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EXPLORATION OF EFFECTIVE
COMMUNICATION STRATEGIES TO
ENCOURAGE PEOPLE TO EAT LESS
MEAT IN ORDER TO ADDRESS CLIMATE
CHANGE

"As the world begins seriously to take stock of the true cost of our food consumption—especially meat—the need to find powerful forces within ourselves and our cultures to help us change becomes more urgent" (Palmer, 2010).

Preface

This Master thesis project builds on and carries forward a case study that was embedded in an internship in the research group Biotechnology and the Society (BTS) at TU Delft in the Netherlands, between October 2014 and March 2015. The case study *"Meat consumption and climate change-an inconvenient couple? - How to communicate the high efficacy to eat less meat to combat climate change to the public in order that it raises interest?"* explores and gives a proposal of a communication strategy that closes the knowledge gap of the high efficacy to eat less meat as a climate change mitigation option, in a way that it raises interest and encourages positive change. Further, this strategy was tested by a qualitative evaluation of students, to investigate if it achieves its objectives (Johanning L., 2015).

Abstract

This Master thesis project explores effective communication strategies to encourage people to eat less meat, in order to address climate change. Thereby, the study carries out two methodologies of designing an exemplary campaign, based on a literature review and conducting qualitative expert interviews to explore effective communication strategies, by discussing the proposed exemplary campaign. Building forth on the results, this thesis gives practical implications & recommendations for campaigns to promote sustainable meat consumption.

As this study indicates, social/sustainability communications/marketing is one important pathway to achieve a shift towards more sustainable meat consumption. Yet, there is a strong need for building an environment for change and to work with policy makers and cooperatives to provide the needed infrastructure and incentives for a shift in meat consumption.

Further, the study implies that campaigns encouraging a moderate meat consumption need to go beyond awareness campaigns. Instead, they need to focus on how to achieve active consumer behaviour change. This transition needs to be promoted by giving concrete, attractive & easy actions and alternatives. Personal benefits need to be in the centre of the communication approach, to make the communicated issue relevant for the consumer, and holistic values (such as climate change) need to be provided as background information. Thereby, social/sustainability marketing strategies turn out to be effective communication strategies to activate this change, by making use of different behaviour change principles and generating consumer insights to address a specific target group.

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1   Introduction

Diet and sustainability are closely connected. Several studies highlight that certain food choices, especially a high consumption of animal products (eggs, meat, dairy, and fish), have various negative effects on the environment, and are therefore unsustainable (Cordts et al., 2014; Sabaté, Joan & Soret, Sam, 2014; Beverland, 2014; Dagevos, H. & Voordouw, J., 2013; Stoll-Kleemann, S. & O'Riordan, T., 2015a).

Particularly intensive livestock farming and its feed production are responsible for a high proportion of global greenhouse gas emissions (GHG), resource wastage use, habitat loss, and for endangering the livelihood of people in developing countries (Beverland, 2014; Steinfeld, 2006; Gerber, P.J., Steinfeld, H. et al., 2013). **Livestock farming is one of the major contributors to climate change.** Being responsible for 14,5 % of emissions, it has more impact on the climate change than the whole transport sector together (Steinfeld, 2006; Gerber, P.J., Steinfeld, H. et al., 2013).

Although experts agree that there is a strong need to alter current practices of livestock farming from the supply side in order to reduce emissions (Gerber, P.J., Steinfeld, H. et al., 2013), a change in meat consumption patterns on the demand side would be the most effective approach to mitigate climate change (Bailey R., Froggatt A. & Wellesley L., 2014; Hedenus et al., 2014). Several models of decreased meat consumption scenarios confirm the **high efficacy of eating less meat for the reduction of greenhouse gases** and corresponding land use changes.(Westhoek et al., 2014; Hedenus et al., 2014; Hallström et al., 2014; van Dooren et al., 2014; Popp et al., 2010). For instance, Westhoek et al. (2014) found out that halving the consumption of meat, dairy products and eggs in the European Union would have significant effects on the level of **nitrogen emissions** (reduction up to 40%) and **greenhouse gas emissions** (25-40% reduction). Also, a significant impact on **land use** would be the result: there would be 23% per capita less cropland, which is now used for the production of animal food. Furthermore, a significant improvement both in **air and water quality** in the EU is to be expected due to the reduced nitrogen emissions.

However, research shows that of a list of potential lifestyle changes**, eating less meat scores one of the lowest in terms of its attributed effectiveness in combatting climate change** in the perception of people (Whitmarsh et al., 2011; Bailey R., Froggatt A. & Wellesley L., 2014; Cordts et al., 2014; Hedlund-de Witt).

This means that, while **effectiveness of individual behavior change is very high, knowledge about this potential for change is very low-** and it seems to point out an important **potential for positive change**.

However, so far **hardly any incentives or strategies** to encourage consumers to eat less meat, by either governments or environmental NGO's, have been taken (Bailey R., Froggatt A. & Wellesley L., 2014; Laestadius et al., 2013) and **limited empirical research** has been carried out in order to investigate how meat consumption in the European diet could be changed (Bailey R., Froggatt A. & Wellesley L., 2014).

Therefore **communication seems to be an essential key** in unlocking this potential for positive consumer behaviour change in the direction of a sustainable meat consumption.

Yet there exists a **gap between environmental knowledge/awareness and active behaviour change** that is described by several studies (Tobler et al., 2011; Kollmuss A., Agyeman J., 2002). Hence a high concern for climate change and meat consumption, does not mean that people immediately change their behaviour (Boer et al., 2013).

However, **changing individual behaviour is central to achieve a sustainable future (Doug McKenzie-Mohr, 2000)**. Unfortunately, a variety of studies pointed out that enhancing knowledge and creating supportive attitudes often has little or no impact on behaviour change. Therefore, considering **psychological behaviour change theories** are relevant to achieve a shift in society (Doug McKenzie-Mohr, 2000). The use of **pro-environmental behaviour theories and sustainability and social marketing strategies are potential approaches** here (Peattie, K. & Peattie, S., 2009; Bakker, de E. & Dagevos, H., 2012).

In addition, in order to communicate and promote the effective climate change mitigation option of eating less meat, several **barriers and obstacles of climate change communication and meat consumption,** of an either individual or infrastructural nature, need to be taken into account.

Because of **meat´s highly valued status** that is associated with wealth, status and masculinity in the Western society (Twigg, 1979; Adams, 2010; Harris, 1998, 1985; Kellman, 2000), changing meat consumption patterns is a **culturally sensitive topic** and needs to be **sensitively approached** (Schösler, 2012; Beardsworth, A. & Bryman, A., 2004).

Therefore, experts suggest that a radical change in the form of becoming vegetarian is neither required nor feasible for most people, and that reducing the number of weekly meat meals and/or portion sizes, is therefore a **moderate way to induce behaviour change** that is acceptable and attainable for many consumers (Dagevos, H. & Voordouw, J., 2013; Boer et al.,

2014b). Others have emphasized that a shift away from factory farmed towards higher quality meats, such as organic meats, is a step in the right direction (Schösler H., Hedlund-de Witt A., 2012; Sutton, C., & Dibb, S, 2013). Promoting **a moderate approach of "less, but better (organic)"** (Boer et al., 2014b; Sutton, C., & Dibb, S, 2013) meat consumption, in combination with a diet with more emphasis on plant-based food, is already a big step forward from where we currently are in terms of addressing the sustainability of collective food consumption patterns. In addition, the emerging trend of **flexitarianism**[1], as a new form of a **conscious lifestyle and social image**, implies that there is big **potential to further increase consumer´s attention and awareness** (Dagevos, H. & Voordouw, J., 2013). Besides, flexitarians will become highly important, as they attract more media attention and yield growing social influence (Datamonitor, 2014). Therefore the arising trend of being **flexitarian could become into the central focus** in the debate of shifting meat consumption in more sustainable directions.

1.1 Research aim & research questions

Hence, the aim of my research is to contribute to **fill the gap of communicating** the important link between **meat consumption and climate change**, by generating insights into **effective communication strategies** that encourage people to eat less meat (by adopting a flexitarian diet), and help them to overcome the barriers for making this behavioural change.

Building forth on the study´s results, I would like to provide **practical implications and recommendations** for campaigning a shift in meat consumption, as an effective climate change mitigation option, by using effective communication strategies that encourage active consumer behavior change.

Thereby arise the following **research questions**:

What are effective communication strategies to encourage people for active behaviour change to eat less meat in order to address climate change?

a) What are motivations for and barriers of active behaviour change to eat less meat?

b) Which values & benefits will need to be emphasized in order to encourage people to eat less meat?

c) Which/What role does sustainability/ social marketing strategies play for changing consumer behaviour?

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[1] Flexitarian (flexible vegetarian):
A person, who has a primarily vegetarian diet, but occasionally eats meat or fish (Oxford Dictionnaries).

d) Does sustainability/social marketing -strategies have the potential to close the gap between knowledge and action and encourage active change in behavior/ active behavioral change?

e) What is an effective communication channel to communicate a behaviour change in meat consumption?

1.2 Methods

I will answer these questions in two different approaches:

1. By translating generated aspects on communication and behavior change of a **literature review** into an exemplary **proposal of a campaign** to encourage people to eat less meat (and to become flexitarian) in order to address climate change.

2. Building forth on that, I will undertake **qualitative, semi-structured-expert-interviews** to answer my research questions.

   a. By getting **insights into sustainability/social marketing strategies** and **obstacles of shifting meat consumption** into more sustainable directions.

   b. By **discussing and evaluating the exemplary campaign**.

1.2.1 Timeline

1.2.2 Reading guide

Hence, this thesis starts with a **literature review** on the **background of meat consumption and its unsustainability**, particularly in comparison to more plant-based diets, in order to highlight the high efficacy of reducing individual meat consumption for mitigating climate change. Then I will give insights into the **current state of affairs of communications** encouraging people to reduce their meat consumption in order to address climate change. Here I will investigate why the high efficacy of eating less meat to combat climate change is **not widely communicated** already. Thereby, I will explore the **(lack of) attempts of environmental NGO's and governmental institutions** to shift meat consumption into more sustainable directions, and present **grassroots movements**, including the "Meat-less Monday" movement which is an existing, successful campaign aspiring for individual meat reduction.

I will also review the literature on the **sociological and psychological motivations for and barriers of eating less meat**. By providing insights into **behavior change theories and communication strategies to empower behavior change,** I will explore how the gap between knowledge and action can be supported to overcome.

In the second chapter, I will then **carry out the two presented methodologies** of designing an exemplary communication strategy and conducting qualitative expert interviews.

Building forth on that, I will present and **discuss the results** in the **third chapter**. The thesis ends with **conclusions** and **practical implications & recommendations** for campaigns to promote sustainable meat consumption.

2 Literature review

2.1 Meat consumption & Climate change

2.1.1 Plant vs. meat based diets and their sustainability

Animal agriculture is directly responsible for about 9% of global greenhouse gas emissions as assessed by IPCC[2] in form of CH4 from enteric fermentation, N2O from use of nitrogenous fertilizers, and CH4 and N2O from manure management and deposition of animal manures on pastures. CO2 is also produced on animal farms from fossil fuel and energy usage (IPCC, 2007). Furthermore it accounts and contributes indirectly up to 14,5% of global emissions including emissions from production of inputs such as feed and fertilizer, transport, processing, and land use change by deforestation to grow crops to feed the livestock. (Gerber, P.J., Steinfeld, H. et al., 2013). Consequently livestock and agriculture farming play a central role to mitigate climate change (Gill et al., 2010; IPCC, 2014; Gerber, P.J., Steinfeld, H. et al., 2013).

Besides the impact of animal farming on climate change, livestock- and its feed production
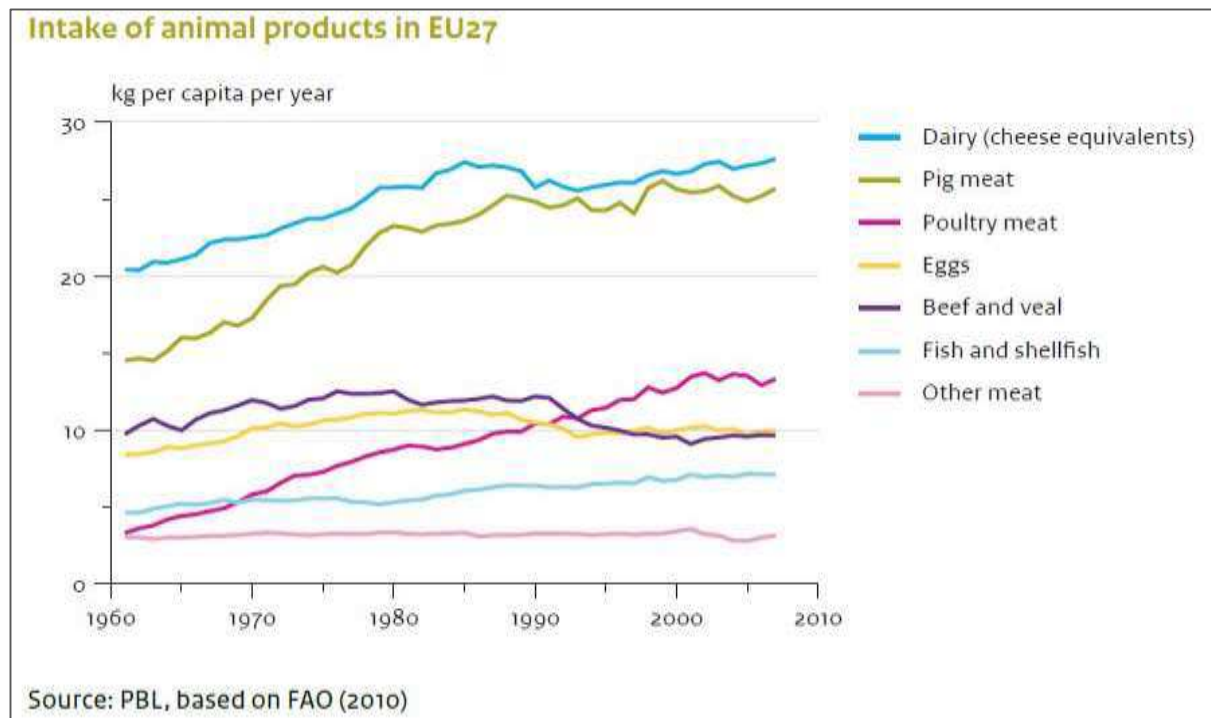
Figure 1 The increase of per-capita animal protein consumption from 1961- 2010 (PBL 2011)

account for 70 % of all agricultural land and 30 percent of the land surface of the planet. It is the major driver for deforestation and desertification: 70 % of deforestation of the Amazon

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[2] Intergovernmental Panel on Climate Change

rainforest is due to livestock farming and feed crop production. Therefore, this sector is a major threat to biodiversity: 15 out 24 important ecosystem services are in decline. In addition, the water consumption of this sector comprises around 8% of freshwater used by humans. At the same it is the biggest polluter of fresh- and coastal water due to nitrogen pollution (Steinfeld, 2006). The high demand of meat consumption even endangers food security around the world by its resource intensity (Rosegrant, M.W., Tokgoz, S., Bhandary, P. and Msangi, S.).

But animal products, especially meat products, are still the most important component in the daily diet of a large proportion of society, especially in industrialized countries and they play a centric role in the Western food culture (Beardsworth, A. & Bryman, A., 2004). However, in
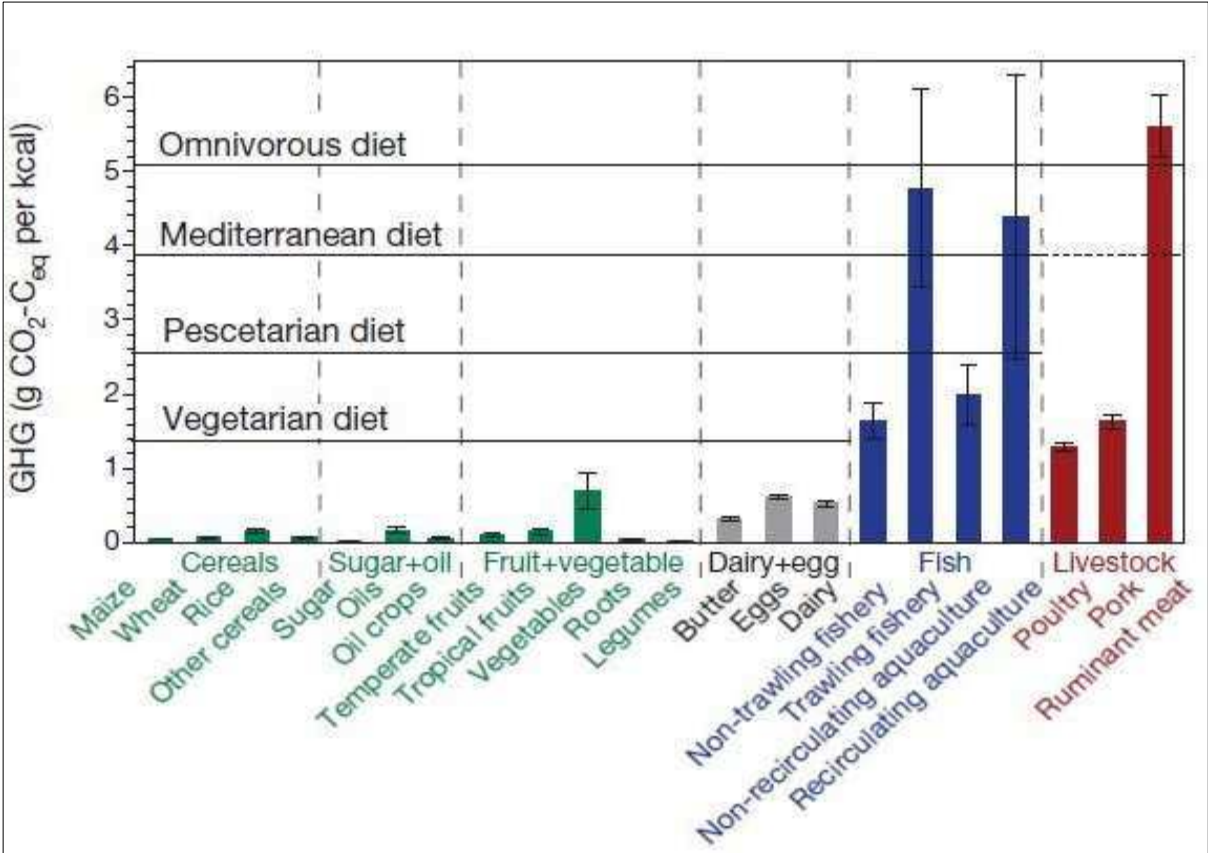
Figure 2 Lifecycle GHG emissions (CO2-Ceq) for 22 different food types. Source: (Tilman und Clark 2014). The data are based on an analysis of 555 food production systems. NA, not applicable.

most of these countries, meat consumption exceeds even the amount recommended by health institutions (Cordts et al., 2014; Westhoek et al., 2014). The European meat consumption per capita increased from 1961-2007 by 30 % and the intake of other animal protein by 60% *(compare figure 1)*. This high demand of meat in Europe is predicted to increase even more by 50% by the year 2030 in comparison to 2000, due to population growth and more wealth (PBL, 2011).

Hence, a call for a more sustainable food consumption, especially in terms of meat consumption as the most impactful food with the highest ecological footprint, is highly needed and has to play a central role in the debate of sustainability (Beverland, 2014; Boer et al., 2007; Sabaté, Joan & Soret, Sam, 2014; Dagevos, H. & Voordouw, J., 2013; Stoll-Kleemann, S. & O'Riordan, T., 2015a).

Plant-based diets, in comparison to diets rich in animal products, are more sustainable because they use immensely less natural resources and are less harmful to the environment (Sabaté, Joan & Soret, Sam, 2014). By using biophysical models and methods, several studies examined the large-scale consequences of replacing animal-derived foods with plant-based foods, assuming corresponding changes in land use. Westhoek et al. (2014) found out, that halving the consumption of meat, dairy products and eggs in the European Union would achieve a 40% reduction in nitrogen emissions, 25–40% reduction in greenhouse gas emissions and 23% per capita less use of cropland for animal food production[3]. Furthermore, a significant improvement in

Figure 3 Comparison of the health and sustainability scores of different diets (van Dooren et al. 2014)

both air and water quality in the EU is to be expected by reducing 40 % of nitrogen pollution (Westhoek et al., 2014). Accompanied by these environmental benefits, a reduction in meat consumption would improve the human health concerning obesity and cardiovascular disease, heart diseases and cancer (Reijnders, L. & Soret, S., 2003). Further Popp et al. (2010) calculated in their 'Decreased meat scenario' a decadal reduction in the demand for meat products by 25%,

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3 Even with a 50% reduction in all animal products, the mean EU intake of proteins would still be more than 50% higher as required by the World Health Organization WHO (Westhoek et al. (2014)).

a global non-CO2 emissions to decrease by 51% by the year 2055, compared to expected emissions of animal products holding a constant component in humans diets (Popp et al., 2010).

In addition, Van Dooren et al. (2014) analysed different Dutch diets concerning their meat consumption on health, GHG and land use by calculating health and sustainability scores[4]. A change from the average Dutch diet (102g of meat products per day)[5] to the recommended diet of the Dutch Dietary Guidelines (25% reduction of meat) already achieves a reduction of 11% in GHG and 38% reduction in Land use. This is a substantial decrease, since the average meat diets are indeed responsible for 34% of GHG emissions (including household energy use) and 54% of Land use in the Netherlands. The Mediterranean diet, which substitutes meat with fatty fish and animal fat with plant oil, is generally the health focus option with a high sustainability score. The vegan diet combines a high health score with the highest sustainability score (van Dooren et al., 2014). Interestingly, the Dutch goal to reduce global emissions by 20% by 2020 could be achieved, if a semi-vegetarian diet became predominant among the Dutch people (sustainability score: 100). This diet consists of 50 % vegetarian diet elements (such as dairy products, eggs, tofu, nuts and pulses) and 50% of the amount of meat recommended by the Dutch Dietary Guidelines, which consists then of 41g per day (van Dooren et al., 2014).

In alignment with that, the model of Hallström et al. (2014) predicts as well a significant decrease of GHG emissions and land use per capita in Sweden, as a result of a national reduction of meat intakes by around 40% (as recommended by the Swedish dietary guidelines). The analysis of this scenario has shown that the current 40% Swedish GHG emissions could be reduced to approximately 15–25% by 2050 and the land use per capita could be decreased from 50% to 20–30% (Hallström et al., 2014).

Besides, the impact of meat production on GHG and Land use, Life Cycle Assessments suggest that on average the environmental impact of meals with meat may be roughly a factor 1.5–2 higher than the effect of vegetarian meals[6]. But by taking into account that vegetable food products are mostly not ready to eat or available to the consumer immediately, it roughly has the same environmental disadvantage as locally produced organic meat. Because it needs to be

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4 The sustainability score was defined as the average of the GHG and Land use score per diet: a sustainability score of 100 complies with a 20% reduction in greenhouse gas emissions and a 44% reduction in Land use. This level was allocated as a score of 100, which is the political goal in the Netherlands to achieve until year 2020 (van Dooren et al. (2014)).

5 This is the average intake of women in the Netherlands, aged 22–50 years. It has to be noted that men are observed to eat more meat in general than women, with a corresponding different outcome.

[6] By relative comparisons of whole systems over a product's life, relating each system to a diverse range of environmental impact categories (Reijnders, L. & Soret, S. (2003).

further processed and transported, for instance by a long distance air transport, deep freeze and due to practices in its primary production (Reijnders, L. & Soret, S., 2003).

2.1.2 Meat consumption and climate change – an inconvenient couple?

Yet, as illustrated in *figure four*, not many people realise that meat consumption is an important driver of climate change (Boer et al., 2013; Novacek, 2008; Vinnari, M. & Vinnari, E., 2014). Of a whole list of potential lifestyle changes, eating less meat scores one of the lowest positions in terms of its attributed effectiveness in combatting climate (Boer et al., 2013; Bailey R., Froggatt A. & Wellesley L., 2014; Hedlund-de Witt). This implicates "translating public concern for global warming into effective action requires real knowledge" (Bord et al., 2000, p. 205) and therefore it cannot be expected of uninformed consumers to alter their food consumption habits (Novacek, 2008).
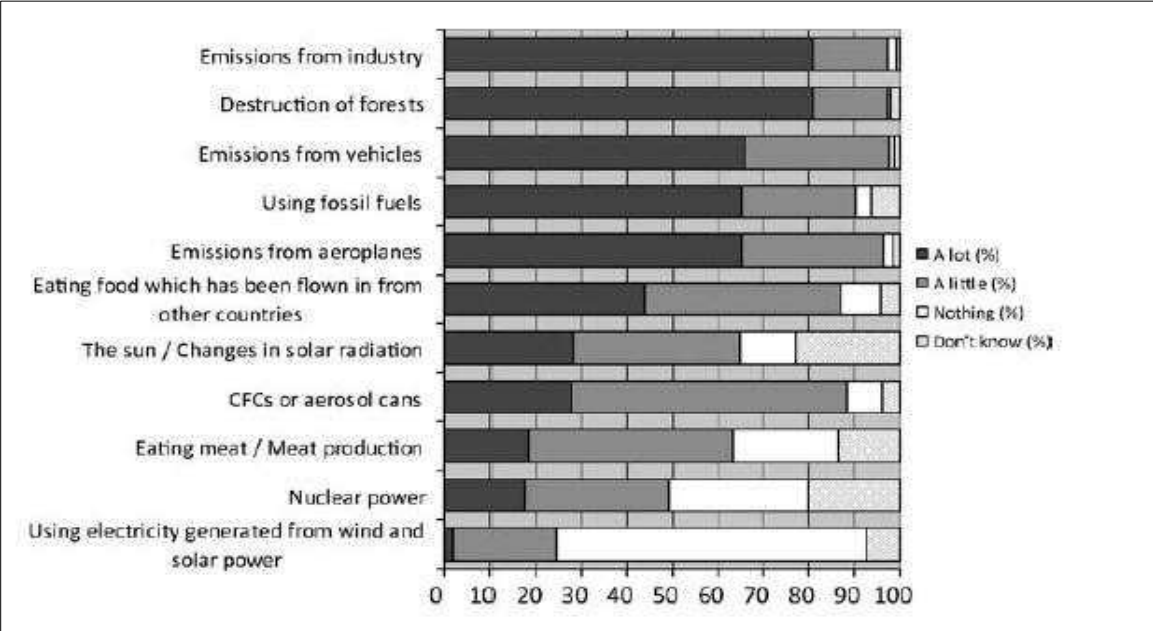
Figure 4 Perceived contribution of different activities and processes to climate change (Whitmarsh et al. 2011)

Hence, closing the awareness gap is likely to increase willingness to act as *figure five* implies: awareness is associated with a clear increase in the percentage of respondents already taking action or likely to take action, across the sectors of transport, meat and dairy consumption (Bailey R., Froggatt A. & Wellesley L., 2014). This points at an important potential for positive change.

