed in the GDs in Vietnam, but it was indirectly mentioned through an example of how meat cannot be missing on special occasions such as celebrations. According to Hansen [2], perceived (higher) social status is one of the main arguments for high meat consumption in Vietnam. Moreover, it was mentioned in the Vietnamese GDs that meat is a sign of masculinity (of the “strong man”; Sobal [35]) and is consumed for this reason (similar to a finding in a British study of consumers who wanted to reduce meat consumption [82]). Sahakian et al. [25] also describe meat as being a status symbol in Switzerland.

This study found that the “healthy man” that reduces his meat consumption due to health concerns (obesity, disease, etc.) was found in both countries [35]. However, the health concerns differ in the two countries. Although Vietnamese participants worried mainly about the unhealthiness of eating red meat—and thus switched to white meat, among other foods—Swiss respondents were more concerned about the health consequences of the amount of meat eaten (regardless of the type of meat) and reduced their meat intake overall. Similar results were found in a UK study of consumers who wanted to reduce their meat consumption due to their fear of disease and illness [82].

We found a high emotional meat attachment [25,83] among a number of meat eaters in both countries. The feeling of missing something and having a craving when not eating meat and the belief that eating meat is natural are examples of the meat attachment identified in our GDs. Like Rust et al. [75], we found that meat was highly valued for its nutritional benefits. Some Vietnamese meat eaters experienced a psychological conflict between liking meat (sensory pleasure) and the desire to be healthy (fear of health risks of eating meat). Some Swiss participants tended to go a step further, being confronted with two conflicting features: the naturalness of eating meat and the unsustainability of meat production and consumption. The limited availability of suitable meat alternatives and the perceived lack of naturalness, as indicated by participants from both countries, can hinder meat reduction. However, the understanding of meat alternatives varies between Vietnamese and Swiss consumers. For Vietnamese GD participants, typical and available meat alternatives are foods such as protein-rich nuts, whereas for Swiss GD participants, they are more likely to be tofu, seitan, or Quorn. This could be a result of the increase in the availability of meat substitutes in Switzerland in recent years [22].

Similar to a study by Chen et al. [84], our study suggests that GD participants in both countries were interested in naturally and locally produced foods. In the Swiss participants’ view, it is important to support local farmers rather than multinational food companies. Moreover, being informed about where the meat comes from and how it is produced, in particular, whether the production conditions ensure a high level of animal welfare, is also crucial. According to the Swiss Federal Office for Agriculture [22], animal welfare is a major driver for Swiss consumers to reduce meat. In addition, less meat and more animal welfare have already been promoted through campaigns in Switzerland [52]. In contrast, the provision of information about sustainable consumption is limited in Vietnam, and this results in a lack of knowledge among consumers [19]. Such country-specific differences explain the following results: While Swiss participants justified their preference for locally produced meat through ecological and ethical motives, Vietnamese participants were more concerned with food safety and health. We argue that meat consumption as a social practice conveys different “meanings” for Vietnamese and Swiss green consumers. It mainly means “healthy” for Vietnamese and “socially and environmentally responsible” for Swiss GD participants. We suspect that this country difference may be due to the discrepancy in access to information about the sustainability aspect of meat consumption in the two countries.

Finally, we found that meat consumption has further social components. Some Swiss respondents only consume meat in the company of friends. A strong influence on in-

dividual meat consumption in Vietnam is family. Specifically, Vietnamese participants who are parents often expressed concern about their children's diet and referred to their families when asked about their individual meat consumption, suggesting strong family ties and the importance of family values in Vietnamese culture [49]. In Switzerland, some participants also expressed concerns about their children's diet. They would like to follow a vegetarian or vegan diet but would not make this change until their children were older. Other participants influenced their parents/families to change their diet and reduce meat consumption.

5.2. Recommendations for Interventions to Reduce Meat Consumption

Understanding consumers' reasons for eating meat and their social practices is particularly important for implementing effective meat reduction interventions. Negative attitudes toward meat consumption, for example, that red meat is perceived as unhealthy, can also facilitate meat reduction and should be taken into account when planning group- and country-targeted policy interventions [72]. Providing information to consumers who are unaware of the negative aspects of meat consumption may seem like an easy and quick solution. However, research shows that providing information is not always effective and does not always lead to lasting behavior change [75]. Therefore, we argue that there must be other interventions such as policy measures in addition to providing information, which we present in the following.