Therefore, obstacles of climate change communication are: (1) to increase public knowledge, (2) interest and concern and (3) most importantly to promote action in relation to climate change (Lorenzoni et al., 2007), as in this case to consume less meat.
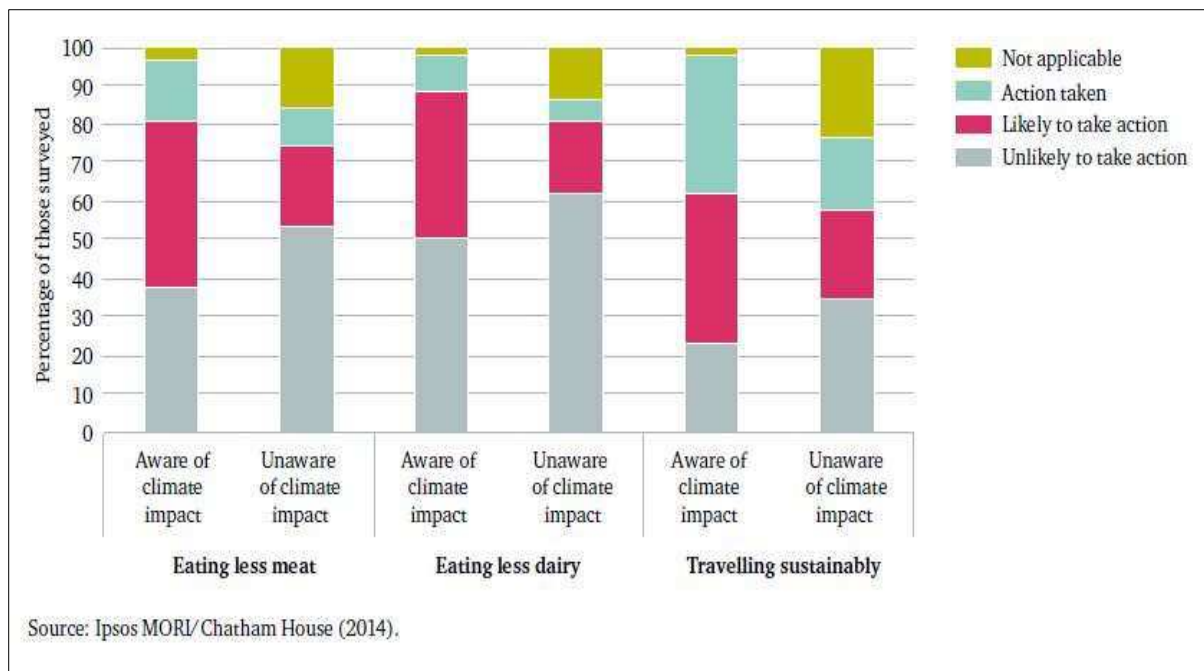
Figure 5 Comparison of the impact of awareness on willingness to take individual action on transport habits and on meat and dairy consumption (Bailey R., Froggatt A. and Wellesley L. 2014)

Yet, there exists a gap between environmental knowledge/awareness and active behaviour change: "people who believe that reducing meat consumption is environmentally beneficial, are less likely to actually show this behaviour. Similarly, the ethical aspect of animals suffering, significantly influences only consumers' willingness to consider reducing their meat consumption, not the transition to actual behaviour " (Tobler et al., 2011, p. 680). Thus, a high concern for climate change does not mean that people immediately change their behaviour to reduce their meat consumption (Boer et al., 2013).

One study that investigated how consumers respond to the idea of eating less meat for mitigating climate change, was undertaken by Boer and Schösler et al. (2013). The study takes into account, how often consumers eat meat as their main meal, how much they value nature, and how they perceive climate issues. The results were based on a nationwide sample of 1.083 consumers in the Netherlands. They show that consumers, who took climate change seriously did not significantly respond positively to the idea of reducing meat consumption. Therefore the study suggests not to emphasize on meat consumption and climate change alone, but to develop an approach that combines multiple values regarding food choices, including health and nature-related values, in order to shift meat consumption into more sustainable directions (Boer et al., 2013).

Other studies agree, that finding a right balance between communicating the urgency and dangers of climate change and to engage the public in mitigation options, is highly difficult (Moser S.C. & Dilling L., 2011).

Barriers of climate change engagement are of individual and social nature. They include lack of knowledge, scepticism and distrust of information, feelings of disempowerment, competing priorities and values, perceived inaction by others, obstacles of social norms and physical/infrastructural impediments (Lorenzoni et al., 2007; Whitmarsh et al., 2011).

2.1.3 Which form of sustainable protein intake should be communicated?

The mentioned studies in section *Plant vs. meat based diets and their sustainability* confirm and underpin the high importance of a more plant based diet in the sustainability debate. Although total plant based diets, as the vegan diet, would be the most desirable food choice to meet sustainability goals, the studies also show that even with a relatively small reduction of meat consumption, a huge positive impact on GHG, land use, human health, and the environment in general can be achieved.

Since meat consumption plays a centric role in Western diets (Beardsworth, A. & Bryman, A., 2004), as a feasible compromise and acceptable to the general public a semi-vegetarian diet seems the best option for consumers to improve health and sustainability (van Dooren et al., 2014). In line with that Aiking et al. (2006) suggest as well a shift of a moderate meat consumption: "If Dutch consumers were to reduce their overall protein intake by about one third, and replace their intensively produced meat by either plant-derived protein products or extensively produced meat, this shift would result in a substantial reduction of the pressure on the environment without putting a healthy nutrition in jeopardy " (Aiking et al., 2006). To approach this shift, different strategies can be communicated to the public: a "less but better" approach[7] or "less and more varied" [8] or "meat- less days" [9]-approach.

Yet, which strategy to choose depends on consumer preferences and the different approaches can be regarded as complementary pathways to enable step-by-step changes in the shift towards a moderate meat consumption (Boer et al., 2014a).

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[7] Smaller portions using meat raised in a more sustainable manner (Boer et al. (2014a); Sutton, C., & Dibb, S (2013))
[8] Smaller portions and eating more vegetable protein (Boer et al. (2014a))
[9] Meatless meals with or without meat substitutes (Boer et al. (2014a))

2.2 The current state of affairs- communications and trends of shifting meat consumption into sustainable directions

2.2.1 The (lack of) attempts of environmental NGO's and governmental institutions

Regardless of the high effectiveness of reducing meat consumption in order to mitigate climate change, there are no meaningful international or national policies to take action (van Dooren et al., 2014; Bristow, 2011; Bailey R., Froggatt A. & Wellesley L., 2014). On the international level neither the United Nations Framework Convention on Climate Change (UNFCCC), nor the Global Alliance for Climate-Smart Agriculture (launched on the UN-Summit in September 2014) mentioned livestock in their negotiations (Bailey R., Froggatt A. & Wellesley L., 2014). In turn, the lack of international policies on livestock farming lead to a deficiency in national policies on livestock and climate change. Here it is the case that policies signal quite the contrary- livestock farming is highly subsidised: in OECD countries by up to $53 billion in 2013, and in the EU cattle subsidies alone exceeded $731 million, equivalent to $190 per cow. In addition, China´s pork subsidies exceeded $22 billion in 2012, equivalent to about $47 per pig (Bailey R., Froggatt A. & Wellesley L., 2014).

The only countries that have established a quantitative reduction target for livestock-related emissions so far are Bulgaria, France and Brazil, and Costa Rica is currently developing a livestock reduction strategy (Bailey R., Froggatt A. & Wellesley L., 2014). Nevertheless, these strategies remain less powerful than those in other sectors to mitigate climate change (Bailey R., Froggatt A. & Wellesley L., 2014). In the US, a reduction of livestock related emissions is just voluntarily binding and in other countries such as China and the UK, government action has mostly been undertaken in form of financial support for efficiency improvements, such as the use of anaerobic digesters and biogas production. Remarkably, these mitigation plans have been largely industry-driven, with a number of national industries committing to reduction targets (Bailey R., Froggatt A. & Wellesley L., 2014). By using these more efficient and improved techniques of manure management, 30% emissions of the livestock sector could be reduced, as the latest report of the FAO[10] implies (Gerber, P.J., Steinfeld, H. et al., 2013). But despite this effort to reduce emissions, the demand of meat consumption is expected to rise continuously (Gerber, P.J., Steinfeld, H. et al., 2013). Therefore just a supply-side mitigation approach alone will not be sufficient (Hedenus et al., 2014). This approach is anyway hard to

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[10] (Food and Agriculture Organization of the United Nations)

achieve with a lack of data and control mechanisms within this complex farming system (Bailey R., Froggatt A. & Wellesley L., 2014).

Yet, this communication is not just absent in political debates, but as well in major environmental organisations and NGOs. Major environmental groups do not highlight the impact of meat on climate change on their agenda and it does not even occur in their campaigns[11]. If meat reduction is campaigned, then by health or animal welfare organisations (Laestadius et al., 2013).

But by maintaining silence around the meat issue, the public and politicians themselves loose interest and awareness and do not believe in the high efficacy of a decreased meat consumption, which leads to neglected mitigation strategies of behaviour change. That in turn does not encourage to undertake more research in order to give more evidence to prove the contrary (Bailey R., Froggatt A. & Wellesley L., 2014) nor does it enable funding for anti-meat consumption campaigns (Laestadius et al., 2014).

2.2.2 Why is the high efficacy of eating less meat to mitigate climate change not widely communicated already?

In contrast to other issues that are under governmental regulations and non-governmental campaigns (such as energy transition, or commodities as tobacco or alcohol), meat is holding a unique cultural status throughout the history of developed countries[12] and it is an aspiration for developing countries (Bailey R., Froggatt A. & Wellesley L., 2014; Nordgren et al., 2012). It should be kept in mind that free choice and individual rights are predominant in market-based economies, and therefore an interference in people's private lives and decisions, is likely to be disliked by potential voters or supporters of NGOs. (Bailey R., Froggatt A. & Wellesley L., 2014; Nordgren et al., 2012; Laestadius et al., 2014).

Another factor influencing politicians not to act, is the potential resistance from powerful interest groups, including the livestock sector and feed-crop farmers (Bailey R., Froggatt A. & Wellesley L., 2014). Gossard (2003, p. 2) even suspects that "the structural power of the meat industry is [..] a major determinant of levels of meat consumption" and that these institutions even control consumer preferences and cultural values through advertisement and financial incentives by subsidising meat production. In fact, the meat consumption just started to increase steeply over the last 50 years (Smil, 2001, c2000) and "[in line with] Cronon's (1991) analysis of how the U.S. meat industry grew throughout the 19th Century by transforming American

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[11] In contrast, many global groups have effective campaigns on energy, transport and agricultural products such as palm oil and biofuels (Laestadius et al. (2013)).

[12] *See section 3.1 : Meat- a cultural and psychological sensitive topic*

agriculture provides clear support for the argument that consumer habits are greatly influenced by powerful corporate interests" (Gossard, M.H., York, R., 2003, p. 2). This indicates that there is a big meat lobbyism behind the status quo mass livestock production system, which in turn influences governmental decision making and consumer's choice.

Yet, a decreased meat and dairy consumption would be a highly cost-effective mitigation strategy with broad effects on mitigation strategies in other sectors: the share of a carbon budget in other sectors would increase and this would result in lower costs of carbon and thereby lower mitigation costs. For instance, by reducing the meat intake to Harvard healthy diet recommendations[13], mitigation costs of energy could be decreased by 50% by 2050 (Bailey R., Froggatt A. & Wellesley L., 2014; Stehfest et al., 2009). With this financial incentive to target meat consumption as the most effective mitigation strategy, governments could overcome the barrier of lobbyism and might as well convince the public to alter their consumption patterns. In addition, economic incentives to consume less meat on the demand side, such as taxation will be necessary to alter consumers behaviour (Popp et al., 2010) under the precondition to cut off subsidies for mass livestock farming. Instead, a subsidised support of the consumption of healthy plant-based food, in order to make it less expensive for the final consumer, should be implemented (NEIC, 2009).

Besides, a taxation of animal products in the EU could be implemented in a similar way as taxes on alcohol and tobacco and would give a rational incentive to the individual to consume less meat. Once it is established it would become part of everyday life like any other consumption tax (Nordgren et al., 2012). Nordgren et al. (2012) suggest to start with establishing a GHG weighted tax on meat consumption, in order to be transparent and to highlight the dangerous effect of GHG to the climate, which will be more likely to get public acceptance.

Concerning non-governmental organisations, Laestadius et al. (2014) analysed qualitative interviews with 34 NGOs from Canada, US and Sweden. Despite the fact that all participants were aware of the importance of reducing meat consumption in order to tackle climate change, there were several factors influencing NGO´s to adopt a campaign. Firstly, the issue has to fit with the NGO's core missions, which depend on prior organizational experience and staff expertise. Participants explained that the relatively recent awareness of the issue of meat consumption and climate change leads to little expertise among staff members and to a lack of credibility. Therefore, issues like energy consumption, on which they had long worked on, are more fundamental to their core mission and they are not likely to change what they stood

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[13] Average daily per capita intake of 10 g beef, 10 g pork, and 46.6 g of chicken meat and eggs (Stehfest et al. (2009))

for in the past years, which would confuse their members and supporters. They have the opinion that the issue around meat consumption should be on the agenda of animal welfare organisations. Those, in contrast think the meat and climate issue reside in the missions of environmental NGOs. Secondly, the campaign issue has to fit with the NGO's tactical preferences: most environmental NGOs expressed a clear preference for policy advocacy, research, or work to influence cooperate practices rather than public education focused on encouraging behaviour change. They are too concerned to tell people what to do and about the consequences of public intolerance of trying to change their lifestyle. This in turn influences the perceived outcome of engagement with the issue, as another important factor for the decision-making to adopt a campaign. Opinions on the potential outcome of campaigns were shaped primarily by the political feasibility and social acceptability of addressing meat consumption and climate change, due to the challenging and controversial nature of addressing meat consumption through personal behaviour, and limited political and public interest in climate change. The cultural significance of meat and the personal nature of dietary choices[14] also raised concerns that engaging with the issue to much could harm the NGO itself, as it could upset farmers and other strategic partners or it would induce fears of a backlash of supporters. In addition, the NGO's capacity to take action on the issue plays an important determinant. NGOs deploy their mainly limited resources of staff and funding to campaigns that fit with their core missions and to other related factors, such as perceived outcome, public interest and reaction, as named above. Besides, a lack of funding and of the funding source also influences campaign issues (Laestadius et al., 2014).

These findings uncover several barriers of politics and environmental NGOs to campaign about meat consumption and climate change. As mentioned before, this topic is mostly addressed by health or animal welfare organisations. They in turn do not see climate change as their core mission and their interest will decrease in alignment with decreasing public interest about this topic. This results in a negative feedback loop with regard to meat consumption and climate change: "When the issue is seen as unpopular and of limited public interest, NGOs seek to reduce their efforts. This in turn deprives the issue of the attention that would be needed for it to increase in prominence" (Laestadius et al., 2014). Therefore a cooperation or partnership between health- and food- or animal welfare orientated organisations with environmental NGOs could be helpful to combine expertise and resources to campaign about meat consumption and climate change (Laestadius et al., 2014).

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[14] *See as well section: Meat- a cultural and psychological sensitive topic.*

2.2.3 Examples of existing grass root movements to encourage people to eat less meat

Yet, a few counter examples exist of grass root campaigns/initiatives that communicate quite successfully about the environmental impact of meat production and to encourage people to change their meat consumption patterns. Here, I will present three of them.

2.2.3.1 The Eating Better Alliance

The initiative *Eating Better: for a fair, green, healthy future* is a growing UK-based broad alliance that is calling for action of governments and the food industry to encourage a culture with a fair, green and sustainable food system. It was launched in July 2013, with a growing number of national supporting organisations and partner networks from a diverse range of fields in the UK. These include interests and expertise from public health, environment, animal welfare, faith groups, campaigning, research, international development and responsible food systems. Among others there are *Friends of the Earth*, *Greenpeace* or *WWF, UK* (Eating Better Alliance; Dibb, S. Fitzpatrick I., 2014).

The *Eating Better Alliance* promotes a "less, but better approach": to moderate the intake of meat, while enhancing more plant-based foods and to choose 'better' meat that meets high animal welfare, environmental and quality -standards.

The mission of the *Eating Better Alliance* is:

- To raise awareness of why there is the need for a shift to more plant-based eating and less and better meat consumption.
- To build support and lobby policy makers, businesses and others who have influences on making this shift happen and to encourage them to incorporate *Eating Better's* approach into their policies and practices.
- To stimulate long-term cultural shifts by exploring new ways of framing the less but better- messages in a compelling way that it attracts public support.

(Dibb, S. Fitzpatrick I., 2014)

This initiative can be regarded as an important and major step in the right direction of promoting sustainable meat consumption and to get this issue on the agenda of policies and nutrient guidelines. As Michael Pollen[15] states: "Eating Better is a path breaking initiative to help define what we mean by sustainable eating, one of the most pressing questions we face" (Eating Better Alliance).

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[15] Author of "The Omnivore´s Dilemma" (Eating Better Alliance)

2.2.3.2 Meat less Monday

Meat less Monday is a worldwide grass root movement of campaigning meat free days ("Meat free" or "Meat less Monday," "Veggie Thursday"), establishing a weekly meat free day in schools, communal institutions, big canteens in hospitals, universities and companies, which is even supported by local governments. The *Meat less Monday* campaigns began in 2003 in association with the Johns Hopkins Bloomberg School of Public Health. Initially, it was a campaign to promote healthier diets in order to reduce the high fat and protein intake from meat products by 15% (one day a week). Additionally, the campaigns are messaging the broader perspective of industrialized meat production and its environmental impact (Johns Hopkins University).

This very inspiring campaign had a wide outrange to up to now 35 countries and cities all over the world: For example, in Germany 30 cities are participating in the "Donnerstag-Veggietag" campaign by the *Vegetarier Bund Deutschland* (VEBU) e.V. In Belgium three cities are joining "Donderdag-Veggiedag" by *EVA* vzw. *Ethisch Vegetarisch Alternatief.* In Sweden it was indeed the National Food Administration and the country's Environmental Protection Agency, which stated to reduce meat consumption in order to reduce environmental impacts (The National Food Agency, 2013). In the USA six cities are implementing a "Meatless Monday" so far. Remarkably, Cincinnati highlighted the impact of meat consumption and included "Meat free Monday" into their Green Cincinnati plan (City Cincinnati, 2013). The city councils of Washington DC, Chicago and Los Angeles signed a meat free Monday resolution as well (VEBU, 2014; Susan Jones, 2012).

According to FGI[16] research, *Meatless Monday* is an effective strategy to encourage people to reduce meat consumption and to incorporate healthy meatless alternatives into their routine (FGI, 2012). 36 % of the people who are aware of *Meatless Monday*[17] say the campaign has influenced their decision to cut back or consider cutting back on meat. 62 % of those cutting back on meat say they would have tried to incorporate *Meatless Monday* into their weekly routine and 40% say it has led them to incorporate more meatless meals the rest of the week (FGI, 2012). Besides, 50% of the participants influenced by *Meatless Monday* have experimented with new meatless recipes when they cook at home and 42% have tried more

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[16] FGI Research is a leading provider of custom market research, panels and surveys and data collection. This online survey was administered in July 2012 to a nationally representative sample of 1,005 U.S. adults (FGI (2012)).

[17] Public awareness of Meatless Monday increased from 26% to 43% from November 2010 to July 2012 (FGI (2012)).

meatless dishes when eating out. In addition, 42% would like to see *Meatless Monday* promoted at restaurants and 54% would like to see its promotion at supermarkets (FGI, 2012).

The success of *Meat less Monday* shows that a campaign which started bottom up can influence and inspire even top down institutions to implement meat free days to highlight the impact of meat on the environment and to take a step towards general social acceptance for its reduction.

2.2.3.3 *Dagen Zonder Vlees- Meat less days*

Another existing and inspiring campaign that is communicating about the environmental impact of meat consumption, is a Belgium campaign called *Dagen Zonder Vlees*[18] (Meat less days). This campaign started bottom up and was founded and initiated by Alexia Leysen, a young motivated student. *Dagen Zonder Vlees* motivates people to take part in a collective challenge to reduce the size of their ecological foot print, as much as possible, by eating less meat within 40 days[19] (Dagen zonder Vlees, 2015). The campaign does not just provide information about the environmental impact of high meat consumption, it also motivates to take action, by creating a movement building to take part in a collective challenge. Thereby the participants can form teams and each individual can choose voluntarily how many meat less days he or she is willing to accomplish. By providing a score calculator, the participants are able to observe the effect of reducing meat consumption on their ecological foot print and are motivated to compete with other teams. To make this behavioural change easier, *Dagen Zonder Vlees* provides a wide range of vegetarian recipes.

This campaign has gained a high media coverage in Belgium and got very popular with 55,364 participants. The campaign had a wide outreach and different restaurants, cooperatives, political parties, schools and universities participated (Dagen zonder Vlees, 2015). This campaign shows that an appealing movement building via a small bottom up approach can have a wide and successful outreach and is able to inform and encourage people to eat less meat, in order to address environmental problems such as climate change.

2.2.4 Trends to consume less meat

Recent developments show that there is already a trend to consume less meat (Schösler H., Hedlund-de Witt A., 2012; Bakker, de E. & Dagevos, H., 2012; Ruby, M. B. & Heine, S. J., 2012; Latvala et al., 2012). Here, one can notice a relation between different social statuses and meat consumption: lower social classes consume more than higher classes and in addition, the education level is inversely related to meat consumption (Gossard, M.H., York, R., 2003). This indicates that individuals' social status has a substantial influence on their eating habits. Thus,

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[18] http://www.dagenzondervlees.be/
[19] In the period of 18. February 2015-04. April 2015

meat is no longer a symbol of welfare in the Western culture, but an indicator for social image (Gossard, M.H., York, R., 2003).

Hence, a new modern and responsible lifestyle can be recognised that includes an emerging vegetarian and increasingly even a vegan diet, which becomes a central part of the social identity. In addition, infrastructure is adapting to this new demand by vegan supermarkets and restaurants (Stoll-Kleemann, S. & O'Riordan, T., 2015a, 2015a; O'Riordan, T. & Stoll-Kleemann, S., 2015b).

The emerging trend of reducing meat consumption indicates to the necessity to differentiate between meat consumption patterns. Dagevos & Voordouw (2013) identified different meat consumer groups among the Dutch population: heavy meat eaters (consume meat every day), meat reducer (reduce meat consumption at least at one or two days per week), flexitarians (consume meat only several days per week), heavy flexitarians (consume meat only 1-2 times per week), vegetarians (consume almost no meat at all, but other animal products) and vegans (consume no animal products at all). By creating a deeper insight into flexitarians, the authors identified diverse subgroups with different motives and socio-demographic compositions (see *figure 6*): "conscious flexitarians" make an active decision about reducing meat consumption, due to their personal norms, health considerations and ethical concerns. This category consists up to 70 % of women and is characterized by its high level of education. The second group are called "unconscious flexitarians": their motivation is less reasoned out of ethical- or health issues, but they have positive views on vegetarian meals. In this category, males and females are equally distributed, and the higher education level (college, university) is underrepresented. Thirdly, the "extravert flexitarians" are people who reduce their meat consumption out of health concerns and consider the origins of meat important. These extravert flexitarians are generally younger than the conscious flexitarians, which suggests that younger consumers are more attracted to meat reduction as something special, or a certain lifestyle, than a moral act.

Taken together, these sub-groups can be summarized in two main consumer groups: one making minor adjustments to habitual meat-consumption patterns trying to choose products that are less burdensome for the environment and thus evolving a weak sustainable consumption (wSC), and the second group undertaking radical transformations in their behaviour with a strong sustainable consumption (sSC) with more of a suffiency (consuming less) approach (Dagevos, H. & Voordouw, J., 2013). Surprisingly, the majority of flexitarians in general does consider themselves as meat eaters and not as a form of part time vegetarian. Just a small minority has a strong consciousness about meat consumption and is actively trying to reduce it (Dagevos, H. & Voordouw, J., 2013). The fourth group of so-called "disengaged meat-eaters" consists of participants, who often eat meat but also regularly substitute fish or other alternatives. Their commitment to reduce meat is only moderate since they do not have strong particular motives or norms for meat reduction. On the other hand, their attachment to eat meat is relatively low, which suggests that these consumers just eat meat routinely. In principle, this group could become medium flexitarians as they do not have strong motives for meat consumption
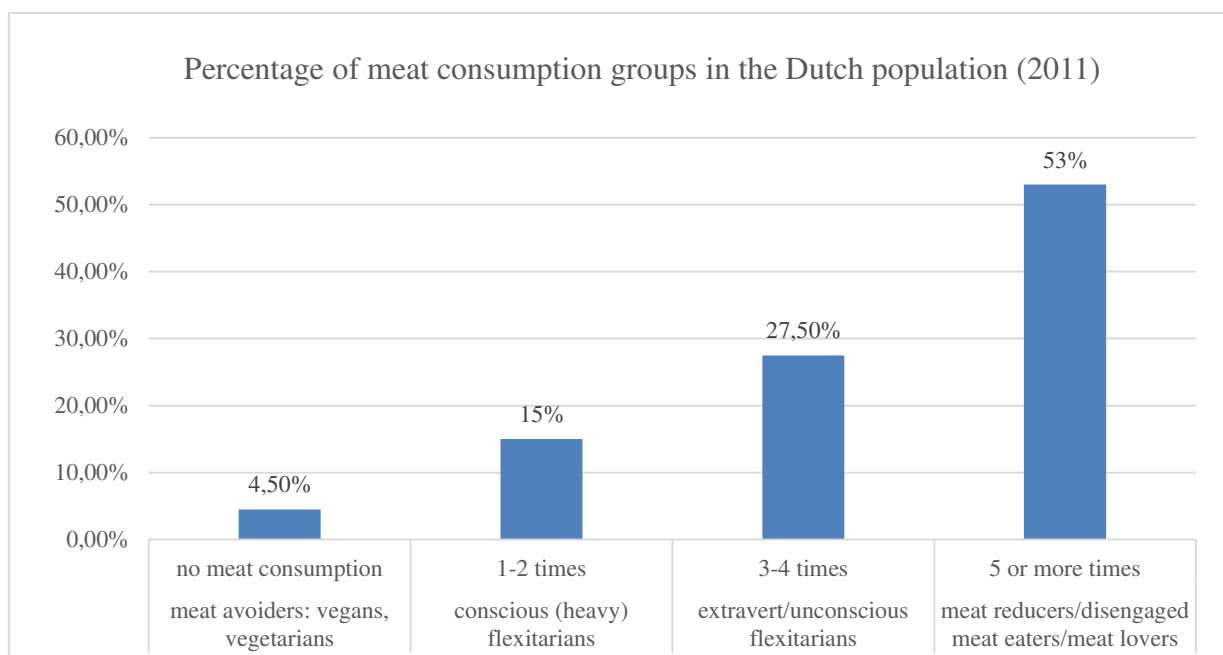
Figure 6 Weekly meat-consumption frequency within different meat consumption groups in the Dutch population 2011, own representation of Dagevos & Voordouw (2013)

(Dagevos, H. & Voordouw, J., 2013). The final group consists of firm meat lovers, who do not intend to reduce their meat consumption and they confirm the stereotype of eating meat as a masculine phenomenon[20]: a notable characteristic is an overrepresentation of men (62%) (Dagevos, H. & Voordouw, J., 2013).

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[20] *See as well section: meat and masculinity*

However, Dagevos & Voordouw (2013) discuss the "meat paradox": although 42, 5% of the Dutch population are considered to have a form of flexitarian diet, the absolute meat consumption of the Dutch population remain almost unchanged. Questions emerge here as such: Is there a discrepancy between self-reported assessments and actual behaviour? Is the reduction in the consumed amount of meat by heavy flexitarians easily compensated by those consumers who eat larger portions of meat more frequently as well as at dinner, breakfast, lunch, and for snacks? Does the out-of-home meat consumption differ from in-home consumption? Or do meat reducers simply eat more meat on the next day? In addition, another reason could be that participants reduced their consumption frequency but not the meat quantity (Dagevos, H. & Voordouw, J., 2013).

In addition, according to a *Datamonitor Consumer* survey conducted in 24 countries globally, a third of the consumers are already flexitarians (Datamonitor, 2014). This trend of meat reduction, as a new form of a conscious lifestyle and social image, implies that there is big potential to increase consumers' attention and awareness further. Especially the group of "disengaged meat eaters," who just eat meat routinely, could be more motivated to become a flexitarian. Besides, flexitarians will become highly important, as they attract more media attention and yield growing social influence (Datamonitor, 2014). Therefore, the arising trend of being flexitarian could become into the central focus in the debate of shifting meat consumption.

2.3 Sociological and psychological motivations for and barriers of eating less meat

2.3.1 Barriers of individual behavior change to eat less meat

2.3.1.1 *Meat- a cultural and psychological sensitive topic*

Food consumption is strongly related with cultural beliefs about well-being, health, moral, aesthetic, and social values. Thereby eating is part of the individual's identity (Schösler H., Hedlund-de Witt A., 2012; Fischler, 1988). This makes the debate about food choices a highly sensitive topic. Especially meat, as a traditional centrepiece of the western diet (Douglas, M., & Nicod, M., 1974), has a unique status. Anthropologists, like Marvin Harris, discussed a "meat hunger" as part of human nature (Harris, 1998, 1985) and due to Kellman (2000), meat has been closely associated with power and privilege and distinguished between rich and poor (Kellman, 2000). Meat, red meat in particular, is in many western cultures a symbol of male identity such as male strength and power, and expresses male domination of nature and women (Twigg, 1979; Adams, 2010). Simultaneously, meat has had always an ambivalent notion concerning health and purity issues in different cultural contexts and is therefore encompassed by complex sets of taboos and prohibitions (Simoons, 1980, 1961; Beardsworth, A. & Bryman, A., 2004). But the "meatification" (Weis, 2007) of the European food culture just emerged from the 1960s, which shows that cultural practices can change over a short time period (Schösler H., Hedlund-de Witt A., 2012). But within different European countries animal protein consumption patterns differ (PBL, 2011). This shows that cultural identities are an important factor to shape individual behaviour and therefore the understanding of a particular food culture with people´s values, beliefs , worldviews, habits, and practices is crucial to implement a shift in meat consumption (Schösler H., Hedlund-de Witt A., 2012). This makes changing food culture a difficult mission.

2.3.1.2 *Meat and masculinity*

The association of meat and masculinity is still in our modern society highly relevant and should not be underestimated. The title of the study by Hank Rothgerber (2012): "Real Men Don't Eat (Vegetable) Quiche: Masculinity and the Justification of Meat Consumption" speaks for itself and gives insight into the psychological justification of a high meat intake as a gender specific phenomena. Being a meat eater is explicitly identified as one of the attributes of an ideal man (Stibbe, 2004). In alignment with this, several studies confirm men eating up to 50% more meat (red meat in particular) than women (Cordts et al., 2014; Ruby, M. B. & Heine, S. J., 2011; Vergnaud et al., 2010; Gossard, M.H., York, R., 2003). Thereby men justify meat consumption with more unapologetic reasons than women, such as: "There is no food that satisfies me as much as a delicious piece of meat" (Pro meat justification), "We need meat for a healthy diet"

(Health justification), "Our early ancestors ate meat, and we are supposed to also" (Human destiny/fate justification) (Rothgerber, 2012). Further, on one hand women maintained meat eating, by avoiding to think about animal welfare, and on the other hand, by having more ambivalences to eat meat and therefore they consume less (Rothgerber, 2012). In line with that, different morals are associated with eating meat or being vegetarian: in the study of Ruby et al. (2011) omnivorous and vegetarian participants perceived eating meat with masculine targets whereas eating vegetarian was characterized by virtuous targets and being more principled. The fact that eating meat plays a role how to be perceived in society should not be underestimated (Ruby, M. B. & Heine, S. J., 2011). Therefore it is important to understand different motivations of eating meat or eating less meat: for example, to men it is more important, whether they have a lot of vegetarian friends (Lea and Worsley, 2001) and not to lose their masculine status by eating less meat, since this is associated even among vegetarians to be less masculine (Ruby, M. B. & Heine, S. J., 2011). In contrast to this, women question their behaviour more often than men, and consider meat reduction out of health, environmental or animal welfare issues (Cordts et al., 2014).

In various studies mostly women are observed to be more likely vegetarian (Beardsworth, A. & Bryman, A., 2004; Worsley and Skrzypiec, 1997). Therefore women could play an important role as change agents to have a positive influence on their children and husbands (Rothgerber, 2012), since especially family members and the home food environment are considered to have influences on dietary intake especially on children and adolescents (Larson, N. & Story, M., 2009).

In conclusion, to promote a shift of meat consumption into sustainable directions, socio-cultural habits, values and worldviews need to be considered and carefully addressed (Schösler H., Hedlund-de Witt A., 2012; Gossard, M.H., York, R., 2003). Hence it is necessary to establish a slow transformation of cultural identity from meat-eating towards plant-based diets (Vinnari, M. & Vinnari, E., 2014). In addition communication strategies could be considered to be addressed gender specifically: whereas men need firstly to be motivated to overcome the barrier of meat and masculinity and their social status, women that are more likely change agents, could be fostered to increase their awareness of meat consumption even further.

2.3.1.3 General barriers of eating less meat

Different studies identified the following primary barriers of reducing meat consumption (Ruby, 2012; Lea and Worsley, 2008). One major barrier is the difficulty or unwillingness to change habitual and convenient dietary patterns. Thereby one can observe that people with a strong attachment to a traditional meal format in form of a 'meat and two vegetables' meal tend

to have a stronger preference for meat than people, who are more adventurous in their eating behaviour, such as eating pasta dishes for example (Schösler et al., 2012). Also the lack of social support, by for example friends of family members, discourages people to eat less meat.

Another barrier is the enjoyment of eating meat and the perception that humans are meant to eat meat. In addition the lack of knowledge**,** how to cook a balanced vegetarian diet, in order to avoid a nutrition deficiency. Besides, external barriers such as the lacking availability of prepared vegetarian meals in canteens or restaurants and the insufficient accessibility of vegetarian food products in stores (e.g. soy products) are restricting people to change their meat consumption patterns (Ruby, 2012; Lea and Worsley, 2008). Here, price and costs play a role as well and are identified as main barriers to purchase more sustainable food choices (DEFRA, 2011).

2.3.2   What are motivations and benefits for eating less meat?
2.3.2.1   *Self-Determination Theory (SDT)*
One study undertaken by Schösler et al. (2014) examines whether the *Self-Determination Theory (SDT)* may help to foster more sustainable food choices, by taking a closer look at the relationship between food-related types of motivation. This theory of needs and of human nature puts a person's choices about food into the perspective of self-determined (intrinsic) and non-self-determined (extrinsic) motivations (Deci and Ryan, 2000).

One of SDT's core elements is the consideration of instinctive psychological needs for competence (e.g. cooking and tasting skills), autonomy (e.g. perceived choice) and relatedness (e.g. a sense of meaning and connection to people or to nature). In the study the need for relatedness was mentioned as a psychological base for feelings of solidarity, which consumers can experience when they consider their relation to the origin of their food and that supports a caring responsibility for the consequences of their choices (Schösler et al., 2014).

The results of the study demonstrate that *SDT* provides useful theoretical insights to explain, what can motivate consumers to make more sustainable food choices. The study implies that it is important to distinguish between intrinsic and internalized motivation, because this clarifies how consumers use basic values when they make food choices. An internalized motivation is a motivation that is 'taken in' into one's value structure, so that people experience that behaviour as an intended expression of their personal values, e.g. such as the integration of environmental and health conscious behaviours.

It appears that internalized motivation was the main factor that made a difference, between food choices, but intrinsic values, as the enjoyment of cooking and eating also played a role. Further,

consumers, who had internalized a food-nature relationship and those, who had externally motivated patterns of food choices were observed to show:

- contrasting levels of meat consumption,
- different reasons for not frequently eating meat,
- different frequencies of buying carefully produced meat,
- different frequencies of buying meat substitutes,
- and contrasting preferences in favour or not of plant-based protein products.

The study points out that a lack of identification with nature, extrinsic motivations or an amotivation in food choices may explain, why externally motivated consumers do not make sustainable food choices (Schösler et al., 2014).

Hence, as mentioned before, the understanding of a particular food culture with people´s (extrinsic/intrinsic) values, beliefs, worldviews, habits and practices is crucial to implement a shift in meat consumption (Schösler H., Hedlund-de Witt A., 2012).

2.3.3 Motivations to eat less meat

To find effective communication strategies to encourage a shift in meat consumption, it is helpful to understand the motivations of already existing change agents, such as vegans and vegetarians.

To be a vegetarian or vegan is a self-conscious and reflective choice (Beardsworth, A. D. & Keil, E. T., 1991). The majority of studies give evidence that the most commonly reported motivation given by vegetarians is concern about the ethics of raising and slaughtering animals. Personal health turned out to be the second most common motivation of meat avoidance. Other motivations, but less common have been: environmental impact of meat consumption, spiritual purity and disgust (Beardsworth and Keil, 1991; Fox, N. & Ward, K. J., 2008; Cordts et al., 2014; Ruby, M. B. & Heine, S. J., 2012; Ruby, 2012; Beardsworth, A. D. & Keil, E. T., 1991).

As a result, it can be distinguished between ethical or health motivated vegetarians (Rozin, P., Markwith, M., & Stoess, C., 1997). The process to become a vegetarian can be gradually, by getting more evidence of health or animal welfare issues and aligning them with own beliefs and values. It also can be a radical change, which is mostly induced by a negative experience by feeling distress and disgust, such as seeing a documentary about industrial farming and the badly treatment of animals or witnessing slaughter of an animal, etc. (Beardsworth, A. D. & Keil, E. T., 1991). Both health- and ethical motivated vegetarians share a set of relations: to animals, the environment, industrialisation, globalisation (Fox, N. & Ward, K. J., 2008). In addition value of nature is an important motivation that is positively correlated with a decreased

meat consumption (Boer et al., 2013). Being vegetarian is thereby not just a choice of diet, but a substantive, holistic identity (Jabs et al., 2000; Fox, N. & Ward, K. J., 2008). This fact is highly important: a vegetarian diet transformation means a spiritual transformation in identity- a new way of life- and thereby this transition is more powerful and stable. As a result, it is unlikely that people return to previous eating habits (Jabs et al., 2000).

Other identified factors and motivations in sustainable eating, including to eat more plant based meals and less but better meat, are interest in provenance and traceability of food products and the aspiration for simplicity, purity & pleasure of taste and mindfulness (DEFRA, 2011; Schösler, 2012; Schösler H., Hedlund-de Witt A., 2012). Another incentive motivating people to eat less meat and more vegetarian is simply to save money (DEFRA, 2011).

2.3.4   Finding solutions: drivers for change

To find solutions how to overcome barriers of eating less meat should become central in effective communication strategies.

Here, the report carried out by the *Eating Better Alliance* gives a good guidance on solutions. The report identified ten drivers for change (Dibb, S. Fitzpatrick I., 2014):

1. Habits	Meat substitutes or better/lower-meat choices with a good value, need to be more accessible and can become desirable tasty choices.
2. Cultural significance of meat eating	Gives the opportunity to present other traditional cuisines such as e.g. Mediterranean, Asian and Middle Eastern diets that are based on low meat/plant-based eating.
3. Price/cost	Lower meat diets can save money and enable 'better' meat choices within the same budget.
4. Convenience	Need for more meat substitutes or lower/better meat options in stores and restaurants. Education is needed to increase cooking skills for plant-based eating.
5. Interest in health	Promotion of health messages on health benefits of lower meat and plant-based diets. Providing

	information on nutrition deficiency issues.
6. Awareness of the environmental impacts	Awareness raising campaigns, information, education and better labelling of sustainable food products.
7. Concern for animal welfare	Opportunities to link animal welfare concerns to wider environmental and health concerns to encourage less and better meat eating. Promotion of better, quality meat with high animal welfare standards.
8. Interest in provenance and traceability	Opportunity to connect people with where their food comes from and to farmers, who produce it. This offers to support producers/local economy that produce higher quality products, with high environmental and animal welfare standards.
9. Knowledge about alternatives to meat	Meat substitutes and meat alternatives provide opportunities to help consumers transition to a lower meat diet.
10. Food scandals	Opportunity to raise awareness of better quality (organic) meat.

2.4 Communication strategies to empower behaviour change

To date most programs to foster sustainable behaviour have been information intensive, mostly by media campaigns and the distribution of printed material with the intention to enhance knowledge and to activate supportive attitudes, by being sometimes over scientifically dry. On the other hand most of current environmental communication strategies or campaigns are noted to cause fear, guilt or shame appeals, in order to highlight the urgency of the communicated issues. As a result, they are raising no interest or concern at all (Moser S.C. & Dilling L., 2011; O'Neill, S. & Nicholson-Cole, S., 2009; Futerra, 2013; Doug McKenzie-Mohr, 2000).

In this section, I will explore communication strategies that have been observed to be successful to fill the gap between knowledge and action and are able to achieve active pro-environmental behaviour change.

2.4.1 What determines pro-environmental behaviour?
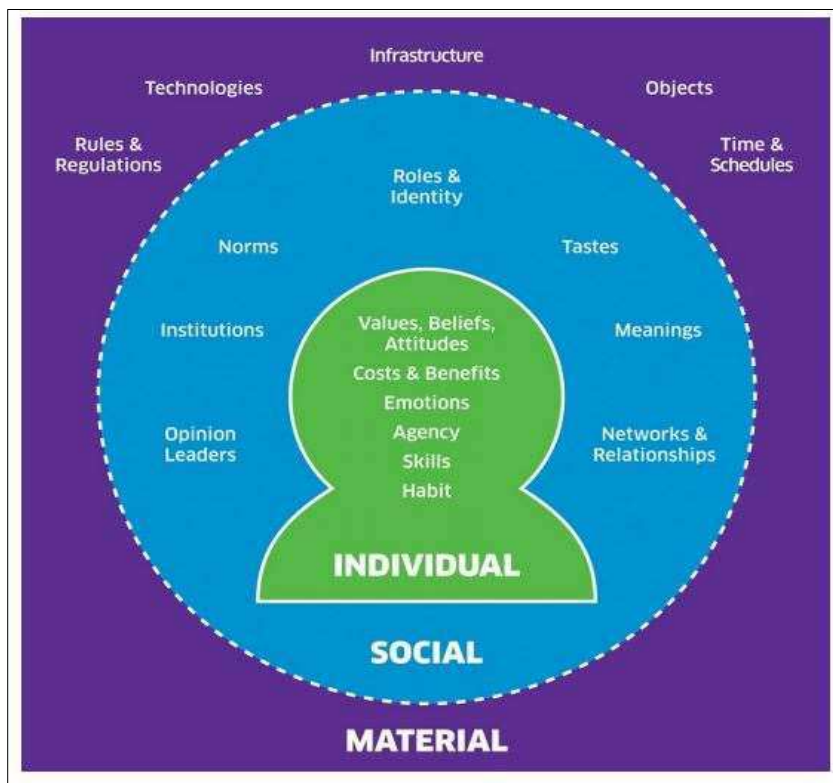
Figure 7 ISM Model (Darnton, A. & Horne, J. 2013)

Kollmuss and Agyemann (2002) suggest that achieving pro-environmental behaviour change is highly complex: environmental knowledge, values, and attitudes, together with emotional involvement shape an actual action. This complexity in turn is embedded in broader personal values and shaped by personality traits and other internal (such as intrinsic motivation, attitudes and values) as well as external factors. Since many pro-environmental behaviours can only take place if the necessary infrastructure is provided, infrastructural factors such as economical-, and social cultural factors influence pro environmental behaviour (Kollmuss A., Agyeman J., 2002).

Further, Kollmuss and Agyeman (2002) identified 'old habits' as the biggest barrier to pro-environmental behaviour[21].

One way to consider the range of influences on our behaviour is illustrated in *figure 7*. The ISM model combines insights from behavioural economics, social psychology and sociology in categorising the influences on behaviour across the individual (I), social (S) and material (M) contexts (Darnton, A. & Horne, J., 2013). The model shows how individual behaviour (based on perceptions, motivations, and calculations) is shaped by social factors (networks, interpersonal relationships and opinion leaders), and how it is restricted by the material options available to the individual that enable performing the behaviour.

Hinse, Hungerford and Tomera (1987) constructed different variables that appear to be most influential in motivating individuals to take responsible environmental action[22]:

- *Knowledge of issues:* The person has to be familiar with the environmental problem and its causes.
- *Knowledge of action strategies:* The person has to know, how he or she has to act to lower his or her impact on the environmental problem.
- *Locus of control:* individual's perception of whether he or she has the ability to bring about change through his or her own behaviour. People with a strong internal locus of control believe that their actions can bring about change. People with an external locus of control, feel that their actions are insignificant, and feel that change can only be brought about by powerful others.
- *Attitudes:* People with strong pro-environmental attitudes were found to be more likely to engage in pro-environmental behaviour.
- *Verbal commitment:* The communicated willingness to take action also gave some indication about the person's willingness to engage in pro-environmental behaviour.
- *Individual sense of responsibility:* People with a greater sense of personal responsibility are more likely to have engaged in environmentally responsible behaviour.
- And in addition*, situational factors:* economic constraints, social pressures, and opportunities to choose different actions.

Further, emotional concern is the most important factor to perform environmental behaviour, because it shapes our beliefs, values and attitudes about the environment (Louise Chawla, 1999). This emotional involvement is created by different experiences and factors (Louise Chawla, 1999):

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[21] (*see as well section: General barriers*)
[22] Based on the *theory of planned behaviour* by Ajzen and Fishbein (1980) and a meta-analysis of 128 pro-environmental behaviour research theories (Hines J.D., Hungerford H. R.,Tomera A.N. (1987))

- Childhood experiences in nature

- Experiences of pro-environmental destruction

- Pro- environmental values held by the family

- Influences of pro-environmental organizations

- Influences of role models (friends or teachers)

- Education

Additional to those experiences, people show different emotional reactions when they are confronted with environmental destruction: the stronger a person's emotional reaction, the stronger the likelihood of engagement in pro-environmental behaviour (Kollmuss A., Agyeman J., 2002).

2.4.1.1 *Theory of dissonance*

However, the majority of people still act controversy to their beliefs in terms of meat consumption called the meat paradox (Loughnan et al., 2010): 'I eat meat, but I do not like to hurt animals', or in this case: 'I eat meat, but I do not like to contribute to climate change and environmental degradation'. Further, it is observed that people tend to avoid inconvenient information about environmental problems (Rothgerber, 2014; Kollmuss A., Agyeman J., 2002). If the information contradicts or threats some of the people´s basic assumptions of quality of life, economic prosperity, and material needs, it may cause distress and discomfort (Kollmuss A., Agyeman J., 2002; Rothgerber, 2014) Besides, this feeling may cause as well a psychological reactance: people feel their freedoms are threatened and they therefore begin to defend them aggressively (Futerra, 2013). This phenomena can be explained by the theory of dissonance. The *dissonance theory* suggest that people feel discomfort whenever they hold simultaneously to cognitions (beliefs, ideas, opinions), which are psychologically inconsistent (Festinger, 1957). For example, smoking cigarettes is known to cause cancer, but although people are aware of this fact, they still continue smoking. To make the cognitions consonant or to reduce the feeling of dissonance, the individual has to change one of the cognitions to align it with the other. This can either promote a behaviour change and in this case lead to stop smoking, but usually people tend to work on the cognition that creates discomfort and try to justify their behaviour or tend to avoid negative information, for instance by doubting the evidence of the link between smoking and cancer (Aronson, 1977).

In line with this, Rothgerber (2014) observed dissonance and defensive strategies applied by meat eaters, when they were confronted with the morality of eating meat (from the animal welfare perspective) by the presence of vegetarians and thereby feeling morally inferior. He identified eight mechanisms to reduce the discomfort of eating meat:

- Avoidance of inconvenient information about meat consumption.

- Dissociation of the animal as a food product (a hamburger does not have eyes anymore and thus dissociating an animal origin).

- Perceived behavioural change: meat eaters, confronted with the morality of eating meat, tend to deny to eat meat regularly.

- Denial of animal pain: People deny animal pain with statements like "Animals don't really suffer when being raised and killed for meat" and "Animals do not feel pain the same way humans do," the more meat they actual consumed (Rothgerber, 2012).

- Denial of animal mind: Perceived dissimilarity between animals and humans has been identified as an important mechanism to justify meat consumption (Bilewicz, M., Imhoff, R. and Drogosz, M., 2011)

- Pro-meat justifications: pro meat justifications as hierarchical justifications (e.g., 'It's acceptable to eat certain animals because they're bred for that purpose'), and religious justifications (e.g., 'God intended for us to eat animals'). "These perceptions allow individuals to act on a moral imperative and maintain their view of themselves as moral actors who do not inflict harm on others (Bandura, 1999)" (Rothgerber, 2014, p. 34).