Meat quality and origin were important considerations for the GD participants in both countries. While Vietnamese participants considered meat safety and freshness as important dimensions of food quality and purchasing criteria, Swiss participants did not have the same view. As origin and food safety are credence attributes that cannot be verified by consumers [85], trust in food systems and their market actors plays an important role in ensuring consumers' trust in food [86]. This finding is in line with Ha et al. [47] who reported significant concerns among urban consumers in Vietnam about food safety because they are less able to trace food than rural consumers who have access to food close to them, often within their social network. These concerns exist among Vietnamese GD participants, particularly with regard to meat, as it may have been produced with hormones (which is not allowed in Switzerland and is, therefore, probably less of a concern for Swiss GD participants). Since animal welfare, meat origin, and meat quality were concerns among consumers in both countries, providing more infrastructure for urban farming, participatory guarantee systems (PGS), and community-based, site-adapted farming projects could be effective solutions. For Switzerland, education on sustainable nutrition could be a promising intervention that is likely to be accepted by consumers, as Richter et al. [73] showed in their study. Such projects could educate consumers about animal welfare and sustainable meat production. This could change meat consumption habits and strengthen the exchange and trust between consumers and producers. This type of intervention, which encourages the replacement of unsustainable food production and consumption (e.g., meat from mass production, eating large amounts of meat) with more sustainable alternatives (e.g., meat production with an elevated level of animal welfare and environmental standards, eating more meat-free meals), is categorized as "substituting practices".

In terms of social practices, it will be important in the future to work toward normalizing meatless eating when eating out or during festivities. According to GD participants in both countries, a festive menu without meat is difficult to implement due to the expectation that there will be meat on the menu. Here, a gradual introduction of meat alternatives that closely resemble real meat could be an option for such occasions, in addition to targeted knowledge transfer. In the short term, at least the portion sizes of meat could be reduced, knowing that the complete renunciation of meat could be difficult [87]. Since out-of-home consumption has increased tremendously in recent decades in Vietnam [2], introducing vegetarian options in community catering and restaurants can have a big impact on sustainability in food [2]. In general, the food environment should be designed in a way to

effectively influence choice architectures, for example, by making the vegetarian option an easy choice via nudging [24,88,89].

Public institutions in both countries such as school canteens could provide healthy and delicious meals at lunchtime with less or no meat or with meat only once a week [24,87]. Doing so requires developing knowledge of how to cook a vegetarian meal or meal with meat alternatives (“competences”) [90,91], for example, through training, and having infrastructure (“materials”) such as a kitchen and dedicated equipment in place. Such changes might change meat values (“meanings”) and could lead not only to less resource-intensive practices but also to “substituting practices”, for example, if children adopt new practices at home by asking their parents to cook meatless meals. When the demand for meat decreases, the way practices interlock can be changed by opening up new opportunities. For example, cooking courses for vegetarian meals for children and young adults could be integrated into school curricula (Figure 1). Since meat consumption among the Vietnamese group discussion participants was evaluated more in terms of the health aspect, the influence on the sustainability of reducing one’s own meat consumption could also be addressed in education, i.e., ideally at a young age when eating habits are not yet so ingrained.

Additionally, policy interventions could be applied such as a total ban on the advertising of meat [73] or global information campaigns about sustainable meat production and consumption, including in school and university curricula. In addition, policy-driven measures, such as a higher tax on meat products or a reduction in meat production (which is currently only possible to this extent in both countries due to feed imports), could be effective tools on the way to a healthier and more sustainable lifestyle [24]. Policy interventions to reduce meat consumption have been more widely implemented in Switzerland than in Vietnam (Section 1.2). While a proportion of Vietnamese consumers are interested in reducing meat intake, politicians seem to have no interest in promoting meat reduction, as evidenced by the absence of policy measures on meat reduction in Vietnam. Given the growing rate of obesity in Vietnam, particularly in urban regions [45], and the environmental impacts of meat consumption, policies to reduce meat consumption are one of the most important measures toward a healthier and more sustainable lifestyle. However, the impact of meat reduction on the health of low-income households should also be considered *“to ensure that interventions do not further widen dietary inequalities”*, as suggested by Rust et al. [75] (p. 4).