- Reduction of perceived choice, and behavioural change: Meat eaters claim to have no choice to reduce meat: it is an important component of a healthy diet and thus necessary for survival. "By convincing themselves that meat is necessary for survival, the individual does not feel responsible for harming animals" (Rothgerber, 2014).

This intrinsic dissonance-conflict of meat eaters may cause tensed social situations with vegetarians and thereby resulting into discomfort of the vegetarians leading to a feeling of exclusion in social interactions, including the own family (Jabs et al., 2000). This is a critical point since social support is highly important to maintain a vegetarian diet[23]. Therefore it is helpful for vegetarians to know, how to deal with the dissonance of meat eaters and to negotiate these interactions, and in addition, to help meat eaters through their defensiveness (Rothgerber, 2014).

These different theories give psychological insights into the motivations for or barriers of showing environmental behaviour. They show its high complexity and that several internal and external factors influence the willingness, capacity and action of active behaviour change.

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[23] See section: *General barriers*

Especially the dissonance theory and defensive justification of eating meat by Rothgerber (2014) reveals the psychological barrier to change meat consumption patterns.

In conclusion communication strategies need to consider this defensive strategy by meat eaters. Therefore, a campaign highlighting the negative impact of meat on the environment, animal welfare and personal health, may simply achieve the opposite effect and increase dissonance further. On the other hand it is still unclear whether exposure to pro-vegetarian arguments produces the same effect (Rothgerber, 2014). On top of that, the gap between environmental knowledge and action indicates that just addressing problems of meat consumption would be insufficient to achieve an active behavioural change.

Instead, campaigns aiming to encourage a moderate meat consumption should consider a more positive and appealing approach (Bakker, de E. & Dagevos, H., 2012). To conclude from the importance of external factors influencing individual behaviour, communications to shift meat consumption need to show infrastructural alternatives that enable to perform the new behaviour (e.g. where to find vegetarian food products or organic meat).

2.4.2 Pro- environmental behaviour change & sustainability/ social marketing – strategies

Here, one could learn from concepts of social or green (sustainability) marketing that utilize strategies and tools from commercial marketing to pursuit positive consumer behaviour change and thereby to achieve social/environmental goals (Peattie, K. & Peattie, S., 2009; Bakker, de E. & Dagevos, H., 2012; O'Riordan, T. & Stoll-Kleemann, S., 2015b). Although social marketing campaigns can focus on the promotion of a particular type of product, the core of social marketing is to promote a particular proposition, such as 'organic food is good for you and the environment' (Peattie, K. & Peattie, S., 2009).

2.4.2.1 *Community based social marketing*

A successful example of sustainability marketing is the *community-based social marketing* approach that is developed by Doug McKenzie-Mohr. Community-based social marketing has been successfully implementing environmental and sustainability projects in Canada, such as backyard composting and encouraging water efficiency. The approach combines knowledge from psychology with social marketing strategies and emphasizes to identify and overcome the barriers of behaviour change (Doug McKenzie-Mohr, 2000).

Community-based social marketing contains five steps (Doug McKenzie-Mohr, 2000):

- Uncovering barriers to behaviours
    - Internal or external?

- What are the barriers of the broad public, what are barriers on the individual level?

- Selecting which behaviour to promote

  - Are there resources to overcome the barrier?

- Designing a program to overcome the barriers to the selected behaviour

  - finding incentives or commitments to foster behaviour change;

- Piloting the program
  - to be repeated until the desired level of behaviour change has been achieved;
- Evaluating the program after its broad implementation.

Communication, on how to overcome the barriers of pro-environmental behaviour was realized by a direct contact with locals. To foster a behavioural change, participants were asked to make commitments to change their behaviour. The case of water efficiency proofed, only providing information is less effective than personal communication and making a personal commitment: only 15% altered their behaviour in comparison to 54% respectively (Doug McKenzie-Mohr, 2000).

2.4.2.2 *The importance of commitment making*
As the study indicates, making a commitment, through a preferably personal contact, is central to foster behaviour change. As other studies confirm, the tool of commitment making was proven to be very effective to foster an active and lasting behaviour change (Cobern et al., 1995; Lokhorst et al., 2012; Cialdini, 2001). According to Cialdini (2001), commitments are effective, since people in many societies have been socialized to be consistent, so when people commit and follow-through on a behaviour, they bring their self-concept in line with the behaviour. Besides, by perceiving the commitment as an internal motivation and thereby as a self-concept, the new behaviour will turn into personal norms and values, which are in turn a motivation to maintain the new behaviour (Lokhorst et al., 2012). If these norms and values become part of people's worldview and identity, this transition can be very strong and stable (Jabs et al., 2000). In addition, studies observed that commitments are especially effective, if they are made in public and witnessed by others, which pushes consistency to stick to the commitment by social pressure, such as criticism or ridicule (Cialdini, 2001; Lokhorst et al., 2012).

2.4.2.3 *Tools of sustainability marketing*
Another inspiring example of sustainability marketing is the British entrepreneurship *Futerra-Sustainability Communications*. *Futerra* is a leader in marketing of sustainability strategies. Their mission is to make sustainable development 'so desirable that it becomes normal' (Futerra, 2014). By analysing social- and psychological theories and marketing strategies,

Futerra developed a guidance on how to use communication tools for behaviour change (Futerra, 2007, 2009, 2013).

Futerra suggests to approach environmental behaviour change in four steps. The first step is to sell a "compelling vision" (Futerra, 2009). In order to avoid misleading communication strategies, causing the conflict of dissonance and psychological reactance, it is highly relevant appealing to positive, personal values and aspirations, just as traditional marketing strategies. Thereby *"a promise of heaven"* (Futerra, 2009) or a "future worth fighting for" (Moser S.C. & Dilling L., 2011; Futerra, 2009; Lappé, 2013) needs to be envisioned. But the consumer has to be reminded that this future will not come about automatically, thus it needs to be shown in the second step of the communication that in order to achieve this future, conscious choices and decisions need to be taken (Futerra, 2009). Hence, the vision worth fighting for should not stay utopian or naive, but rather should present a viable plan (step three) to achieve this vision (Futerra, 2009, 2013). In the last step, the individual has to be inspired to take action in order to implement the plan, hence an applicable, concrete action needs to be formulated, that in turn has benefits for the consumer (Futerra, 2009, 2013).

Another major fact is that people do not change or act isolated from the group environment around them- therefore the changing behaviour needs to become socially acceptable (Futerra, 2013). Further, *Futerra* underlines the importance to show the person´s high self-efficacy to make a difference and that their behaviour change really matters. If people do not feel that climate change is in their locus of control, they will not bring about change (compare: Hines J.D., Hungerford H. R.,Tomera A.N. 1987).

2.4.2.4 Rules of climate change communications

"Climate change is no longer a scientist's problem - it's now a salesman's problem" (Futerra, 2009, p. 2) - In terms of communicating meat consumption as an effective climate change mitigation option to the public one can learn from "rules of the game" of climate change communications, developed by Futerra (2013):

- Make a request:
    - Communication needs to be very clear and specific about the behaviours that help tackling climate change.
- People are more worried about losses than gains:
    - Communication of the benefits of new actions, but leading in with the real losses people are suffering as a result of their current unsustainable behaviour.
- Empathy and Imagination are power tools

- o Creation of empathy: people do not show empathy with landscapes, but with the animals who are in danger, if this particular landscape is destroyed.
  - o Combination of pictures and words to visualize climate change.
  - o Showing threats but as well solutions.
- Language of the message
  - o Emphasis on the solution and not the problem with big, heroic words.
  - o Making "good sound normal and bad sound rare": being good should become normal.
- Feedback
  - o Acknowledgement of the new behaviour.
  - o A feedback reinforces the behaviour and increases the belief that action makes a difference.
- Right messenger
  - o Scientists with authority: they reassure that someone understands the complexity of climate change.
  - o Intermediate translator: translates scientific pronouncements into practical advices
- Reminders
  - o By trying to change habits, communications need to convince and remind the person about the new behaviour several times.
- Commitment
  - o It needs to be personal and meaningful (compare: (Cialdini, 2001; Doug McKenzie-Mohr, 2000; Lokhorst et al., 2012)
- Need for time to pilot the new behaviour
  - o People should try the new behaviour in safe settings first, before asking to change.
- Changing behaviour step by step
- Give something and you get something back
  - o By giving something, even small things, people will feel beholden to do what you ask.
- Label people
  - o If someone undertakes a climate-friendly behaviour (whether they intended to or not), you should say *"thanks, you're clearly someone who cares about the climate"*.

- Keep the new behaviour compatible
  - If a new behaviour is not compatible with people´s lifestyles and opinions, they are not likely to change.
- Time to change
  - Catch people if there are open to change anyway, e.g. new year's resolutions (compare (FGI, 2012)
- Make the new behaviour feel as a pleasure and fun.

2.4.2.5 *Making use of an attention grabber*

Another identified approach to promote long-term behaviour change, is to combine an "advertiser model" with an "educator model", developed by the environmental communicator Peter Sandman (*see figure 8*).
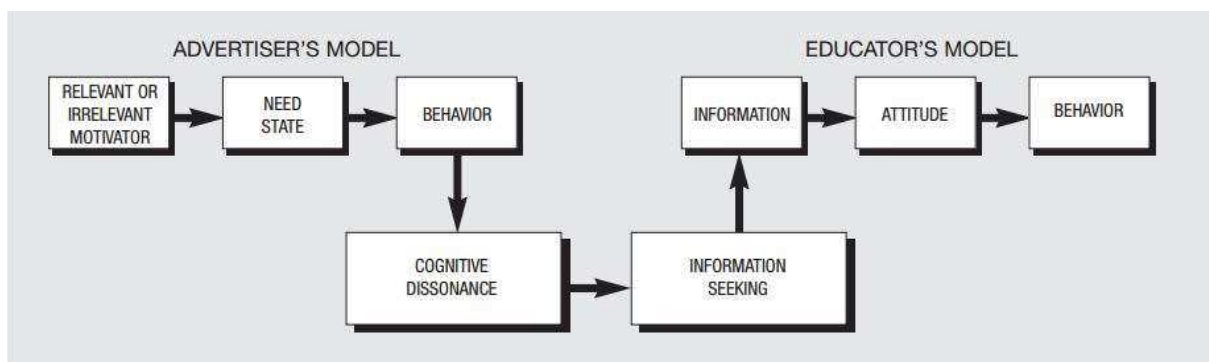
Figure 8 Sandman´s advertiser- educator model (Day und Monroe 2000).

The underlying theory of this model is, how to make use of consumer's cognitive dissonance of questioning their behaviour[24]. Cognitive dissonance could then lead into a state of information seeking, in order to line their behaviours with their beliefs and knowledge. That in turn, could lead to a long-term behaviour change (Day, B. A. & Monroe, M. C., 2000).

Usually advertisements grab consumer´s attention by an irrelevant motivator, which motivates the consumer to buy the product, but without being directly related to the product. This motivator is connected to a "need state" of the potential customer, as for example the universal human need state for status, sexual attractiveness, or being a good parent. Thereby the advertiser suggests that buying a certain product (changing consumer behaviour) will fill this need. But the consumer is performing a behaviour (for example buying a certain kind of toothpaste) for a reason that he or she intellectually knows to be untrue (e.g.: "It will help me to get a date"). This is an uncomfortable state of cognitive dissonance that most humans will seek to resolve, so that their actions are in line with their beliefs and knowledge. Here the information seeking

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[24] Compare section: *theory of dissonance*

process starts: consumers are interested in finding information that will support their new behaviour. The original irrelevant motivator is no longer enough to sustain the new behaviour. Advertisements make use of repetition to make the costumer believe and to reassure them that their behaviour is right. An environmental educator model can make use of this information seeking state and provide the consumer with real and good reasons to perform the new behaviour. Information, delivered at the right time and in a targeted manner, is crucial to consolidate new attitudes, which in turn support long-term behaviours. But without an initial motivator, which will lead to cognitive dissonance, which in turn ignites the information seeking process, there is nothing to trigger the uptake of the information. Therefore a combination of both models can have a bigger impact on pro environmental long-term behaviour change (Day, B. A. & Monroe, M. C., 2000).

In terms of messaging the abstract issue of meat consumption and climate change to the public, a relevant or irrelevant motivator to firstly gain people's attention could be very helpful, which in turn initiates the steps to an actual behaviour change, as described by Sandman´s model.

As the literature indicates, pro- environmental behaviour change & sustainability/ social marketing strategies seem to be an efficient tool to promote active and long-term behaviour change. Yet, Peattie and Peattie (2009) remark that the challenge to promote anti-(meat) consumption, especially out of altruistic reasons (such as climate change and responsibility for future generations), will be much more difficult to be approached since normal assumptions are that individuals are motivated to maximize their own wealth and consumption. Hence the authors suggest that social marketing campaigns may appeal to the concept of sustainability itself with the type of emotional and symbolic meanings that encourage a modest and reduced consumption. For example to promote an anti-consumption could involve communicating the benefits of a simpler, but satisfying lifestyle, which many people aspire to (Cherrier H, Murray J., 2002).

3 Designing an exemplary campaign to encourage people to eat less meat

In this section I will design an exemplary proposal of a communication strategy to empower a shift in meat consumption in order to address climate change, by translating the mentioned aspects of the literature review into an exemplary campaign, by making use of social/sustainability marketing tools.

3.1 What needs to be communicated and how?

To summarize and conclude the previous sections, communication strategies to promote a shift in meat consumption need to meet the following aspects:

- A transformation of a cultural identity from meat-eating towards plant-based diets has to be slowly and sensitively approached:
  - Focus on transition to become flexitarian, as a compatible, socially approved behaviour.
  - Therefore I want to promote a semi-vegetarian diet with 50% less meat in the sense of the "less but better" approach (meaning 3-4-days without meat per week; if meat is consumed then organic) as recommended by Van Dooren et al. (2014) in their diet-sustainability model to achieve a high sustainability score and in addition to meet health improvements.

- Providing knowledge of the impact of meat consumption on climate change in a way that it is applicable and evokes (emotional) concern.
  - Combination of presenting the impact of meat consumption on climate change and showing the high effectiveness of individual change, by rising empathy and emotions: by visualization with words and pictures.
  - Communication of a high self-efficacy and locus of control of reducing meat consumption for the environment.

- "Envision a future worth fighting for"
  - Activating social and personal norms
  - Presenting a viable plan to achieve the vision: providing vegetarian recipes
  - Showing the choice options (what happens if you change, or keep the present behaviour)
  - Presenting a concrete individual action

- o Showing benefits from the new behaviour, but mention losses if the old behaviour is kept.
- Addressing motivations & barriers:
  - o A moderate meat consumption has to become more desirable, attractive and fun to overcome its barriers:
    - ▪ Presenting being flexitarian as a new, trendy and healthy lifestyle:
      - Encouraging meat lovers to try out vegetarian meals for at least one or two days a week;
      - Encouraging "disengaged meat eaters" to become flexitarians;
      - Encouraging "unconscious flexitarians" to become "conscious";
      - Encouraging "conscious flexitarians" to embrace a substantial, holistic identity by considering oneself as a vegetarian/vegan.
  - o Trying to reveal and overcome barriers, by showing good alternatives:
    - ▪ e.g.: habit and taste, healthy diet, cooking knowledge, price and infrastructural availability of vegetarian food products/organic meat and to create a new social image.
- Communication needs to be tailored specifically for each meat consumption group to address their individual barriers effectively
- Transition needs to be addressed gender specifically
- Formulating a commitment to reduce meat consumption (depending on to which extend the participant is eating meat):
  - o Ask for a meaningful, personal commitment to change their behaviour step by step.
  - o Use social media
- Giving Feedback and remind (after a few weeks).

Thereby the communication strategy follows two objectives:

a) To close the knowledge gap of the high efficacy to eat less meat as a climate change mitigation option. This will be presented in a way that it raises interest and encourages willingness to change. Therefore, the first part of my communication strategy starts with a motivator that functions as an "attention grabber" and leads to an information seeking process.

b) After creating interest and attention in the communicated topic, further steps of behaviour change strategies need to be approached. Here the second part of the

communication strategy follows the recommendation of Boer and Schösler et al. (2013) and appeals to multiple values to trigger other motivations to decrease meat consumption, such as personal health, animal welfare, etc.

3.2 Communication strategy -Part I: Postcards as an attention grabber

I will start my communication strategy with a motivator (as suggested in the Sandman´s model), which functions as an "attention grabber" and that leads to an information seeking process[25]. After raising interest and attention in the communicated topic, further steps of behaviour change strategies need to be approached (*see section*: *Communication strategy -Part II*).

In my generated communication strategy, I will try to raise attention to become a flexitarian in order to address climate change, and other related environmental problems, such as deforestation, biodiversity loss, etc.

I will try to approach this in an appealing, even humorous manner, in order to avoid feelings of guilt, emotional discomfort, fear and disempowerment of both addressed topics (Lorenzoni et al., 2007; Rothgerber, 2012; O'Neill, S. & Nicholson-Cole, S., 2009). As I got inspired by the work of *Futerra*, I will make use of sustainability marketing strategies, in order to encourage people for a positive change.

In a manner of traditional marketing strategies trying to start a trend, I will try to promote flexitarianism and make it social acceptable and "trendy". In a creative process I designed, several postcards that make use of familiar, popular, nostalgic icons that pick up on a current vintage/ retro trend[26]. These images are set in a new and unexpected context (in this case climate change and meat consumption), in order to grab people's attention. The attention grabber is presented in an overdrawn and funny manner that encourages people despite the reason to worry or even to panic about climate change and related problems, to become flexitarian as a solution to save the planet. This emphasizes the high self-efficacy and the locus of control of the behaviour change of being a flexitarian. The attention grabber aims to confuse and to entertain the viewer, by the relatively unknown term flexitarian and the images, set in a new and unexpected context. It aims to raise curiosity, so that an information seeking process will set in (*see figures 9,11,13,15, 17*). Therefore, I have chosen a postcard as a potential communication

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[25] Here, I will make use of the already existing proposal of a potential attention grabber to raise interest in meat consumption and climate change, as developed in the previous case study (Johanning L., 2015).

[26] In order to avoid copy right violations of the used images, not all original postcards are displayed in this thesis. Out of this reason, the respective images were redesigned on the basis of my ideas and in the style of the original designs. Yet, the original postcards were provided as pre-read material for the expert interviews (see section: 3.4.1.).

channel, so that people can find direct information on the backside of the card, after seeing the attention grabber (*see figures 12, 14, 16, 18*). This information is be provided in a compact and appealing manner, by providing a short and effective input, in order to avoid that people lose interest. The information on the postcard´s backside gives evidence and examples for positive effects of eating less meat to combat climate change and other environmental problems, by using facts from official and public approved institutions such as from UNEP[27] or PBL[28]. Additionally, a web link or a QR-code is provided, in order to find more detailed information, to be able to appeal to multiple values, and to follow further steps of behaviour change strategies on an established website (see section: *Communication strategy part II*).

In addition, the target group is motivated to take concrete action, and in this case to eat more often vegetarian.

3.2.1 Addressing barriers of shifting meat consumption

To address the barrier of a lack of social support, and the fact that people do not like to change or act isolated from the group environment around them, the backside message of the postcard is formulated as if it was written by a friend, who informs the reader of the positive impacts of eating less meat on the climate and environment and gives an invitation for a vegetarian dinner to take action for change together. In particular the designed postcard *"Let´s save the planet together"*, showing several superheroes saving the world, underlines a group movement of flexitarians and to take collective action to combat climate change.

Another important barrier of meat consumption that I will try to address, is "meat and masculinity". Therefore I designed different cards with different gender specific appeals: the *"Flexitarianman"* postcard is an allusion to the comic book hero *Superman*. On one hand male strength is portrayed, but with the twist that a man can save the world not by being a classical superhero, but by being *"Flexitarianman"*. In contrast to the associated symbol of meat and masculinity, men who are eating less meat represent even more a masculine hero.

In addition the *"Pop-art"* postcard, reproducing the popular image of the *"Kiss V, 1964"* by Roy Lichtenstein, is picking up the role of a man being in control of the situation: he calms and comforts a women, who is upset to have ruined their children's future - by their unsustainable behaviour- and proposes to become flexitarian to recover losses.

As a counter play and a more feminine approach, I have chosen the *"We can do it"* postcard, which makes use of the original wartime poster *"Rosie the Riveter"* (1943). In this image, an

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[27] United Nations Environmental Programme
[28] The Netherlands Environment Assessment Agency

iconic figure of a strong female war production worker is shown as an inspirational image to boost worker morale. This poster got re-framed in different ways over time, including a campaign to promote feminism and other political issues, in the beginning of the 1980s (Kimble, James J., and Lester C. Olson, 2006). This associated promotion of feminism matches with the mentioned role of women to be potential change agents of food consumption and to promote flexitarianism or vegetarianism.

In order to address different individual tastes and to be gender neutral, I have designed other approaches such as *"Let´s save the planet together"*- and the *"Keep Calm"* postcard, which makes use of another World War II propaganda poster, that got re-framed in several current advertisements and that is used for motivational slogans (Hughes S., 2009).

Figure 9 Postcard front „Let´s save our planet together", redesigned by Rutger Cox

Figure 10 Backside message "Let´s save our planet together"
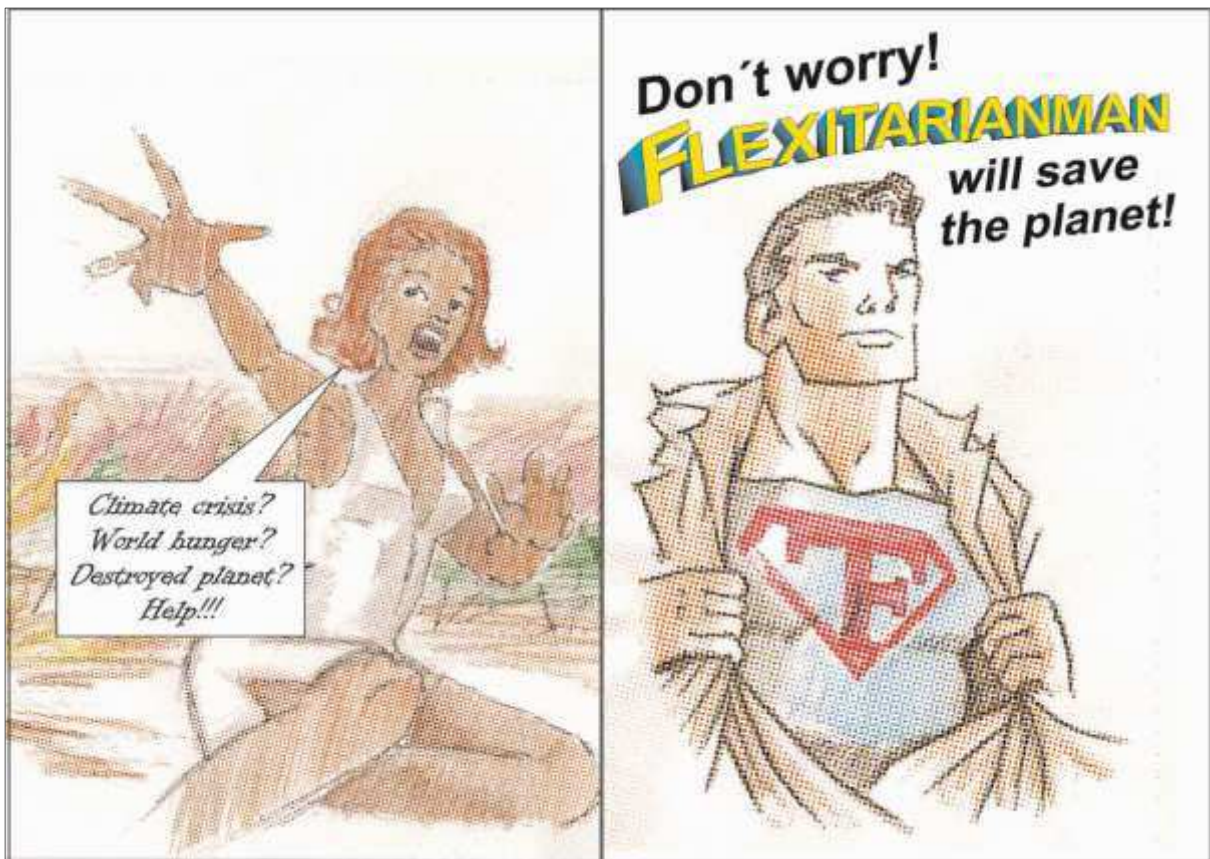
Figure 12 Postcard front "Flexitarianman", redesigned by Thomas Behrendt

Figure 11 Backside message "Flexitarianman"

Figure 13 Postcard front "Pop-art", redesigned by Thomas Behrendt

Figure 14 Backside message "Pop-art"

Figure 15 Postcard front "We can do it", Picture: public domain

Dear..........,

Did you know that halving the meat and dairy consumption in the EU would lead to * :
- up to 40% less greenhouse gases ?
- a strong improvement of water and air quality?
- 40% reduction in nitrogen emissions?
- a significant reduction of land use?

Are you also hungry for change?
Let´s get together for a delicous veggie cooking session and give peas a chance!

See you soon!
Yours.....,

www.flexitarians-can/save/the/world.com

* PBL 2011 (Netherlands Environmental Assesment Agency)

TO:

Figure 16 Backside message "We can do it"

Figure 17 Postcard front „Keep calm", Photo: picture alliance//picture alliance

Figure 18 Backside message „Keep calm"

3.3 Communication strategy - Part II: Activating behaviour change

In the second part of the communication strategy, further steps of behaviour change strategies as suggested in the literature review are approached. For an overview of the strategy see *figure 19.*

Complementary to the designed postcards, I created the website "flexitarians can save the planet"[29], by using the online software *WordPress[30]*.

The website builds on the information seeking process induced by curiosity and the fun aspect of the postcards. The concept of this website is to show solutions and benefits by using an appealing positive and personal tone and language. The homepage[31] of the created website illustrates a future worth fighting for (Schösler H., Hedlund-de Witt A., 2012; Moser S.C. & Dilling L., 2011) that presents a scenario of "heaven" (Futerra, 2009), in which the positive effects of a flexitarian diet on climate change, world hunger, biodiversity, health and animal welfare are presented. Thus, a desirable future is envisioned that builds up positive attitudes. In the next step, the website visitor is motivated to browse through the website to find out, how this vision can be reached.

The following section "What does that mean?"[32] explains the flexitarian diet and the benefits of eating better, quality meat are highlighted. The chosen image ("the rise of the carnivorous vegetarian") shows that meat consumption is part of a flexitarian diet and therefore it is presented as none-extreme and positive chance to have a diverse diet to make it socially more acceptable ("You luckily enjoy just the sunny sides of two food cultures").

As suggested by Futerra, the section: "Why should we care?"[33] shows the urgency and need for a behaviour change (Futerra, 2009). Here the presented scenarios are underpinned by references to significant papers or reports.

The next section "How can flexitarians save the planet"[34] explains several benefits of eating less meat in terms of climate change, biodiversity, food security, the food system and local economies. Moreover, Sources for deeper understanding are provided in form of references to

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[29] To view the website please visit https://flexitarianscansavetheplanet.wordpress.com or see appendix.
[30] For further information please visit: https://wordpress.org/
[31] See https://flexitarianscansavetheplanet.wordpress.com/ or see Appendix.
[32] See https://flexitarianscansavetheplanet.wordpress.com/what-does-that-mean-2/ or see Appendix.
[33] See https://flexitarianscansavetheplanet.wordpress.com/why-should-we-care/ or see Appendix.
[34] See https://flexitarianscansavetheplanet.wordpress.com/how-can-flexitarians-save-the-planet/ or see Appendix.

significant papers or reports. "What´s in for me?"[35] focusses on the personal benefits of this diet change by addressing health issues related to a high meat consumption.

The identified main barriers of an active behaviour change are addressed in the section "That sounds reasonable, but…"[36]. The first barrier "Why should I change, if nobody else is doing it?" addresses the feeling of individual disempowerment and the fact that people do not like to change or act isolated from the group environment around them (Futerra, 2009). Hereby the individual needs to feel as a part of a bigger movement and changing behaviour needs to become social and fun (Futerra, 2009). Therefore it is highlighted that "flexitarianism is a growing movement and trendy around the world" and the individual is encouraged to motivate his social environment to start fun "veggie cooking sessions". The barrier of taste is addressed by emphasising the benefits of eating less, but better meat and by exploring a new food culture of delicious vegetarian dishes. The lack of knowledge how to cook vegetarian, or where to buy vegetarian food and/or quality meat – products, is approached by providing access to recipes and addresses of stores in a provided database[37]. Concerns of a nutrient deficiency are also addressed in this section.

After clarifying the "Why" and "How", a concrete action plan (Futerra, 2009) is formulated and gives a behaviour change request (section: How to start[38]: "Half of the week you eat vegetarian, the other half, you could opt for good and organic meat"). Here, a positive and engaging language is used: "Discover new tastes and your creative cooking skills – you automatically feel more pure and healthy". Besides, the barrier of habit is helped to overcome by integrating the new behaviour into an existing week planning (FGI, 2012). In addition, to help putting the behaviour change request easier into action, a download of a "Flexitarian-Meal-Planner"[39] is provided that could potentially give daily suggestions and recipes, shopping lists, shows where to buy ingredients in shops nearby, calculates the ecological footprint & savings and calculates health scores.

The last section "Hungry for change?"[40] is engaging the website viewer to try out a flexitarian diet "today" and to motivate friends and family to join. By joining the Flexitarian-Facebook

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[35] See https://flexitarianscansavetheplanet.wordpress.com/whats-in-for-me/ or see Appendix.
[36] See https://flexitarianscansavetheplanet.wordpress.com/that-sounds-reasonable-but/ or see Appendix.
[37] This database is just fictive (https://flexitarianscansavetheplanet.wordpress.com/databases/).
[38] See https://flexitarianscansavetheplanet.wordpress.com/how-to-start/ or see Appendix.
[39] This App is just fictive.
[40] See https://flexitarianscansavetheplanet.wordpress.com/get-connected/ or see Appendix.

group, the website visitor is encouraged to post "I am proud to be flexitarian" as a form of a public commitment making that is central for a behaviour change (Futerra, 2009; Cialdini, 2001; Doug McKenzie-Mohr, 2000). As a last step the website visitor is rewarded for his behaviour change to become flexitarian: "You really make a difference! Thanks for saving the planet- thanks for being flexitarian!" If people join the established Facebook group, they would receive weekly updates of events in the flexitarian community[41] or of vegetarian recipes of the day, which function as a reminder. The Community page gives also room for an exchange of ideas between the participants and could provide feedback or advices around a flexitarian diet.

3.3.1 Target group

As identified by Dagvos &Voordouw (2013) there exist different meat consumption groups in the Dutch society (see section: *Trends to consume less meat*). One consumer group was classified as "extravert flexitarians" (eating meat 3-4 times a week), consisting of mainly younger people that are more attracted to meat reduction as something special, or a certain lifestyle, than a moral act. Since this communication strategy aims to make flexitarianism trendy, especially extravert flexitarians could be addressed by the exemplary campaign. Thus, with regard to the visual design and tone of the postcard and website, the communication strategy aims to target mainly young and highly educated people, such as university students in their twenties. Due to the fact that these groups of flexitarians do not consider themselves as such (Dagevos, H. & Voordouw, J., 2013), the aim is to make this group more conscious of being flexitarian, not just as a lifestyle, but as a moral identity.

Besides, the campaign aims to empower already "conscious flexitarians" and to strengthen their flexitarian identity out of ethical concerns, which might encourage this group to become even vegetarian. In addition, "disengaged meat eaters", who just eat meat routinely and "meat lovers" are also targeted to become interested in the concept of being flexitarian and to be motivated to try out vegetarian dishes.

To reach this target group of mainly young and highly educated people, the postcards could be displayed in urban, trendy student cafés and can be taken home for free.

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[41] See https://flexitarianscansavetheplanet.wordpress.com/community/ or see Appendix.
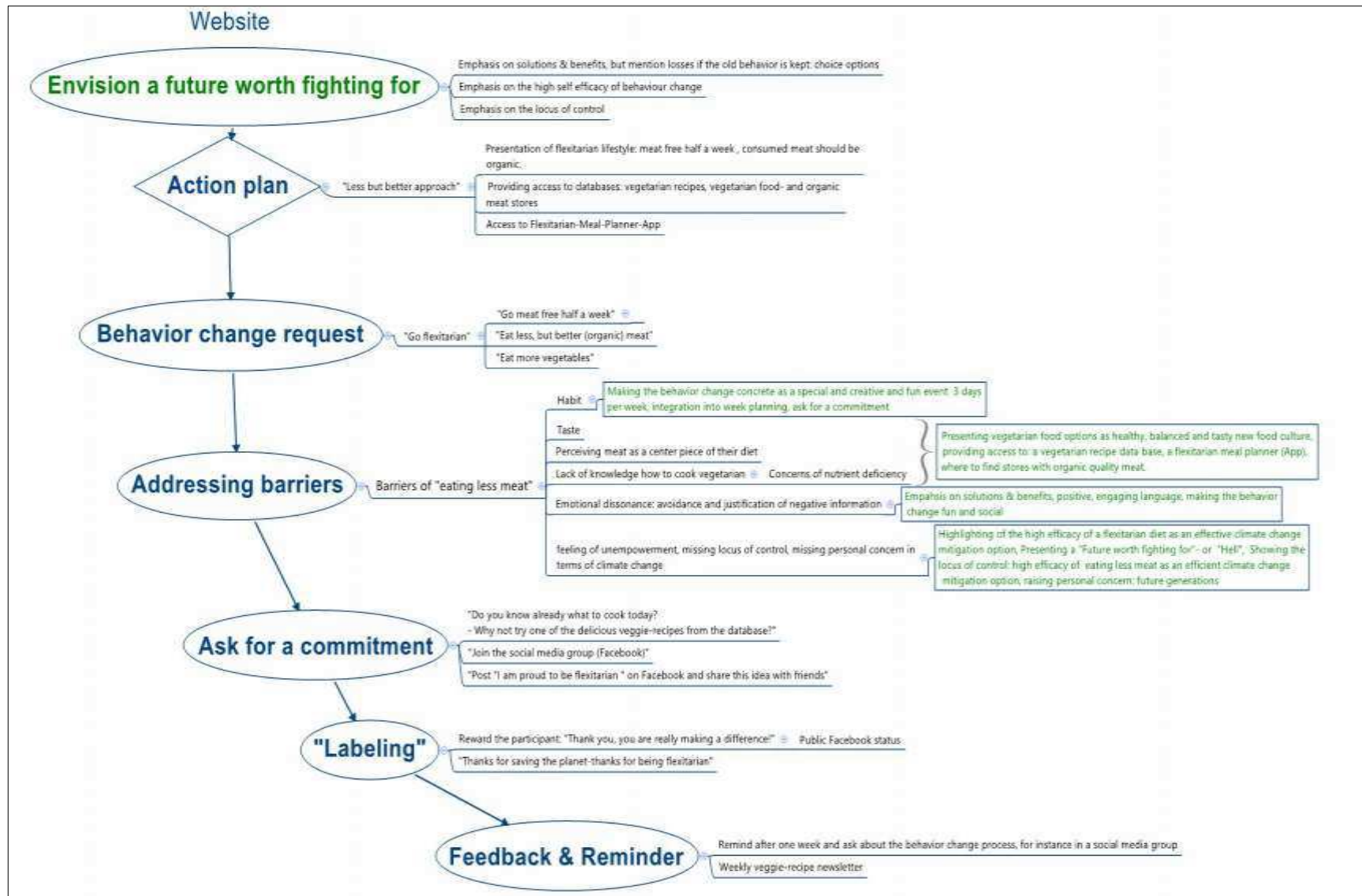
Figure 19 Communication Part II- Concept of the website

3.4 Semi-structured expert interviews

3.4.1 Methods

In order to explore effective communication strategies to encourage people to eat less meat, I have chosen to conduct expert interviews on the basis of a semi-structured interview guide (*see Appendix*). This follows an explorative approach that is open for new directions the interviewee points out and is providing a directive function to exclude unwanted topics (Meuser et al., 2009).

Because current literature of behavior change communication to shift meat consumption is limited (Bailey R., Froggatt A. & Wellesley L., 2014), the aim of conducting expert interviews is to answer my research questions more profoundly beyond the boundaries of the literature review.

Hence, I aim to gain insights into social marketing and behavior change communication, as well to find out up to which extent they have the potential to close the awareness and action gap and encourage people to eat less meat. In addition I want to understand the lessons learned from existing campaigns. Further, I will present and discuss my generated exemplary campaign with the interviewees and hope to gain important advices how to improve its strategy further (*see as well the interview guide in the Appendix*).

Therefore, I have chosen experts with an expertise in the field of:

a) Sustainability/social-marketing-communication strategies and/or behavior change communication,
b) Shifting food (meat) consumption into more sustainable directions and exploring its cultural acceptance,
c) Meat-less/flexitarian campaigns.

The selection process of the participants was partly conducted via internet research or via recommendations of already chosen participants or as recommended by my supervisors. I also interviewed authors/contributors of important articles/reports as identified by the literature review.

I invited the interviewees via email by explaining my research objective. Participants were then provided with pre-read material (description and presentation of the exemplary campaign, including postcards and web link to the generated website, and potential interview questions).

The interviews were conducted via *Skype* in the time frame of April - May 2015. In average the interviews took 30 minutes, due to a set time limit by the interviewees.

To be able to fully concentrate on the interview process itself, the interviews were recorded, with the permission of the interviewees. After each conducted interview, I reflected on the recorded audio material to improve the next interview progress and to detect interesting aspects and information. I conducted enough interviews to reach a saturation effect, so that I could not detect any new aspects or information.

In total 10 interviews were conducted with the following experts (ordered respectively to their field of expertise):

    a) *Sustainability/social-marketing-communication strategies and/or behavior change communications:*

        a. **Oliver Lawder:** Senior creative planner at *Futerra Sustainability Communications UK*; Expertise in communication strategy, campaign planning, campaign activation. (Selection process: contributor of *Futerra* as an important part of the literature review[42])

        b. **David Hall:** Executive director of "Behaviour change", UK- not-for-profit social enterprise for strategic behaviour change, consultancy leading strategic thinker and researcher on tackling challenging behaviours. (Selection process: internet research on behaviour change communications)

        c. **Leontine Gast:** Founder & manager of "The Terrace, agency for positive change", NL. The Terrace offers sustainability strategy services, and meaningful marketing tools that support organizations in their path to sustainability. (Selection process: internet research on behaviour change & sustainability communications).

        d. **Jeroen Willemsen:** Innovation manager & advisor at FOODFORIMPACT, NL, Food for impact offers consultancy and strategies for translating ideas, inventions or innovations to impact in the food industry. (Selection process: recommended by other participant).

        e. **Susanne Moser:** Director and Principal Researcher of Susanne Moser Research & Consulting, US with an expertise in climate change communication and social

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[42] Among others: Futerra (2009): Sell the sizzle. The new climate message. Hg. v. Futerra Sustainability Communications. London.

change. (Selection process: author of important articles, as identified in the literature review[43]).

    b) *Shifting food (meat) consumption into more sustainable directions and related cultural aspects:*

        a. **Dr. Hanna Schösler**: Researcher with expertise in sustainable food consumption, corporate social responsibility, consumer behaviour, value orientations.GE (Selection process: author/co-author of important articles, as identified by the literature review[44] & recommended by Annick Hedlund - de Witt).

        b. **Anna Lappé:** cofounder of the small planet institute, US. With an expertise in food systems; Author of: "Diet for a Hot Planet: The Climate Crisis at the End of Your Fork and What You Can Do About It" (Bloomsbury). (Selection process: recommended by Annick Hedlund - de Witt)

    c) *Meat-less/flexitarian campaigns:*

        a. **Sue Dibb:** Coordinator at *Eating Better, UK; Eating better* is an alliance to promote a transition in meat consumption and a fair, green, healthy food system. (selection process: author of important report as identified by the literature review[45])

        b. **Alexia Leysen:** Campaign leader at *Dagen Zonder Vlees* (Meat free days), BE. (Selection process: via internet research on existing meat-less campaigns)

        c. **Peggy Neu:** President of *Meat less Mondays* campaign, US (Selection process: via internet research on existing meat-less campaigns)

3.4.1.1 *Data analysis*

I transcribed the interview material with the software *Audacity*. Thereby I have reduced the content a little, by excluding unimportant introductions. After the interviewees' approval of the interview content, I used the software *ATLAS.ti*[46] for the qualitative data analysis.

Here I applied the *Grounded Theory* in order to build a theoretical concept of an effective communication strategy to encourage people to eat less meat and to be able to give guidance for future campaigns. Therefore I made use of an open coding system according to Strauss &

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[43] Moser S.C. and Dilling L. (2011): COMMUNICATING CLIMATE CHANGE : CLOSING THE SCIENCE - ACTION GAP. In: John S. Dryzek, Richard B. Norgaard und David Schlosberg (Hg.): The Oxford Handbook of Climate Change and Society. Oxford: OUP Oxford, S. 161–174.

[44] Among others: Boer, Joop de; Schösler, Hanna; Boersema, Jan J. (2013): Climate change and meat eating: An inconvenient couple? In: *Journal of Environmental Psychology* 33, S. 1–8. DOI: 10.1016/j.jenvp.2012.09.001.

[45] Dibb, S. Fitzpatrick I. (2014):
Let's talk about meat: changing dietary behaviour for the 21st century. Hg. v. Eating Better: for a fair, green, healthy future.

[46] For more information please visit: http://atlasti.com

Corbin (1996)[47] to identify key themes, which contain quotations according to named aspects or that are responding to my research questions. During the coding process, the open, broader codes were revised, compared and various sub-codes were generated (*see Appendix*).

3.4.2 Limitations

Due to the short time limit set by the interviewees (in average 30 minutes) the interviews in general could not be very in-depth. As well to the fact that some interviewees had no time to look at the pre-read material beforehand, I needed to explain and present my exemplary campaign during the interview. As a result, the discussion of the exemplary campaign could not be very in-depth either. Despite these time limitations, many valuable aspects and inputs could be generated, in order to explore effective communication strategies on the field of interest.

3.5 Interview results

In the following, I present the gained aspects and information of the expert interviews on effective communication strategies to encourage people to eat less meat.

3.5.1 The role of sustainability/social marketing strategies to encourage positive behaviour change

Most of the experts agree that **social marketing plays an important role to encourage behaviour change**. As for example Oliver Lawder points out: "All choices in the supermarket are heavily influenced by marketing, advertising, design, and price strategy. Any attempt to influence the decisions people are making, entirely relies on communications as such (…) [Therefore] their roles in changing behaviours or helping guiding people´s choices is fundamental".

Peggy Neu explains that the background of *Meat less Monday* is in advertisement, Social media, PR and marketing. Additionally, scientific knowledge is provided by the John Hopkins University. She remarks that the combination of these two expertise made *Meat less Monday* so successful.

Nevertheless, Leontine Gast underlines the importance of sustainability communications **advocating consumer behaviour change instead of advocating their policy**: "The problem of (..) social – and sustainability marketing is that it is not marketing, maybe it is communicating, but it is about sending [a] message. Instead of really thinking through, what the **benefits for consumers** or end users would be. If you can't make it relevant to the people

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[47] Strauss, Anselm L. & Corbin, Juliet (1996)

that you talk to, it is not a good communication, because people will not relate to it". Here she claims that this is a major problem of current campaigns by NGOs: "leading NGOs are almost by principle, not very suitable or knowledgeable or interested in consumer insights. Because they are also a sending organization, because they have an opinion, a very valid opinion, and they ventilate that opinion, if you are interested in that opinion or not".

Need for different path ways for change

Yet, the experts remark that **social marketing alone is not enough** to change people's behaviour, but it is an important part of the picture. They underline the importance of other interventions to achieve a shift in sustainable meat consumption. Thus, Anna Lappé underlines to keep in mind **three pathways for change**: "One there is consumers. **Consumer consciousness shift**, **cultural shift**, not saying that this is not important, but this is just one piece of it. Secondly, the importance of **governmental policy**. It is not guaranteed to achieve this shift, but it is important to be working towards policy change. And then **thirdly**, there is a really strong world for cooperate campaigns **to shift cooperate practice**. All three of those also of course have influences on the others: the more there is demand for organic production [through consumer choices] the more you see corporations, farmers shifting in that direction. So there is interplay between those pathways towards change, but I think it is important to be working on all three".

3.5.1.1 Why is there no meaningful communication to eat less meat already?

The interviewees note that since there is a lack of policies to intervene and regulate meat production & consumption, sustainability & pro environmental communications are "all what we have" (Hanna Schösler). The experts detect **vested interest of the industries** as a main issue, which is why there is no meaningful communication on policy levels on this topic. In addition, "every NGO or political party is afraid to burn themselves and to lose members. Meat consumption is still an issue that is not easily questioned in our society" (Hanna Schösler).

Here, the experts point out that this social norm of a high meat consumption is in turn influenced and manipulated by the meat industry and vested interests: "[they] are trying to sell people meat one way or another" (David Hall) and "companies make money by selling more, so **what is the business case to sell less**?" (Sue Dibb). Besides, Leontine Gast remarks that attacking the meat industry by NGOs is extremely difficult: "because what is lacking in meat is an A brand that you can attack. Meat is brand less- meat is meat. In fresh meat there is no brand. And **if there is no brand, who do you attack?"**

Besides, the experts mention the eating *less* message as tricky one for politicians: "It sounds like a negative message" (Sue Dibb). To Sue Dibb here the question is: "**how do you make it**

a positive message?" She suggests therefore to change the name of the "less *but* better" approach to "**less *and* better**", because *but* is a negative word.

Lack of knowledge/awareness

In addition, the interviewees comment that there is **just recently growing more awareness** among the public, about the negative impacts of meat consumption, in particular in terms of understanding the link between meat consumption and climate change.

But here, Susanne Moser questions to which extent awareness and knowledge of that link are actively relevant to people to change their behaviour. In her opinion, other barriers, such as the cultural significance of eating meat, are much bigger obstacles for such behavioural change than just knowing about this particular link. To her, awareness is just one of the means and people's awareness needs to be increased where that is an issue, but the biggest focus of a campaign to reduce meat consumption is to **focus to overcome bigger, other barriers**. To her, the first barrier of making this behavioural change is to **capture people's attention** and to raise interest in the communicated issue. Here, the experts agree that communications to encourage people to eat less meat need to go **beyond of just awareness campaigns**. Instead, they need to focus more on how to promote active behavioural change.

3.5.2 Barriers of encouraging people to eat less meat

All experts agree that the overall obstacle of reducing individual meat consumption is the cultural & social sensitive topic. The experts identify meat consumption as an important element of our food culture, which is associated with certain values. **The social norm is to eat meat**: "In our culture you have to explain yourself when you choose not to eat meat, never the other way around" (Hanna Schösler). "Misperception of coming across it, is telling people what do to [and] coming across to preachy: food is personal, cultural, and spiritual. We don´t want to touch this issue, it is too personal" (Anna Lappé). Due to the interviewees these arguments make it difficult to convince people to adopt other food consumption behaviours.

Besides, the **habitual nature of eating** in general, and thereby perceiving **meat as a centre piece** of the diet in particular, was identified by most of the participants as the biggest barrier of making this behavioural change. One of the major obstacle here is that "eating habits are created very early in our lives. And there are maybe a couple of moments later in life, where people might rethink it. (…) Habitual behaviour change is much more difficult than just making a one-time choice, for example whether you are going to buy a small or big car" (Susanne Moser). In addition the experts point out that "the current system is designed by people to make their lives as easy as possible. People have a very busy life and research on food suggests that people (...) tend not to change what they cook, **how** they do shopping and buy the same thing

every time" (David Hall). "If there is no pain in doing, what you do today, then it is very difficult [to change this behaviour]. Because, if you enjoy eating meat every day, **if there is no negativity in that for you, why should you change your behaviour?**" (Leontine Gast).

To overcome this barrier, the experts suggest that a **new habit** needs to be created, by providing **attractive and easy alternatives**. Thereby, David Hall underlines that "in terms of how to make this behaviour easier (…), it is certainly **not about education, it is about facilitation**" (David Hall). Anna Lappé mentions as well that there is a **lack of climate friendly food options** available in the US.

Here, the next consumer insight the experts detected falls into line: "**What to eat instead?"** (Peggy Neu). As Peggy Neu explains, the *Meat less Monday* campaign is mainly recipe driven to help people see "that there are **alternatives that are easily satisfying**". Whereas, David Hall claims that people use rarely recipes. Instead, he suggests to offer people alternatives that are simpler than recipes, such as **one step ideas, rather than full recipes**, because that requires a lot to change: "So you have to think of the aspect **how to make it easier for people to change**. That could be showing **options for meat replacements**, or there a lot of things to cook that not necessarily require step by step recipes".

However, Peggy Neu reports that once people try vegetarian recipes, conducted research by *FGI*[48] shows that it opens them up: "It is easy, it is delicious, so let me try it on Wednesday or on Thursday". But here the question is: "How to get people to try out things once?" (Sue Dibb).

Meat & masculinity

Another aspect the experts mentioned is the issue of meat & masculinity. Here, Hanna Schösler points out to give plant based foods a mal make over. Besides, Oliver Lawder remarks to appeal to the less and better approach and to promote quality meat as a motivator for men to change their meat consumption patterns. He suggests to influence them via partnerships with certain types of restaurants or social media channels.

3.5.3 Values, motivations for & benefits of eating less meat

As the expert remarked earlier, values and personal motivations to encourage a decreased meat consumption depend and vary regarding to different target groups.

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[48] See as well section: *Meat less Monday*

Hanna Schösler identified from her research important general values that campaigns may appeal to, such as the **idea of caring**: "caring **for the environment**, [caring **for nature**], caring **for the animals**. As well as a **sense of responsibility**".

Further, she mentions values that appeal to the audience, which are mainly supported by the slow-food movement and organic food production: the importance of **mindfulness**, **awareness** of what you eat, **purity**, **quality**, **temperance** and **simplicity**. In addition, she suggests that communications about eating less meat could as well appeal to a **sense of autonomy**: "To make people aware that meat consumption is something that the industry wants us to do, because that is where the money is. That's why advertising and supermarkets all want us to eat meat. I think it can appeal to some people of course not all, but make them more aware that, they should decide for themselves". In addition she points out that "we need the **awareness that we are all carrying the societal cost** of our food consumption behaviour. And that of course makes food consumption not a private matter anymore".