Policy interventions need to take into account the various trade-offs between the different sustainability dimensions of meat consumption. For instance, reducing meat consumption means better health for a proportion of the population that faces health risks from overconsumption, but could lead to even greater nutrient deficiencies for other consumer groups that are already food insecure. Reduced meat consumption would also mean that some livestock farmers would lose their livelihoods. Improving animal welfare also increases production costs. As a result, meat would become more expensive, and poor consumers would be more affected than wealthy ones. Further research could be done on how to make healthy and sustainable meat alternatives accessible to as many consumers as possible in a socially equitable way.

Finally, interventions should be developed and discussed together with different stakeholders such as citizens. This could be achieved using participatory approaches, as already happens in Switzerland with the *“Bürger:innenrat für Ernährungspolitik”* [92]. Thus, such interventions must be adapted to regional and local conditions and needs. For example, while highly processed plant-based alternatives have been introduced in most regions of Switzerland, these types of products are not widely available in Vietnam. They should, therefore, be made more widely known, available, and visible in Vietnam [87]. As the Vietnamese GD participants perceived meat alternatives as expensive and unnatural, they should be tasty, provide sufficient nutrients, be healthy, and, finally, be affordable for all consumers, as already mentioned above, to ensure socially equitable access to sustainable and healthy food.

In addition to reducing meat consumption, a strategy of focus in this paper, other sustainability scenarios may come into play. For example, research is underway to supplement ruminant feed with macroalgae to reduce methane emissions [93]. In addition, the whole animal should be eaten from-nose-to-tail rather than, for example, only the prime cuts. To this end, the value of different cuts of meat for different consumer groups could be researched in both countries in the future. This could also be used to generate targeted (policy) interventions. Research is also needed on meat by-products, which should be further exploited in order to use the whole animal. For example, instead of burning poultry feathers, which are not suitable for human food consumption, they could be used as animal feed.

6. Conclusions

Our paper contributes to a better understanding of the social practices of meat consumption by green consumers in urban Vietnam and Switzerland. In both countries, there are lighthouse topics that interest consumers, such as the quality or local sourcing of meat, for example, from farmers known personally to consumers. However, the motives for consuming meat are different in the two countries. While in Vietnam the focus is on health, in Switzerland, it is on sustainability. In both countries, meat is seen as a status symbol. A few decades ago, however, vegetarianism was the norm in Vietnam for religious and also economic reasons. Today, meat consumption in both countries is at a similarly high level. In Switzerland, however, an increasing number of meat alternatives are coming onto the market, but they are not yet available in Vietnam. Shopping habits also differ between the two countries. While Vietnamese consumers are highly interested in food safety, this does not seem to be an issue in Switzerland despite the food scandals in recent years. For this reason and because of cultural differences, consumption habits are very different in the two countries. A strong family influence was found less in Switzerland than in Vietnam. In both countries, social embeddedness, high meat attachment, and the lack of adequate meat alternatives hinder meat reduction. Nevertheless, concerns about health, animal welfare, and the environment motivate consumers to eat less meat. An insight into green consumers' reasoning would inform public policies that aim at supporting meat reduction. Policy measures targeting individual consumers are one way to reduce meat consumption, but such measures should also consider social practices and region-specific habits.

Based on the results of this study, the proposed interventions could be discussed with green consumers and tested for their acceptance. Further research should also evaluate the proposed policy interventions on social practices, focusing on the following question: Are these interventions feasible, and under what circumstances? Will the targeted consumer group accept them? How can we convince consumers who are not yet interested in sustainability and do not intend to reduce their meat consumption? A quantitative study in both countries could verify the results of this rather small sample and identify the proportion of sustainability-oriented consumers, thus showing the potential of sustainable meat alternatives for producers. Other consumer groups could be identified in this context so that interventions could be tailored to them. A bias may have occurred in this study because young consumers were over-represented in both countries. There were also more women than men in the sample. Further research could focus on older consumers and their social practices. Finally, research is needed on how policy interventions can provide socially equitable access to sustainable and healthy food in Vietnam and Switzerland. This could be achieved through participatory research, including workshops with people experiencing poverty.

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