Besides, some experts mention **that making a positive choice** and doing something good appeals to many people, as well as the idea of **supporting local farmers and economies.**

Although the experts observe that caring for the environment becomes more and more important for people, they identified **health** as a very important benefit of making this diet change. Health appears to be more important to people than benefits for the environment or climate change. But here David Hall claims that **appealing to a better health is quite difficult,** "because if [people] are currently healthy, to do something that might be positive in the long term perspective, is for [them] quite difficult". He mentions that *Behaviour Change* research has shown that **animal welfare** is a more compelling benefit than he would have expected. But he questions, whether that would drive people to change their behaviour, because what the survey has also shown is that **although people care about animal welfare, they don't tend to do something differently**.

Climate change as a poor motivator for encouraging people to eat less meat
Yet, almost every expert warns of the **danger to focus on climate change and other global issues** as motivations to shift individual meat consumption. Due to the experts, these arguments are quite challenging, because they are **holistic and not personal**. "That makes it more difficult to translate it into an actual behaviour. Nobody can be against a better climate or a better planet, but because it is so holistic, it is note to be a threshold for people to change" (Jeroen Willemsen). And because of that "people say: I leave that to other people to solve that out for me" (Sue Dibb).

David Hall reports that research from *Behaviour change* has shown that the most challenging behaviours to change, in order to address climate change, are eating less meat and flying less: "Because that are both things that people feel to be entitled to do and don't like the idea of being told by other people not to". In addition, Susanne Moser highlights: "The more we bring their attention to the fact, that everything they do, even something as essential as eating, has a negative environmental impact, there is a **possibility of generating anger** in people or of even **creating bigger resistance**". Therefore, she recommends giving people options of how to reduce their climate impact - and to reduce meat consumption is one of them. David Hall stresses as well that the tone in the approach is crucial: it is "important to make people feel that they make the decisions for themselves, rather than being told what to do".

In addition, **people feel overwhelmed** by the big issue of climate change and the environment: "these problems are so big and what can I as a little person do?" (Peggy Neu). Therefore, the climate message is easy for people to dismiss. But here Peggy Neu suggests giving people a specific action to overcome the feeling of **disempowerment**: –"Just cut out meat once a week". Hanna Schösler remarks to uncover the environmental costs of a high meat consumption in a form that people can relate to: "The studies that tell you that 15000 litres of water are needed to produce a kilo of grain-fed beef. That is something you can really relate to. And you have the piece of meat on your plate and you remember the environmental costs of it". In addition, Anna Lappé´s approach is to show examples in terms of giving practical ways to embrace this new way of eating. Thereby, she messages to put more healthy diet choices on the plate and mentions **climate conservation just as a co-benefit**: "People need to feel that **sense of empowerment so that they can make a difference.** Diet is not the only way, but it is one way".

Nevertheless, Oliver Lawder argues that people truthfully are aware of the fact that their action alone is not enough. Therefore, he suggests either to create a **movement**, by showing the **collective benefit** of people reducing their impact together, or to move the climate message out of the way, because **climate change is not a big motivator**. Due to her research, Hanna Schösler undermines not to use climate change at all as a motivator to reduce individual meat consumption.

Climate change as an element of the mix

At this point, Oliver Lawder highlights the importance of focusing on the communication strategies objective: "Are you trying to achieve people to eat less meat, or are you trying to achieve people to care about climate change? **If it is to get people to eat less meat, you should**

only be interested in 'what is the best way to get people to eat less meat?' Climate change is just one reason to reduce the amount of meat you eat (…) and it is not a big motivator".

Yet, the experts note, **not to abandon the climate change message completely,** but **to find a right place in the mix** of a set of compelling and more personal messages to have a better chance of convincing a wider group of people.

3.5.4 Principles of behaviour change

3.5.4.1 Focus on personal benefits

All experts agree to emphasize individual benefits and personal motivators of making this diet shift instead, in order to **avoid misperceptions and resistance: "[discussing] so many problems related to food (…) is not what gets people motivated**. It is very important to think about the more positive sides of change" (Hanna Schösler).

David Hall recommends to make use of a guidance about main principles on behaviour change that was developed by a UK government led project called "Mind Space"[49].

To Oliver Lawder eating **better, quality meat** is the real benefit and upside of the less but better meat consumption proposal, on that he would focus on. He suggests **focusing on** the **self-image of people**, which are "food-connoisseurs" and **value the quality and taste** of their food. In his opinion, this approach would appeal to a wider group of people than holistic values, such as climate change. Here, the mentioned values of the slow food movement and organic oriented people and the "foodies" by Hanna Schösler are appealed to. Sue Dibb points out that the slow food movement already runs a campaign called *slow meat*, they promote to eat better *and* less, by appealing to the quality. Another personal motivator is "**what is it going to cost?**" (Sue Dibb). Hence, communicating that it actually does not cost more to buy less but better meat and more vegetarian choices, but instead it could save money, could be interesting to many people. "And those, who do that and afford it, by buying less of it, may even take it further". But here, she amplifies to be aware that if people can afford it and have therefore a heavy consumption of better quality meat, is not going to help either.

In addition, the experts highlight that motivations such as **pleasure, taste, creativity** & making **new discoveries** need to be in the focus to engage behaviour change. In addition, experts highlight to **engage fun** as an important motivator and behaviour change principle. Besides, Susanne Moser highlights the importance of appealing to the **aspiration for happiness**.

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[49] For further information, please visit:
http://www.instituteforgovernment.org.uk/our-work/better-policy-making/mindspace-behavioural-economics

3.5.4.2 *The power of the social*

Another aspect the interviewees mentioned is the social element of making this behavioural change. There is the need to "**create a cultural context for change**" (Peggy Neu) by creating a collaborative movement instead of communicating to a single individual. Peggy Neu explains that "people are doing [*Meat less Monday*] together, because it is a specific action at a specific time. There is a *Meat less Monday* in many countries around the globe, and it is inspiring that once a week that everyone takes the same small step, the same action. And by doing it together, we have a big impact collectively".

To Sue Dibb, this **collaborative movement is one element of social marketing**: "People do things, what other people are doing. Instead of asking people to do something weird, or on their own, you should rather show, what other people are doing already". Besides, Susanne Moser highlights as well the importance of "people seeing people like them" in advertisements. Therefore, she suggests to show in a campaign not just a picture of delicious food, but a picture of food shared by friends: "that is what marketing does- selling happy people. So if you can sell happy people and in the meantime we save the planet - fantastic. But being happy - that is, what sells". To her **the power of the social opposed to the power of information are the key elements of social marketing.**

3.5.5 Sustainability/Social communications & marketing strategies
3.5.5.1 *The importance of identifying target groups*

In general, the experts highlight the importance of an audience segmentation and to identify a target group, as a crucial start-element of any communication & marketing approach. Leontine Gast highlights that **the target group builds the "ecosystem" around the strategy´s objective**: "Without consumer insights I would say the impact is zero". In order to gain consumer insights, different **mind sets, values and personal motivations** of the specific target group need to be explored, in order to know ″who are the people that you are trying to change?″ (Oliver Lawder). Here, Oliver Lawder recommends to gain insights into a target group for instance via research by *Cultural Dynamics*[50] through a value based audience segmentation. In addition, David Hall suggests "to get under the skin of a specific audience via qualitative research, trying to understand how they relate to that particular issue, rather than trying to find a general value model".

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[50] *Cultural Dynamics Strategy & Marketing* advises organizations on the implications of changes in cultural and individual values on policies, processes and procedures (for further information please visit: http://www.cultdyn.co.uk/index.html).

Depending on these consumer or audience insights, the experts suggest to tailor the communication messages to what resonates and appeals to the particular audience- as Anna Lappé states: "There is no one fits all messages".

In addition, Leontine Gast points out that the **likability of adopting the proposed behaviour** by the target group needs to be considered: "So the question is: who cares? If you want to change someone's behaviour from eating 7 times a week meat towards 5 or 4 times, that is even more difficult than someone, who is already eating 3 (…) or 4 times meat [a week] and you skip one."

Behaviour change transition stages - opportunities to intervene

Jeroen Willemsen remarks to consider in which the **behaviour change transition stage**[51] the target group is positioned. He claims that depending on this information the communication can step into that particular stage and needs to help to move it to the next transition level. "The only challenge (..) there is, when you aim for (..) people at the first stage, the perception stage, that, before you actually see a fact, they have not just to go through the first stage, but through the second stage and third stage. And that is a long way to go". Therefore he suggests to have parallel or instead of, another strategy, which aims for those people, who have already gone through the first two stages and to help them to translate their attitudes and their expression into an actual behaviour. However, here he points out that this last transition stage is the most difficult one to achieve.

Complementary to this, Susanne Moser remarks that the **opportunity of when to intervene** is very crucial in the behaviour change communication approach: "Maybe there is an opportunity in early adulthood, when people become politically conscious, socially and environmentally-conscious and in particular when they are moving out of their home and establish their own households, or probably again when there is a big health issue, where eating becomes a sort of a big piece of the cure or to change the health status. That are the big opportunities that I see, where people really change their eating behaviour".

3.5.5.2   What can we learn from examples?

Jeroen Willemsen points out some examples of entrepreneurships **that advocate actively consumer behaviour change** towards eating less meat, by promoting attractive meat replacement products: *"The vegetarian butcher*[52] (NL), *The Dutch Weed Burger*[53] (NL) *Oumph! Epic Veggie Eating*[54] (SWE)*, Like Meat*[55] (GER). He remarks that their common

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[51] (1. Perception 2. Attitude 3. Adopting the new behaviour)
[52] http://www.vegetarianbutcher.com/
[53] http://dutchweedburger.com/?lang=en
[54] http://oumph.se/en/
[55] http://www.likemeat.de/en/

elements are **social entrepreneurship**, **youth** and a **positive approach towards the problem**, by promoting a **modern and trendy lifestyle** appealing to a **new generation,** with an attitude that logically includes eating less meat. According to Jeroen Willemsen, another important aspect of these business is the creation of a **personal and authentic feeling** around their brands, by being small bottom up initiatives, because people can see the founders behind the brand. In addition, he underlines the importance of this personal touch as a success factor of these approaches or of other campaigns, such as *Dagen Zonder Vlees* (BE).

In the campaign *Dagen Zonder Vlees*[56]*,* Alexia Leysen takes up the mentioned movement building and focusses on the **collective positive impact of eating less meat** on the environment and climate. She suggests that its´ **simple and easy approach** and the idea to do something good appeals to many people: "People cannot be against it, we ask so little and every step is positive. And I think that is very important to give the idea that even a little helps a lot. Of course it would be better that everybody would start to eat only three days a week meat. But that is too big for many people. So you would see less results happening".

For her it is very important not to convince people in a radical way and always **to emphasize the positive side of making this behavioural change**. Therefore, she does not solely focus on climate change and the environment as a motivator but stresses also the **personal benefits** to eat less meat: "How can you enjoy it? How can you discover new recipes? How can it be fun? How can it be healthy?" She focusses on the **win-win situation** and the benefits from it, "like the recipes, the flavours, the discoveries". Besides, Alexia Leysen recognizes that some people join, because it is **trendy**, **something new or challenging.**

Alexia Leysen believes that her campaign affects people, first on the **level of awareness** and then on the practical **level to translate the attitude into an actual behaviour**: "it got so much media attention, so the aspect of raising awareness was already successful. And then on the second level, it is the number of people participating online: we had about 50.000 people participating and we received a lot of emails by people, with reactions saying (…) 'We make new discoveries, it seems better and I want to keep it' ".

As mentioned before, Jeroen Willemsen claims the success of *Dagen Zonder Vlees* by the very **personal and authentic touch** given by Alexia Leysen: "Alexia started off the initiative very slow, it started off very **authentic**, because she had the feeling like having to do something. So it has grown very much from that (…) it is not brought in from the government or by a large

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[56] This campaign motivates people to take part in a collective challenge to reduce the size of their ecological foot print, as much as possible, by eating less meat within 40 days, See: http://www.dagenzondervlees.be/

company it is **coming from the bottom up**, brought up by this girl, and everybody is jumping on her".

Alexia Leysen, herself, explains the success of *Dagen Zonder Vlees* by getting a **high media attention**. She achieved this firstly by sending press releases and spreading the idea on the internet via social media, but mainly by the **support of famous** Belgian **people**: "they help to get attention and to set an example for other people".

3.5.6 Communication channel

The experts remark that in terms of communication channels, **the biggest issue** for most environment campaigns, is fundamentally **the budget**: "You are competing with **businesses** that have a lot of money to spend to get messages out there for commercial gain. So if you don't have a budget, you are significantly disadvantaged" (David Hall).

The experts suggest working with partnership organizations with an existing network, which can spread the message more easily in terms of budget and have access to a big community already, such as local initiatives as *Friends of the Earth*.

Peggy Neu explains that *Meat less Monday* uses a **combination of channels**: "We are very active on **social media** [such as Instagram, Facebook and Twitter] it is getting other people that have kind of a bigger megaphone, if you will. We try to convince for example the LA Times or other people having a bigger reach to do *Meat less Monday*. That is how we get the word out there. Or **by other participants** adopting the program, or other media picking it up".

In addition, Peggy Neu mentions that an **open source approach** made *Meat less Monday* so successful with a wide outreach: "it is a very big neutral idea that can be used by anyone to promote less meat consumption for any reason. This is how it is spread, people can own it and so it can be truly grassroots." And by that the campaign does not spent any money on media, the idea is spread via other grassroots advocacy or participants.

Social media

David hall explains that once you have an appealing message, **social media** is very suitable to address a quite large audience with little or no sort of investment. But he remarks that even with social media it is getting harder over time, as Facebook is getting more commercial.

Although the experts agree that using Facebook is a fundamental good idea, some experts estimate the efficiency of a mass campaign on Facebook or via other social media channels as quite low: " a lot of it has gone nowhere [because] Facebook is quite big and where do I create and put it into?" (Oliver Lawder).

Where your target group is most likely to see

Therefore they suggests to narrow it down and to f**ocus on the target group**. Here again, the experts amplify the importance of an audience segmentation and addressing a specific target

group with a set of compelling messages. The experts underline that **once you know your target group and their consumer insights, the communication channel becomes easy**: "It is the outcome where your target group is most likely to see" (Leontine Gast). As for example Oliver Lawder explains: "You could target and want to change the macho culture around meat eating. You can target young men in their university stage, in their early 20s-30s. Then you have a very specific group of people and you are targeting a very specific type of attitude. Then you can start to choose your channels. If you want to reach that group of 20s-30s men you have to be on those magazines, those Facebook discussion groups, Instagram accounts, or a partnership with this type of restaurant." Hereby, Oliver Lawder highlights that only if you have a **tight definition of your audience**, you can start to make decisions on your preferred messages and channels.

Who is the messenger?

The experts underline that it is important, who is delivering the message for the audience and which credibility this messenger holds.

For example, Sue Dibb reports that *Eating Better* tries to influence government policies to make sure that the message to eat less and better meat goes into nutrition guidelines. "Because those official dietary advices are much more efficient as a communication tool going out to the public. Because this is an **official organization that influences people**. So we try to influence those, who have the most influences".

In addition, Sue Dibb mentions the importance to promote the *less & better approach* via **chefs and cooks**, in which a lot of people are interested in. Also Peggy Neu reports that *Meat less Monday* communicates a lot via food bloggers and via chefs and cooks. But here, David Hall sees the danger to just exist in the "foodie world" and not in the mainstream culture. He remarks that although a lot of people like to watch those cooking shows, it does not mean that they really cook that recipe. So he claims, making something too "foodie" is going to be dismissed by a lot of people and it is unlikely taken action on.

The attempt to use **celebrities**, as Alexia Leysen in her campaign, is to David Hall a good short cut to get media coverage, but with just a short term impact.

Instead of using celebrities as a messenger, Jeroen Willemsen suggests to communicate via **role models and agents of change**, as key figures or examples that inspire and have influences on other people: "If you would be able to reach a number of people, who have a lead by example effect. That could be a very smart, almost indirect way of communication". Here he mentions change agents as Alexia Leysen from "Dagen Zonder Vlees" or as well popular video bloggers:

"One of our "Like Meat" products were promoted by Karl Ess[57] and it went like crazy, just because Karl Ess was eating it".

To Hanna Schösler using role models is as well very important to influence people: **"we all like to copy people we admire".**

3.6 Discussion of the exemplary campaign to encourage people to eat less meat in order to address climate change

3.6.1 The flexitarian & less, but better - approach

In general, the experts evaluate the chosen flexitarian approach in order to promote moderate meat consumption, instead of a more radical diet change to become vegetarian, as a **good fundamental idea**. In their opinion, this is the most likely diet transition people would rather accept without giving up meat consumption completely, since it is an important part of our food culture. Yet, the experts suggest **defining the flexitarian diet more concretely**: "How do people understand the flexitarian word? What does that mean, does that mean that they should sometimes eat meat and other times eat vegetables? How many times? Or does it mean that they should just eat less meat in every meal?" (Peggy Neu). In addition, they doubt that the term flexitarian is not accessible enough by most of the people. Therefore, David Hall remarks that there needs to be a **better communication of the basics what flexitarian is**, or to find a more approachable piece of language to describe it.

Sue Dibb wonders if the movement to eat less but better meat needs a name at all. In her opinion forming a movement by creating an identity could have different outcomes: "some people like to have an identity, but on the other hand putting people into boxes might set people apart from each other". In addition, Peggy Neu suggests not creating a flexitarian movement, by creating an identity for people, but by **giving people an action that they do together**, as in the *Meat less Monday* approach.

Oliver Lawder remarks that the proposition of the flexitarian approach to eat less but better meat is "heavily focussed on why eating less is better for the world and a little bit better for you". Instead, he suggests to use the **personal benefit of eating better meat** as the campaigns headline, such as : "you can actually eat the best meat in the world, all it is about is: did you know, if you eat less you can [afford] to eat *better*? "

All experts agree to **alter the focus of the holistic motivations**, such as climate change, food security, etc., **towards the personal benefits** of this diet change to reach a wider group of people than just environmentalist. As mentioned before, the experts suggest to integrate these global issues in a mix of communications, but more in the background, and to put the focus

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[57] Karl Ess is a vegan body builder and has a popular YouTube channel with more than 80. Mio. views (https://www.youtube.com/user/karlessdotcom)

instead on the personal level. Therefore, David Hall suggests reformulating the website categories: "What´s in for me", "Why should I care?", "That sounds reasonable, but..." into questions, which directly speak to the individual: "How do I do this?" and "Why do I do this?" Besides, Jeroen Willemsen recommends to personalize the campaign itself more, for example to put a face on it, as Alexia Leysen for *Dagen Zonder Vlees*.

3.6.2 Postcards as an exemplary attention grabber

Most experts find the ironic icons of the postcards funny. Hanna Schösler remarks that fun is an important element of making behaviour change attractive: "It is creative, it's funny, which is already a different perspective. It is not your regular health advice". In addition, Hanna Schösler points out that the approach of the postcards to invite the reader for a 'veggie-dinner', in order to give them a concrete action, is important to encourage behaviour change.

Nevertheless, the experts doubt that those **holistic motivations** to 'save the planet' shown on the postcards will motivate people that are not yet interested in the issue to search for more information and to visit the website: "By the time you get people to come to visit your website, you must have already overcome the biggest barrier: to be interested in this in the first place"(Susanne Moser).

Besides, Susanne Moser criticizes that the biggest disconnect in the campaign is between the imaginary of the postcards and the topic: "I don't see any food". Instead, she suggests to show "the most fantastic, mouth-watering food" and to appeal to the senses to change people's routines: "**they get drawn in by their senses and not through their head".** Thus, she encourages to go with the sensual experience first and to make the information secondary: "I'd rather be convinced that the food is amazing, instead of having to think through: is it good for the environment? - And then to decide, I am going to eat a veggie burger instead of a hamburger". Besides, as mentioned earlier, she highlights the importance of showing not just great vegetarian food, but food shared by happy people to appeal to the social element and aspiration of happiness. In addition, Hanna Schösler suggests not to pull the images out of the daily context too much, but instead to **help people to envision the flexitarian diet in their everyday life**.

Moreover, Alexia Leysen warns to be careful with the ironic icons and texts messages: "Because people, who are non-believers, could laugh with the idea of being flexitarian or about young people, who are naive and thinking that they are able to change the world. You could perceive it in a way that the person, who designed the cards, is making fun of being flexitarian". Jeroen Willemsen also remarks that some of the postcards start off with a feeling of fear, instead of starting off with a positive approach towards the problem. In addition, Hanna Schösler points

out that the approach of the "Fleximan" and "Let´s save our planet together" postcards could be misunderstood in the sense of having to be a superhero to help solving the addressed problems related to meat consumption and this could create a feeling of disempowerment. Hence, she warns for the effect to use climate change as an argument for reduced meat consumption and amplifies to break it down to the **personal level**: "How does this relate to my life? What can I do when I get up and eat my breakfast, what is that little change that I can make". As an alternative Hanna Schösler suggests to show people for example the **positive and fun aspects** of growing own food in an urban garden as an option to make that change on the personal level.

3.6.3 Postcards as an exemplary communication channel

Leontine Gast estimates that the **postcards could work** as a communication channel to address young, highly educated & urban people.

Yet, Susanne Moser doubts that the postcards **will work neither as an** attention grabber nor as a communication channel, because it is a fairly **static communication** in the age of social media, or YouTube. To her the question is: "How do you stand out? So an approach to reach young people between [the age of] 15-20 , maybe would be to have a very, very funny YouTube clip, because they are constantly on their cell phones and get their information that way, maybe they don't even pay attention to a postcard".

Alexia Leysen suggests spreading the messages of the postcards in the internet instead, which has the power to reach more people. In addition, she remarks that thereby the **campaign can be climate neutral itself** by not using resources to print or to send the postcards.

Jeroen Willemsen recommends not to use just hard communication like postcards, websites or flyer, but to use softer**, psychological communications** via **role models** and **change agents** *(see section: Communication channel).*

3.6.4 Website

Some experts acknowledge the website site´s approach in terms of addressing barriers and to offer solutions. Here, Sue Dibb positively acknowledged the concept "How to start" and the idea of having a weekly cooking planner. Regarding to give alternative actions, by providing a recipe data base, David hall suggests to provide easy one step cooking ideas or meat replacement options instead of long, step by step recipes to make the behaviour change easy as possible.

3.6.5 Target group

The attempt to appeal to younger generations by the trendy vintage icons got positively acknowledged by some experts. Hanna Schösler estimates that younger generations are more willing to adopt a trend and to change their behaviour. But here, she questions if young people adopt this trend as a long-term behaviour: **"Is it hype or is it something that is going to last?"** However, Oliver Lawder comments that although the visual roots of the postcards and website are appealing to a younger target group that is concerned with "what's cool right now", the **messages are appealing to a group of environmentalists**.

Here, all experts agree that this exemplary campaign needs to **focus more concretely on the target group and consumer insights**.

Nevertheless, in terms of raising awareness and perception of the link between climate change and meat consumption, Jeroen Willemsen sees a **potential in the exemplary campaign to reach a certain part of people, who are not yet in their perception stage** in the behaviour change transition model. But here, he notes that in his feeling younger generations (especially generation "Y" and "Z") already a feeling or a form of a perception that we eat too much meat. Therefore, he points out that "you may not have to persuade those people with the items that you mention on your postcard. You may summarize, or you may make a note of it. But it does not have to be a goal by itself to make that statement and to convince those people in that area. But if you for example aim at elderly people, then the perception is your goal, because in general they won't have that perception". Therefore, he suggests starting off with the assumption that the perception is already there. Thus, he recommends to summarize the negative impacts of meat and to reformulate the question that is stated on the postcards: 'Did you know, that meat consumption is responsible for...?' to 'You most likely know...' as a different start: "That could enable you to move one or even two steps ahead in the transition model and also in your communication strategy". Additionally, Peggy Neu reports that college students are mostly interested in environmental issues around meat.

As mentioned before, to the experts perception and awareness are not the main obstacles to achieve a shift in meat consumption patterns, but to help translating those into active behaviour change, by giving concrete, attractive and easy actions.

How to remind people

Another aspect the experts mentioned is the **reminder function in order to keep this topic people's minds**. To Sue Dibb the **question is**: "When people sign up for something, how do you catch them?" Further she wonders which option, like Facebook or Twitter posts or a weekly newsletter would be personal and efficient enough to keep the issue topical and

popular. To her an option could be to send out weekly posts or emails to the participants and to show them tips for the week, or stories what other people have done.

Campaign Evaluation

Besides, some interviews point out the **importance to evaluate the campaign**: "So how would you evaluate the success of your campaign? How do you know your campaign has any impact? Is it the number of postcards you sold, the number of people visiting your website or the number of sing ups for the weekly newsletter?" (Sue Dibb). Sue Dibb reports that the *Eating Better Alliance* uses measurements, as for instance the number of sign-ups for the weekly newsletter to evaluate their success. Yet, she remarks that this is not an efficient indicator for active behaviour change. Here, she suggests to conduct a **survey among the participants** in order to find out if the campaign motivated to change their behaviour. As Peggy Neu explains, Meat less Monday undertakes an annual survey with FGI research to measure awareness and active behaviour change. In addition, different information can be gained via a survey, as for instance about new habits or meat alternatives. Peggy Neu reports that according to the last survey "46% of Americans are aware of Meatless Monday and 47% of those cutting back on meat said that they were influenced by Meat less Monday to do so" *(compare as well section: Meat less Monday).*

3.7 Discussion

In this section, I will reflect on the interview results in the context of my research questions to explore how to develop effective communication strategies to encourage people to eat less meat, in order to address climate change.

3.7.1 What are effective communication strategies to empower people for active behaviour change to eat less meat, in order to address climate change?

3.7.2 The role of sustainability/social marketing strategies for consumer behaviour change

Findings of the expert interviews indicate that sustainability/social marketing strategies are important ways to promote a consumer consciousness & cultural shift by creating a cultural context for change- by using the power of the social opposed to the power of information. As Bakker & Dagevos (2012 p. 892) argue: "consumers are allies that can be trusted with the challenge of realizing less meat-based diets that will contribute to a more sustainable world of food". Yet the experts name a missing infrastructure of accessible vegetarian food products or better quality meat, as a barrier to perform this sustainable eating. Here, governments and cooperatives are carrying the responsibility to facilitate environmentally friendly consumer

choices (Fahlquist 2009). Thus, as the interview results indicate a shift toward sustainable meat consumption needs different path ways for change and political interventions.

Besides, the interview results are in line with findings of the literature that communicating to eat less meat is a strong cultural sensitive topic that needs to be sensitively approached (Schösler 2012; Beardsworth, A. & Bryman, A. 2004). In addition, the experts agree that communications, to eat *less* meat in particular, are sought to get resistance due to vested interests of industries. They in turn are note to influence or manipulate consumer behaviour, political decisions or campaign issues of leading NGOs (Bailey R., Froggatt A. & Wellesley L. 2014; Nordgren et al. 2012; Laestadius et al. 2014; Gossard, M.H., York, R. 2003). These reasons explain, why this issue of eating less meat and its negative impact on the climate and environment is not widely communicated already. In addition, the interview results show that the problem to attack the meat industry partly grounds in unbranded fresh meat. As a result, no brand or company can be directly attacked by campaigns. Here, the challenge of sustainability marketing will be to make "eating *less* and better meat" a positive message for politicians and cooperatives (Peattie, K. & Peattie, S. 2009). As a solution, political interventions could also operate in the background, for example by facilitating parties (NGOs and/or market enterprises) that are promoting a food culture of eating less meat (Peattie, K. & Peattie, S. 2009). As mentioned in the literature review, these communications could then embrace the sustainability concept itself and could communicate the benefits of a simpler, but satisfying lifestyle, which many people aspire to (Cherrier H, Murray J. 2002).

In addition, different studies offer suggestions on how to shape these path ways towards a framework of sustainable eating (Dibb, S. Fitzpatrick I. 2014; O'Riordan, T. & Stoll-Kleemann, S. 2015b). They call for targeting key stakeholders of this system, such as "regulatory bodies, retailers, producers, service providers, media, and others " (O'Riordan, T. & Stoll-Kleemann, S. 2015b, S. 9), as the Eating Better Alliance already demonstrates (Dibb, S. Fitzpatrick I. 2014).

Taking these cultural obstacles into account, the experts agree that a *less and better* approach and to become *flexitarian* will be more likely accepted by the broad public, than to promote a complete vegetarian diet (Dagevos, H. & Voordouw, J. 2013; Boer et al. 2014b). Hence, there is the need to establish a slow transformation of cultural identity from meat-eating towards plant-based diets (Vinnari, M. & Vinnari, E. 2014). But here, the discussion of the exemplary campaign indicates that the form of a flexitarian diet needs to be communicated more clearly and concrete, in terms of which and how much meat should be consumed. Here, different reports and guidelines could be consolidated, in order to find appropriate intakes to

meet health and sustainability goals, as for instance the Swedish[58] or Dutch[59] dietary guidelines (that include health and sustainability aspects) or the report on the exploration of dietary guidelines based on ecological and nutritional values, by Van Dooren et al. (2014). Besides, different approaches of moderate meat consumption can be communicated: "less but better", "less and more varied" or "meat less days". Yet, which approach to be chosen depends on consumer preferences (Boer et al. 2014a), thus consumer insights of the to be addressed target group are crucial.

3.7.3 Do sustainability/social marketing -strategies have the potential to close the gap between knowledge and action and encourage active change in behaviour/ active behavioural change?

One major aspect of the results is that communications around reducing meat consumption need to go beyond awareness campaigns. Although there is still a lack of awareness of the link between meat consumption & sustainability, the experts estimate a growing perception & awareness on this issue. As Jeroen Willemsen & Peggy Neu report, especially young generations would already have this form of perception for the need of sustainable meat consumption. As different studies show, consuming less meat and to have a form of a flexitarian diet has found its way into mainstream society (Dagevos, H. & Voordouw, J. 2013; Datamonitor 2014; O'Riordan, T. & Stoll-Kleemann, S. 2015b). Yet, the discussed meat paradox should be explored further, since the absolute meat consumption levels remain almost unchanged (Dagevos, H. & Voordouw, J. 2013).

Besides, the experts doubt that awareness of the link between meat consumption and environmental issues, such as climate change are actively relevant to people to change their behaviour. As findings of the literature review confirm, knowledge & awareness do not lead self-evidently to active behaviour change (Tobler et al. 2011; Boer et al. 2013; Kollmuss A., Agyeman J. 2002).

Therefore, the experts suggest to move one step ahead in the behaviour transition process and to help translating perception and awareness into active behaviour change. Here, the interview results add another aspect: campaigns need to advocate consumer behaviour change instead of advocating their policy.

The behaviour change transition needs to be achieved by giving concrete, attractive and easy actions and alternatives. In addition, the interview results are in consistence with the literature review that campaigns to encourage a moderate meat consumption should move away from

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[58] National Food Agency Sweden 2015
[59] Health Council of the Netherlands 2011

guilt as a driver (Rothgerber 2014; Bakker, de E. & Dagevos, H. 2012). Instead, they should focus on the positive side of making this behaviour change and on feelings of involvement and identification and need to highlight personal benefits of making this behavioural change (compare: Bakker & Dagevos 2012).

Social marketing strategies take (psychological) motivations, values and attitudes as well as consumer benefits of specific target groups for behavioural change into account and follow an appealing and positive communication approach (AED 2008; O'Riordan, T. & Stoll-Kleemann, S. 2015b; Bakker, de E. & Dagevos, H. 2012; Doug McKenzie-Mohr 2000; Peattie, K. & Peattie, S. 2009). Hence, these strategies could have a higher potential to encourage active behavioural change than just awareness campaigns.

3.7.4 What are effective communication strategies/principles that help to overcome the barriers of active behaviour change to eat less meat?

3.7.4.1 Consumer insights - a crucial start element of any communication approach

As the experts point out, barriers of and benefits and motivations for eating less meat, differ between different groups of the society. Therefore, they highlight the importance of an audience segmentation, to identify a specific target group and to gain consumer insights, as crucial start elements of any communication approach. The experts mention consumer insights and promoting active behaviour change as central elements of social marketing strategies (compare: AED 2008). Thus, tools of social/sustainability marketing to analyse target groups and to gain consumer insights, can be very useful to develop effective campaigns to encourage people to eat less meat.

For example, the classification of Dagvos &Voordouw (2013) of different meat consumption groups in the (Dutch) society, could help to address barriers and motivations of each specific target group more effectively (Bakker, de E. & Dagevos, H. 2012). As recommended by the experts, in order to find general values of different audiences in the society, the consultation of agencies, such as by *Cultural Dynamics Strategy & Marketing* can be very useful. To gain more concrete consumer insights, qualitative research needs to be undertaken, in order to understand how consumers relate to the particular issue of eating less meat. This gives also the chance to explore ideas, to try out vocabulary, or to listen to members of the target audience in their own words (AED 2008).

According to the interview results, a suitable target group to activate behavioural change is younger generations, in their early adulthood (generation Y). Partly because this life stage is a good opportunity to intervene and as mentioned earlier, they already would have a certain form of awareness of sustainable meat consumption. For example, this target group could be motivated to be part of a trendy lifestyle that logically includes to eat less meat, which is a

raising trend in the Western society (O'Riordan, T. & Stoll-Kleemann, S. 2015b). Here, the given examples of social entrepreneurship approaches are good examples to learn from, in order to create a modern and trendy lifestyle feeling around the flexitarian diet. On the other hand, elderly people could be addressed by appealing to their health status, where eating might play an important part of the cure.

3.7.4.2 *How to overcome barriers of eating less meat – principles of behaviour change*

The interview results show that overcoming the biggest barriers of making this behaviour change need to be in the focus of communicating to eat less meat. In line with the literature, the experts identified habitual and convenient dietary patterns and the social support/acceptance as major obstacles (Lea und Worsley 2003; Ruby, M. B. & Heine, S. J. 2011; Ruby 2012). Here, the opportunity to break through habits is to intervene around major life events (compare: Behavioural Insights Ltd. 2014). The interview experts suggest that a new habit needs to be created, by providing attractive and easy alternatives. Therefore, the communication should start with clear messaging and an easy behaviour change proposal (Behavioural Insights Ltd. 2014). Since the effort and time play an important role for a behaviour change (Behavioural Insights Ltd. 2014), communications to eat less meat need to offer easy and simple one step ideas of cooking vegetarian or to make use of meat replacements. In addition, the results show that effective campaigns encouraging people to eat less meat need to provide information on how to get access to vegetarian food options or better (organic) meat products, which also other studies report to be a barrier of implementing meat less diets (Ruby 2012; Lea und Worsley 2003). Here, Bakker & Dagevos (2012) argument as well that whether and to what extent consumers can become change agents strongly depends on the opportunities offered by the infrastructure and incentives by marketing strategies *(see as well section: The role of social/sustainability marketing strategies for consumer behaviour change).* Hence, in order to realize a sustainable meat consumption, the sustainable choice needs to become an easy, desirable and more accessible choice with the right incentives in place (Bakker, de E. & Dagevos, H. 2012; Dibb, S. Fitzpatrick I. 2014). As an option the suggested "flexitarian app" could help to show where to find sustainable food products and could give easy shopping lists and daily flexitarian cooking ideas.

To address the barrier of social support and cultural acceptance, the interview results show that the social element of making this behaviour change is very crucial. Here, the experts suggest creating a cultural context for change, by starting a collaborative movement of eating less meat. Besides, the experts mention to demonstrate showing what other people are doing already and

to appeal to the aspiration of happiness (e.g. by advertising friends sharing delicious vegetarian food together) (compare: Behavioural Insights Ltd. 2014).

In addition, the interview results indicate that communications around a sustainable meat consumption could make use of the fact that "we all like to copy that we admire". Hence, identified role models or change agents of the addressed target group need to get on board and could inspire people to make better choices.

To address the identified barrier of meat and masculinity (Rothgerber 2012; Ruby, M. B. & Heine, S. J. 2011), the interview results suggest to give vegetarian food products a "male makeover" and to motivate men by the better approach of eating quality (organic) meat. As the results indicate further, campaigns could make use of specific social media channels and could cooperate with specific restaurants, where for example a target group of young men in their 20s-30s are influenced by. Here, also the mentioned influence of role models can be used and to get for example football players or body builder on board.

However, in contrast to the literature, the experts have not mentioned commitment making as an important behaviour change principle (compare: Cialdini 2001, Lokhorst et al. 2012). Yet, the social nature of commitments is crucial as a tool for behaviour change (Behavioural Insights Ltd. 2014) and could enhance the success of a campaign to encourage people to eat less meat.

3.7.4.3 Values & motivations to promote a moderate meat consumption

The interview results also imply that creating a trend or hype around a flexitarian lifestyle needs to be treated with caution, in order that the trend promotes not just a short term, but a long term behaviour change. Here, Sandman´s advertiser/educator model can be approached in order to provide the consumer with real and good reasons to perform the new behaviour (Day, B. A. & Monroe, M. C. 2000). Therefore, different values related to more plant based diets need to be stressed, in order to promote a moderate meat consumption as not just a choice of diet, but as a substantive, holistic identity (Jabs et al. 2000; Fox, N. & Ward, K. J. 2008). As Jabs et al. (2000) remark is this transition more stable and unlikely that people return to previous eating habits.

The experts give a range of values and motivations a campaign to encourage people to eat less meat could appeal to. But appealing to different values, such as health or the environment, strongly depends on which target group is sought to be addressed. As the literature review points out, here it matters also if consumers choices on sustainable food or their sustainable behaviour in general, are influenced by intrinsic/internalized or extrinsic motivations (Schösler et al. 2014) or on which worldview their share (Hedlund-de Witt et al. 2014). In conclusion, to promote a shift of meat consumption into sustainable directions, socio-cultural habits, values and

worldviews need to be considered and carefully addressed (Schösler H., Hedlund-de Witt A. 2012; Gossard, M.H., York, R. 2003).

In general, the experts warn to focus on holistic arguments and values, such as climate change, global environmental/ social – problems and animal welfare, to encourage people to eat less meat. These motivations are impersonal and not strong enough for most of the people to change their behaviour. Especially climate change is note to be a low motivator to reduce meat consumption, even among people that care about climate change (Boer et al. 2013). As mentioned earlier, such approaches to raise awareness have limited success, because in contrast to the assumption that individuals make conscious and rational decisions, behaviours - particularly about day-to-day food choices – are at a low level of consciousness and flow from habits, routines and external influences. Hence, attributes such as taste, convenience or price may well be prioritised over health and sustainability considerations (Dibb, S. Fitzpatrick I. 2014).

Thus, as mentioned before, a campaign aiming to encourage people to eat less meat in order to address climate change, needs to focus on activating consumer behaviour change (to encourage people to eat less meat) and not on their policy (to address climate change). As a result, personal benefits of making this behavioural change need to be in the centre of the communication approach. Thereby, it also depends on consumer insights in order to find out, which personal benefits and motivations appeal to the chosen target group. One example given by the experts is to address the group of "meat lovers", which consists mainly of men, as described by Dagevos & Voordouw (2013). Here, the motivation of eating better, quality meat as an enjoyment of taste could be appealed to. Other motivations identified in this study are: pleasure, taste, creativity, making new discoveries, self-image & being part in a social movement, aspiration for happiness and fun aspects of making this diet change.

Hence, arguments, why eating less meat is better for the climate and environment or other issues such as animal welfare, need to be in the background and mentioned as co-benefits or need to be elements of a mixed communication. This background information on climate change and other environmental problems, related to meat consumption, could present eating less meat as an effective choice option to reduce the individual climate/environmental impact. Here, the tone of the communication to focus on the positive sides of making this behaviour change is crucial, in order to avoid coming across to preachy and to tell people what to do. This could cause a feeling of dissonance or anger, or even greater resistance (Futerra 2013; Rothgerber 2014; Kollmuss A., Agyeman J. 2002). By communicating these co-benefits a positive, motivating

tone needs to be chosen to show the positive choices people can make for themselves. Here, people could be inspired & empowered by the collective benefit of people reducing their impact together. One could learn from the campaigns *Dagen Zonder Vlees* and *Meat less Monday* as useful approaches: to appeal to a collective behaviour change, by giving people a challenge to reduce their ecological foot print or by giving a specific action at a specific time. In addition, the interview results show that it is important that people can relate to the environmental costs of a high meat consumption, by giving examples (e.g. how much litre water is needed to produce a kilogram of beef).

3.7.5 What is an effective communication channel to communicate a behaviour change in meat consumption?

The interview results imply that an effective communication channel is the outcome of where the target group is most likely to see. Thus, as mentioned before, the centre of an effective communication is its specific target group (AED 2008). By addressing a specific target group the efficiency of the communication channel can be increased, instead of its messaging going lost (for example in the big world of social media).

Under this pre-condition, also the messenger of the campaign can be chosen. Here, the messenger´s credibility and position play a role to influence the target group. Depending on that, potential messengers could be celebrities, chefs and cooks, change agents and role models, or official organizations that influence people.

Further, the experts note that effective channels are also limited by the campaign´s budget. Here, a collaboration with partnership organizations with an existing network can be useful, or to spread the idea via other participants.

3.7.5.1 Attention grabber

The experts highlight the importance of attracting people's interest and in the communicated issue (Day, B. A. & Monroe, M. C. 2000; Behavioural Insights Ltd. 2014). As the interview results imply, postcards could work as an attention grabber, but this depends again on preferences of the target group.

Although some experts find the proposal of the attention grabber in form of postcards with its retro/vintage images quite funny, some see the danger that the ironic humour could be misunderstood and misleading. Therefore, the experts suggest to appeal to people´s senses via pictures of delicious food or to envision the flexitarian lifestyle in the daily context, by presenting the positive and fun aspects of this behaviour change. In addition, they stress to create a personal and authentic feeling in the behaviour change approach (compare: Behavioural Insights Ltd. 2014).

Results of the previous conducted case study show that the majority of the participants were not appealed by the images and not motivated to have further interest in the topic, by having negative attitudes towards the postcards (Johanning L. 2015). As the study implies, this might be due to different personality types and preferences, than as a consequence of attitudes towards meat consumption and climate change per se. Thus, communication strategies need to be tailored with an appeal to different preferences and perceptions of different personality types. As the case study suggest, C.G. Jung´s work *"Psychological Types"* (Jung et al. 1953,1983) gives important insights into this subject. According to those psychological types, the proposed images of the postcard are more likely to attract individuals that are more appealed by fantasy and inspiration, which belong to a target group that is characterized with an extravert personality and an emphasis on intuitions and feelings, with a more global and abstract perception. Hence, this might not appeal other personality types and audiences.

Here, the findings of the case study undermine as well the importance of identifying a specific target group in order to design appealing attention grabber that meet specific preferences, humours and designs.

3.7.5.2 *Reminder & evaluation*
As the interview results point out, in order to keep the communicated issue topical and popular, different reminder options need to be considered. Also a campaign evaluation to measure the success and impact on consumer behaviour change should be taken into account. By conducting a survey among the participants one could also gain important insights of the target group and gain feedback about the campaign´s approach (AED 2008).

4 Summary & Conclusion

"One campaign is probably not changing the world, but it is going to make a difference towards it"
(Sue Dibb, coordinator of Eating Better Alliance).

In this section I will summarize and conclude the findings of this study by giving a guidance on effective communication strategies to encourage people to eat less meat to address climate change.

Consumer behaviour shift through social/sustainability communications/marketing is one important pathway to achieve a shift towards more sustainable meat consumption. Especially since there are currently no meaningful political interventions taken and there exists a lack of communication on this issue of leading environmental NGOs. Since shifting meat consumption is a sensitive cultural topic and it is noted to get resistance by vested interests by industries, the promotion of the *less and better approach* and to become flexitarian as a new conscious lifestyle, is estimated to be more likely accepted by the broad public.

Yet, there is a strong need for building an environment for change and to work with policy makers and cooperatives to provide the needed infrastructure and incentives for a shift in meat consumption.

As this study indicates, communications to encourage more sustainable meat consumption need to go beyond awareness campaigns. Instead, they need to focus on how to achieve active consumer behaviour change. Active consumer behaviour change needs to be promoted by giving concrete, attractive and easy actions and alternatives. Personal benefits need to be in the centre of the communication approach to make the communicated issue relevant for the consumer. Holistic values, such as climate change, need to be provided as background information, because they are noted as low motivators for active behaviour change. Thereby, social/sustainability marketing strategies turn out to be effective communication strategies to activate this change, since they make use of different behaviour change principles and consumer insights to address a specific target group.

4.1 Guidance for campaigns aiming to encourage people to eat less meat in order to address climate change

4.1.1 Step 1: identifying a target group and consumer insights

As the study shows, audience segmentation, the identification a specific target group, and gaining **consumer insights are crucial start elements of any communication approach**.

In terms of communication approaches to encourage people to eat less meat, the following examples can provide a useful starting point for an audience segmentation:

- Differentiation between meat consumption groups by Dagvos &Voordouw (2013)
- Model of general values of different audiences in the society (*Cultural Dynamics Strategy & Marketing)*
- Self-determination theory on intrinsic/internalized or extrinsic motivations on food choices

In addition, the time of intervention plays a crucial factor for activating behaviour change. Therefore it needs to be considered in which life stage or in which behaviour transition stage the target group is found. As this study implies, a suitable target group to activate behaviour change are younger generations, in their early adulthood (generation Y).

After identifying a specific target group, consumer insights of motivations for and barriers of eating less meat need to be generated. Here, a literature review, the consolation of societal models or agencies, such as by *Cultural Dynamics Strategy & Marketing,* or qualitative research, can be an option.

4.1.2 Step 2: The attention grabber- "They get drawn in by their senses and not through their head"[60]

According to the gained consumer insights, the specific target group needs to be initially attracted to be interested in the communicated issue. Hence, **communication strategies need to meet different individual preferences of the addressed target group**, such as tastes and senses of humours. Therefore, different designs and approaches need to be chosen. In general, colours, images and emotions are useful here.

As suggested in this study, the campaign could appeal for example to peoples´ senses via pictures of delicious food, shared by friends, with an aspiration for happiness. Or by envisioning the flexitarian lifestyle in the daily context, by presenting the positive and fun aspects of this

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[60] Susanne Moser, climate change communicator

behaviour change. In addition, a personal and authentic feeling about the behaviour change approach needs to be created.

Another example of an attention grabber is given in this study, by using familiar cultural comic/vintage icons with an ironic humour. This is more likely to attract individuals that are more appealed by fantasy and inspiration, which belong to a target group that is characterized with an extravert personality and an emphasis on intuitions and feelings, with a more global and abstract perception. Hence, this might not appeal to other personality types and audiences.

In addition, it has to be noted that copy rights of cultural icons need to be strictly adhered.

4.1.3   Step 3: focus on personal motivations

Now the consumers need to be motivated by **personal benefits** of eating less meat. These motivations strongly depend on the target group.

Personal motivations derived from this study to promote a flexitarian diet are the following:

- Pleasure & taste

- Creativity, fun & making new discoveries

- To be part of a trendy lifestyle/collaborative social movement

- Aspiration for happiness

- Purity & and mindfulness of what you eat

- Quality of food (in particular, quality/organic meat)

- Temperance & simplicity

- Healthy eating

To motivate the exemplary target group of generation Y, a trendy lifestyle that logically includes less meat could be presented. Here, the given examples of social entrepreneurship approaches *(see interview results)* offer much to learn from, in order to create a modern and trendy lifestyle feeling around the flexitarian diet.

4.1.4   Step 4: clear messaging and propositioning

After identifying a target group and consumer insights, a **clear behaviour change request** and messaging need to be formulated. Which approach to choose depends on the **likeability of adopting the new behaviour** by the target group.

As this study shows, a *less and better* **meat consumption** as a form of a flexitarian lifestyle is generally a good approach to achieve a socially accepted shift towards more sustainable meat consumption patterns.

Therefore, the **flexitarian diet** needs to be communicated clearly and concrete, in terms of which and how much meat should be consumed. Here, different reports and guidelines could be consolidated, in order to find appropriate intakes to meet health and sustainability goals, such as:

- o Swedish[61] or Dutch[62] dietary guidelines
- o And/or the report on the exploration of dietary guidelines based on ecological and nutritional values, by Van Dooren et al. (2014).

4.1.5 Step 5: provide real and good reasons to perform the new behaviour

In order to promote the trend of being flexitarian not just as a short term, but as a long term behaviour change, different values related to more plant based diets need to be emphasized. The emphasized values should depend strongly on the gained consumer insights of the target group. Here, the tone makes the difference: communications need to strictly avoid coming across too preachy, as telling people what to do, or as using guilt as a driver. Instead, they need to focus on the positive side by using engaging and positive language.

Identified values in this study are as such:
- Idea of caring and sense of responsibility
    - o For the environment & nature (including climate change)
    - o For animal welfare
    - o For the people (e.g. for local farmers, the society carrying the cost of a high meat consumption, food security)
- Sense of autonomy: making people aware of vested interests and manipulations of the meat industry and that they should decide for themselves what to eat.

Holistic values – as background information
Since these **values are of a holistic nature and are known to be a low motivator** to alter peoples eating habits, they should **stay in the background**. Nevertheless, they **are important to support peoples´ attitudes and to support long term behaviours**.

Addressing climate change & other environmental problems
As an example, eating less meat could be presented as an effective choice option to reduce the individual climate/environmental impact. In addition people can be inspired & empowered by the **collective benefit** of people reducing their impact together, by giving people a challenge to reduce their ecological foot print, or by **giving a specific action at a specific time**.

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[61] National Food Agency Sweden (2015)
[62] Health Council of the Netherlands 2011

Here, it is important to give people **examples to which they can relate** to (e.g. how much litres of water are needed to produce a kilogram of beef).

4.1.6   Step 6: overcoming barriers
Habit and the **social acceptance** are major barriers of making the behaviour change to eat less meat. Thus:

Communications need to create a new habit by:
- Giving a **concrete action at a specific time** (compare *Meatless Monday* approach)
- Providing **attractive and easy alternatives**
  - offering easy and simple one step ideas of cooking vegetarian or to make use of meat replacements
    - a "flexitarian app" could be useful here
  - providing information on how to get access to vegetarian food options or better (organic) meat products

Communications need to give the campaign a social element by:
  - Creating a **collaborative movement** of eating less meat (see *"Dagen Zonder Vlees" approach*) to show, what other people are doing already.
  - Appealing to the **aspiration of happiness** (e.g. by advertising friends sharing delicious vegetarian food together) what we admire: communications need to get **role models or change agents** on board, which inspire the addressed target group. They could motivate to make better choices and enhance the social acceptance of eating less and better meat.
  - Addressing the barrier of **meat and masculinity**
    - Communicate gender specific
      - Give vegetarian food products a "male makeover"
      - Motivate men by the better approach of eating quality (organic) meat.

      - Make use of specific social media channels and cooperate with specific restaurants, which could, for example, influence a target group of young men in their 20s-30s.
    - In turn: **women** need to be supported to become **change agents**.

4.1.7   Step 7: commitment & reminder
A **voluntary commitment,** for example by signing up in a newsletter, or as a status in a social media group, makes the behaviour change more salient and people feel more obliged to perform the behaviour. In order to keep the topic popular in people's minds, they could receive a **reminder** after singing up, for example in form of a weekly email or posts on social media, in which they receive tips for this week, recipes, or stories what other people have done.

4.1.8 Step 8: Which communication channel?

As the study results show, an effective communication channel is the outcome of **where the target group is most likely to see**. Here, potential channels could be:

- o Postcards (as suggested in this study: distribution in student cafés)
- o YouTube channels
- o Blogs and websites
- o Social media such as Facebook, Twitter, etc.
- o Newspapers
- o Via role models and change agents

Here, in general budget plays a role: therefore a campaign could try to collaborate with **partnership organizations** with an existing network and a bigger "megaphone" or the idea could be **spread by participants**.

Besides, depending on which channel is chosen, the idea of **keeping the campaign-project in itself climate neutral and sustainable** could be an interesting aspect.

Who is the messenger?
- o Which credibility does the campaign/or the messenger have?
- o Who is influencing your target group?
- o Giving the campaign a personal/authentic feeling: people like to see who is behind it.

Potential messengers, depending on your target group, could be:
- o celebrities,
- o chefs and cooks,
- o change agents and role models,
- o official organizations that influence people

4.1.9 Step 9: After the implementation- Campaign evaluation

- o **Feedback** of the participants or a **qualitative survey** could give information on the campaign´s success and if it activates active consumer behaviour change.
- o The feedback and qualitative survey enable to **improve the campaign** further by showing the weakness and strength of the chosen approach.

4.2 Future research perspectives

Further research projects could develop and test another exemplary campaign that follows the guidance of this study. Highly interesting would be, to run this campaign with a test group of participants and to conduct qualitative research to explore the campaign´s weaknesses and strengths in order to find out if the strategy achieves active consumer behaviour change.

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6   Appendix

To keep this thesis itself more sustainable, you find the Appendix digital on the attached CD.

The Appendix includes:

1. Appendix 01: Documentation of the website

    https://flexitarianscansavetheplanet.wordpress.com (in screenshots)

2. Appendix 02: Documentation of the expert interviews

    a. Interview analysis – codes & quotations

    b. Interview pre-read material for participants

    c. Interview transcriptions

    d. Semi-structured interview guide

3. PDF document of this thesis

7 References

Adams, C. J. (2010) *Sexual politics of meat: A feminist-vegetarian critical theory*, 20th edn, New York, N.Y., Continuum.

AED (2008) *Social Marketing Behavior: A Practical Resource for Social Change Professionals*, Washington, DC, AED, Academy for Educational Development.

Aiking, H., Boer, J. de and Vereijken, J., eds. (April 2006) *Sustainable Protein Production and Consumption: Pigs or Peas?*, New York, Boulder, Springer; NetLibrary, Inc. [distributor].

Aronson, E. (1977) 'The Theory Of Dissonacne: A Current Perspective', in Berkowitz, L. (ed) *Advances in experimental social psychology,* New York, Academic Press.

Bailey R., Froggatt A. & Wellesley L. (2014) *Livestock – Climate Change's Forgotten Sector: Global Public Opinion on Meat and Dairy Consumption*.

Bakker, de E. & Dagevos, H. (2012) 'Reducing Meat Consumption in Today's Consumer Society: Questioning the Citizen-Consumer Gap', *Journal of Agricultural and Environmental Ethics*, vol. 25, no. 6, pp. 877–894.

Beardsworth, A. D. and Keil, E. T. (1991) 'Vegetarianism, Veganism, and Meat Avoidance: Recent Trends and Findings', *British Food Journal*, vol. 93, no. 4, pp. 19–24.

Beardsworth, A. & Bryman, A. (2004) 'Meat consumption and meat avoidance among young people: An 11-year longitudinal study', *British Food Journal*, vol. 106, no. 4, pp. 313–327.

Beardsworth, A. D. & Keil, E. T. (1991) 'Vegetarianism, Veganism, and Meat Avoidance: Recent Trends and Findings', *British Food Journal*, vol. 93, Vol. 93 Iss 4 // 4, pp. 19–24.

Behavioural Insights Ltd. (2014) *EAST Four simple ways to apply behavioural insights* [Online]. Available at http://www.behaviouralinsights.co.uk/publications/east-four-simple-ways-to-apply-behavioural-insights/.

Beverland, M. B. (2014) 'Sustainable Eating: Mainstreaming Plant-Based Diets In Developed Economies', *Journal of Macromarketing*, vol. 34, no. 3, pp. 369–382.

Bilewicz, M., Imhoff, R. and Drogosz, M. (2011) 'The humanity of what we eat: Conceptions of human uniqueness among vegetarians and omnivores', *Eur. J. Soc. Psychol.*, no. 41, pp. 201–209.

Boer, J. de, Hoogland, C. T. and Boersema, J. J. (2007) 'Towards more sustainable food choices: Value priorities and motivational orientations', *Food Quality and Preference*, vol. 18, no. 7, pp. 985–996.

Boer, J. de, Schösler, H. and Aiking, H. (2014a) '"Meatless days" or "less but better"? Exploring strategies to adapt Western meat consumption to health and sustainability challenges', *Appetite*, vol. 76, pp. 120–128.

Boer, J. de, Schösler, H. and Aiking, H. (2014b) '"Meatless days" or "less but better"? Exploring strategies to adapt Western meat consumption to health and sustainability challenges', *Appetite*, vol. 76, pp. 120–128.

Boer, J. de, Schösler, H. and Boersema, J. J. (2013) 'Climate change and meat eating: An inconvenient couple?', *Journal of Environmental Psychology*, vol. 33, pp. 1–8.

Bord, R. J., O'Connor, R. E. and Fisher, A. (2000) 'In what sense does the public need to understand global climate change?', *Public Understanding of Science*, vol. 9, no. 3, pp. 205–218.

Bristow, E. (2011) 'Global Climate Change and the Industrial Animal Agriculture Link: The Construction of Risk', *Society & Animals*, vol. 19, no. 3, pp. 205–224 [Online]. DOI: 10.1163/156853011X578893.

Cherrier H, Murray J. (2002) 'Drifting away from excessive consumption: a new social movement based on identity construction.', *Advances in Consumer Research*, vol. 29, pp. 245–247.

Cialdini, R. (2001) *Influence: Science and practice.*, Boston, MA, Allyn & Bacon.

City Cincinnati (2013) *Green Cincinnati Plan*.

Cobern, M. K., Porter, B. E., Leeming, F. C. and Dwyer, W. O. (1995) 'The Effect of Commitment on Adoption and Diffusion of Grass Cycling', *Environment and Behavior*, vol. 27, no. 2, pp. 213–232.

Cordts, A., Nitzko, S. and Spiller Achim (2014) 'Consumer Response to Negative Information on Meat Consumption in Germany', *International Food and Agribusiness Management Review*, Volume 17 Special Issue A [Online]. Available at http://www.ifama.org/files/IFAMR/Vol%2017/(6)%20Cordts_20130064.pdf (Accessed 7 November 2014).

Dagen zonder Vlees (2015) [Online], Dagen zonder Vlees. Available at http://www.dagenzondervlees.be/ (Accessed 15 March 2015).

Dagevos, H. & Voordouw, J. (2013) 'SSPP: Sustainability and meat consumption: Is reduction realistic?' [Online]. Available at http://sspp.proquest.com/static_content/vol9iss2/1207-031.dagevos.pdf (Accessed 12 November 2014).

Darnton, A. & Horne, J. (2013) *Influencing behaviours: Moving beyond the individual : a user guide to the ISM tool*, The Scottish Government.

Datamonitor (2014) *Consumer and Innovation Trends in Meat, Fish, and Poultry* [Online]. Available at http://www.datamonitor.com/store/Product/consumer_and_innovation_trends_in_meat_fish_and_poultry_2014?productid=CM00198-064.

Day, B. A. & Monroe, M. C., ed. (2000) *Environmental education & communication for a sustainable world: Handbook for international practitioners*, Washington, DC, Academy for Educational Development.

Deci, E. L. and Ryan, R. M. (2000) 'The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior', *Psychological Inquiry*, vol. 11, no. 4, pp. 227–268.

DEFRA (2011) *Attitudes and Behaviours around Sustainable Food* [Online], 1011st edn, London, Department for Environment, Food and Rural Affairs.

Dibb, S. Fitzpatrick I. (2014) *Let's talk about meat: changing dietary behaviour for the 21st century*.

Doug McKenzie-Mohr (2000) 'New Ways to Promote Proenvironmental Behavior: Promoting Sustainable Behavior: An Introduction to Community-Based Social Marketing', *Journal of Social Issues*, Vol. 56,No. 3,, pp. 543–554.

Douglas, M., & Nicod, M. (1974) 'Taking the biscuit. The structure of British meals.', *New Society*, no. 19, pp. 744–747.

Eating Better Alliance [Online], Eating Better: for a fair, green, healthy future. Available at http://www.eating-better.org/ (Accessed 25 August 2015).

Fahlquist, J. N. (2009) 'Moral Responsibility for Environmental Problems—Individual or Institutional?', *Journal of Agricultural and Environmental Ethics*, vol. 22, no. 2, pp. 109–124.

Festinger, L. (1957) *theory of cognitive dissonance*, 2nd edn, Stanford University press.

FGI (2012) *2012 MEATLESS MONDAY ONLINE PANEL* [Online]. Available at http://www.meatlessmonday.com/images/photos/2012/10/FGI-Survey-Report.pdf.

Fischler, C. (1988) 'Food, self and identity', *Social Science Information*, vol. 27, no. 2, pp. 275–292.

Fox, N. & Ward, K. J. (2008) 'You are what you eat? Vegetarianism, health and identity', *Social science & medicine (1982)*, vol. 66, no. 12, pp. 2585–2595.

Futerra (2007) *Words that sell Words that sell: How the public talks about sustainability*.

Futerra (2009) *Sell the sizzle: The new climate message*.

Futerra (2013) *The new rules of the game: Communications tactics for climate change*.

Futerra (2014) [Online]. Available at http://www.futerra.co.uk/ (Accessed 15 December 2014).

Gerber, P.J., Steinfeld, H. et al. (2013) *Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities*.

Gill, M., Smith, P. and Wilkinson, J. M. (2010) 'Mitigating climate change: the role of domestic livestock', *Animal : an international journal of animal bioscience*, vol. 4, no. 3, pp. 323–333.

Gossard, M.H., York, R. (2003) 'Social structural influences on meat consumption', *Human Ecology Review*, Volume 10, Issue 1, pp. 1–9.

Hallström, E., Röös, E. and Börjesson, P. (2014) 'Sustainable meat consumption: A quantitative analysis of nutritional intake, greenhouse gas emissions and land use from a Swedish perspective', *Food Policy*, vol. 47, no. 0, pp. 81–90 [Online]. DOI: 10.1016/j.foodpol.2014.04.002.

Harris, M. (1998, 1985) *Good to eat: Riddles of food and culture*, Prospect Heights, Ill., Waveland Press.

Hedenus, F., Wirsenius, S. and Johansson, Daniel J. A. (2014) 'The importance of reduced meat and dairy consumption for meeting stringent climate change targets', *Climatic Change*, vol. 124, 1-2, pp. 79–91.

Hedlund-de Witt, A. 'forth coming'.

Hedlund-de Witt, A. *forth coming*.

Hedlund-de Witt, A., Boer, J. de and Boersema, J. J. (2014) 'Exploring inner and outer worlds: A quantitative study of worldviews, environmental attitudes, and sustainable lifestyles', *Journal of Environmental Psychology*, vol. 37, pp. 40–54.

Hines J.D., Hungerford H. R.,Tomera A.N. (1987) 'Analysis and Synthesis of Research on Responsible Environmental Behavior: A Meta-Analysis', *The Journal of Environmental Education*, Vol. 18, Iss. 2.

Hughes S. (4 February 2009) 'The greatest motivational poster ever?', *BBC News Magazine*, 4 February.

IPCC (2007) *Climate Change 2007 – Mitigation of Climate Change. Contribution of Working Group III to the Fourth Assessment Report of the IPCC*. [Online]. Available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

IPCC, 2. (2014) *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*.

Jabs, J., Sobal, J. and Devine, C. M. (2000) 'Managing vegetarianism: Identities, norms and interactions', *Ecology of Food and Nutrition*, vol. 39, no. 5, pp. 375–394.

Johanning L. (2015) *Meat consumption and climate change-an inconvenient couple?: How to communicate the high efficacy to eat less meat to combat climate change to the public in order that it raises interest?,* University of Greifswald, TU Delft University.

Johns Hopkins University [Online]. Available at http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/projects/MMP_old/ (Accessed 8 December 2014).

Jung, C. G., Read, H., Fordham, M. and Adler, G., eds. (1953,1983) *The collected works of C.G. Jung*, New York, Pantheon Books.

Kellman, S. G. (2000) 'Fish, flesh, and foul. The anti-vegetarian animus.', *The American Scholar*, 69(4), pp. 85–96.

Kimble, James J., and Lester C. Olson (2006) 'Visual Rhetoric Representing Rosie the Riveter: Myth and Misconception in J. Howard Miller's "We Can Do It!" Poster', *Rhetoric & Public Affairs*, no. 9, pp. 533–569.

Kollmuss A., Agyeman J. (2002) 'Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior?', *Environmental Education Research*, Vol. 8, Iss. 3.

Laestadius, L. I., Neff, R. A., Barry, C. L. and Frattaroli, S. (2013) 'Meat consumption and climate change: the role of non-governmental organizations', *Climatic Change*, vol. 120, 1-2, pp. 25–38.

Laestadius, L. I., Neff, R. A., Barry, C. L. and Frattaroli, S. (2014) '"We don't tell people what to do": An examination of the factors influencing NGO decisions to campaign for reduced meat consumption in light of climate change', *Global Environmental Change*, vol. 29, pp. 32–40.

Lappé, F. M. (2013) *EcoMind: Changing the way we think, to create the world we want*, New York, Nation Books.

Larson, N. & Story, M. (2009) 'A review of environmental influences on food choices', *Annals of behavioral medicine : a publication of the Society of Behavioral Medicine*, 38 Suppl 1, pp. S56-73.

Latvala, T., Niva, M., Mäkelä, J., Pouta, E., Heikkilä, J., Kotro, J. and Forsman-Hugg, S. (2012) 'Diversifying meat consumption patterns: consumers' self-reported past behaviour and intentions for change', *Meat science*, vol. 92, no. 1, pp. 71–77.

Lea, E. and Worsley, A. (2001) 'Influences on meat consumption in Australia', *Appetite*, vol. 36, no. 2, pp. 127–136.

Lea, E. and Worsley, A. (2003) 'Benefits and barriers to the consumption of a vegetarian diet in Australia', *Public health nutrition*, vol. 6, no. 5, pp. 505–511.

Lea, E. and Worsley, A. (2008) 'Australian consumers' food-related environmental beliefs and behaviours', *Appetite*, vol. 50, 2-3, pp. 207–214.

Lokhorst, A. M., Werner, C., Staats, H., van Dijk, E. and Gale, J. L. (2012) 'Commitment and Behavior Change: A Meta-Analysis and Critical Review of Commitment-Making Strategies in Environmental Research', *Environment and Behavior*, vol. 45, no. 1, pp. 3–34.

Lorenzoni, I., Nicholson-Cole, S. and Whitmarsh, L. (2007) 'Barriers perceived to engaging with climate change among the UK public and their policy implications', *Global Environmental Change*, vol. 17, 3-4, pp. 445–459.

Loughnan, S., Haslam, N. and Bastian, B. (2010) 'The role of meat consumption in the denial of moral status and mind to meat animals', *Appetite*, vol. 55, no. 1, pp. 156–159.

Louise Chawla (1999) 'Life Paths Into Effective Environmental Action', *The Journal of Environmental Education*, Vol. 31, Iss. 1.

Meuser, M., Nagel, U., Pickel, S., Jahn, D., Lauth, H.-J. and Pickel, G. (2009) *Das Experteninterview — konzeptionelle Grundlagen und methodische Anlage // Methoden der vergleichenden Politik- und Sozialwissenschaft: Neue Entwicklungen und Anwendungen*, Wiesbaden, VS Verlag für Sozialwissenschaften / GWV Fachverlage GmbH, Wiesbaden.

Moser S.C. & Dilling L. (2011) 'COMMUNICATING CLIMATE CHANGE : CLOSING THE SCIENCE -ACTION GAP', in Dryzek, J. S., Norgaard, R. B. and Schlosberg, D. (eds) *The Oxford Handbook of Climate Change and Society,* Oxford, OUP Oxford, pp. 161–174.

National Food Agency Sweden (April 2015) *Find your way: to eat greener, not too much and be active*, Sweden, National Food Agency Sweden.

NEIC (2009) *Stop EU subsidies to livestock industry* [Online], Nutrition Ecology International Center. Available at http://www.nutritionecology.org/news/stop_subsidies.html (Accessed 5 December 2014).

Nordgren, A., Potthast, T. and Meisch, S., eds. (2012) *A climate tax on meat? // Climate change and sustainable development: Ethical perspectives on land use and food production ; EurSAFE 2012, Tübingen, Germany, 30 May-2 June 2012*, Wageningen, Wageningen Academic Publishers.

Novacek, M. J. (2008) 'Colloquium paper: engaging the public in biodiversity issues', *Proceedings of the National Academy of Sciences of the United States of America*, 105 Suppl 1, pp. 11571–11578.

O'Neill, S. & Nicholson-Cole, S. (2009) '"Fear Won't Do It": Promoting Positive Engagement With Climate Change Through Visual and Iconic Representations', *Science Communication*, vol. 30, no. 3, pp. 355–379.

O'Riordan, T. & Stoll-Kleemann, S. (2015b) 'The Challenges of Changing Dietary Behavior Toward More Sustainable Consumption', *Environment: Science and Policy for Sustainable Development*, vol. 57, no. 5, pp. 4–13.

Oxford Dictionnaries *Definition of flexitarian* [Online]. Available at http://www.oxforddictionaries.com/de/definition/englisch_usa/flexitarian (Accessed 20 March 2015).

Palmer, M. (2010) 'Religion, culture and diet.', in D'Silva, J. and Webster, J. (eds) *The meat crisis: Developing more sustainable production and consumption,* London, Washington, DC, Earthscan.

PBL (2011) *The Protein Puzzle: The consumption and production of meat, dairy and fish in the European Union* [Online]. Available at http://www.pbl.nl/sites/default/files/cms/publicaties/Protein_Puzzle_web_1.pdf.

Peattie, K. & Peattie, S. (2009) 'Social marketing: A pathway to consumption reduction?', *Journal of Business Research*, vol. 62, no. 2, pp. 260–268.

Popp, A., Lotze-Campen, H. and Bodirsky, B. (2010) 'Food consumption, diet shifts and associated non-CO2 greenhouse gases from agricultural production', *Global Environmental Change*, vol. 20, no. 3, pp. 451–462.

Reijnders, L. & Soret, S. (2003) 'Quantification of the environmental impact of different dietary protein choices', *American Journal of Clinical Nutrition*, vol. 78, pp. 664S–8S [Online]. Available at http://ajcn.nutrition.org/content/78/3/664S.full.pdf (Accessed 12 November 2014).

Rosegrant, M.W., Tokgoz, S., Bhandary, P. and Msangi, S. 'Looking Ahead: Scenarios for the Future of Food', in *Global Food Policy Report*.

Rothgerber, H. (2012) 'Real men don't eat (vegetable) quiche: Masculinity and the justification of meat consumption', *Psychology of Men & Masculinity*, vol. 14, no. 4, pp. 363–375.

Rothgerber, H. (2014) 'Efforts to overcome vegetarian-induced dissonance among meat eaters', *Appetite*, vol. 79, pp. 32–41.

Rozin, P., Markwith, M., & Stoess, C. (1997) 'Moralization and becoming a vegetarian: the transformation of preferences into values and the recruitment of disgust.', *Psychological Science*, no. 8, pp. 67–73.

Ruby, M. B. (2012) 'Vegetarianism. A blossoming field of study', *Appetite*, vol. 58, no. 1, pp. 141–150.

Ruby, M. B. & Heine, S. J. (2011) 'Meat, morals, and masculinity', *Appetite*, vol. 56, no. 2, pp. 447–450.

Ruby, M. B. & Heine, S. J. (2012) 'Too close to home. Factors predicting meat avoidance', *Appetite*, vol. 59, no. 1, pp. 47–52.

Sabaté, Joan & Soret, Sam (2014) 'Sustainability of plant-based diets: back to the future', *The American journal of clinical nutrition*, vol. 100, Supplement 1, pp. 476S-482S.

Schösler, H., Boer, J. de and Boersema, J. J. (2012) 'Can we cut out the meat of the dish? Constructing consumer-oriented pathways towards meat substitution', *Appetite*, vol. 58, no. 1, pp. 39–47.

Schösler, H. (2012) *Pleasure and Purity: An exploration of the cultural potential to shift towards more sustainable food consumption patterns in the Netherlands*, Dissertation, Vrije universiteit Amsterdam.

Schösler, H., Boer, J. de and Boersema, J. J. (2014) 'Fostering more sustainable food choices: Can Self-Determination Theory help?', *Food Quality and Preference*, vol. 35, pp. 59–69.

Schösler H., Hedlund-de Witt A. (2012) *Eiwitttransitie en culturele innovatie: Wat bedrijfsleven, overheden en organisaties kunnen leren van duurzame foedseltrends in binnen- en buitenland*, Amsterdam.

Simoons, F. J. (1980, 1961) *Eat not this flesh: Food avoidances in the Old World*, Westport, Conn., Greenwood Press.

Smil, V. (2001, c2000) *Feeding the world: A challenge for the twenty-first century*, Cambridge, Mass., MIT Press.

Stehfest, E., Bouwman, L., van Vuuren, Detlef P., den Elzen, Michel G. J., Eickhout, B. and Kabat, P. (2009) 'Climate benefits of changing diet', *Climatic Change*, vol. 95, 1-2, pp. 83–102.

Steinfeld, H. (2006) *Livestock´s long shadow: Environmental issues and options*, Rome, Food and Agriculture Organization of the United Nations.

Stibbe, A. (2004) 'Health and the Social Construction of Masculinity in Men's Health Magazine', *Men and Masculinities*, vol. 7, no. 1, pp. 31–51.

Stoll-Kleemann, S. & O'Riordan, T. (2015a) 'The Sustainability Challenges of Our Meat and Dairy Diets', *Environment Magazine*, vol. 57, no. 3, pp. 34–48.

Strauss, Anselm L. & Corbin, Juliet (1996) *Grounded Theory: Grundlagen qualitativer Sozialforschung.*, Weinheim: Beltz, Psychologie Verlags Union.

Susan Jones (November 12, 2012) 'No Meat on Mondays in Los Angeles', *CNSNews.com*, 12 November [Online]. Available at http://cnsnews.com/news/article/no-meat-mondays-los-angeles (Accessed 9 December 2014).

Sutton, C., & Dibb, S (2013) *Prime cuts. Valuing the meat we eat.*

The National Food Agency (2013) *Food and environment* [Online], Uppsala (Accessed 9 December 2014).

Tobler, C., Visschers, Vivianne H M and Siegrist, M. (2011) 'Eating green. Consumers' willingness to adopt ecological food consumption behaviors', *Appetite*, vol. 57, no. 3, pp. 674–682.

Twigg, J. (1979) 'Food for thought: Purity and vegetarianism', *Religion*, vol. 9, no. 1, pp. 13–35.

van Dooren, C., Marinussen, M., Blonk, H., Aiking, H. and Vellinga, P. (2014) 'Exploring dietary guidelines based on ecological and nutritional values: A comparison of six dietary patterns', *Food Policy*, vol. 44, pp. 36–46.

VEBU (2014) [Online]. Available at http://www.donnerstag-veggietag.de/aktuelles/der-veggietag-global.html (Accessed 8 December 2014).

Vergnaud, A.-C., Norat, T., Romaguera, D., Mouw, T., May, A. M., Travier, N., Luan, J., Wareham, N., Slimani, N., Rinaldi, S., Couto, E., Clavel-Chapelon, F., Boutron-Ruault, M.-C., Cottet, V., Palli, D., Agnoli, C., Panico, S., Tumino, R., Vineis, P., Agudo, A., Rodriguez, L., Sanchez, M. J., Amiano, P., Barricarte, A., Huerta, J. M., Key, T. J., Spencer, E. A., Bueno-de-Mesquita, B., Buchner, F. L., Orfanos, P., Naska, A., Trichopoulou, A., Rohrmann, S., Hermann, S., Boeing, H., Buijsse, B., Johansson, I., Hellstrom, V., Manjer, J., Wirfalt, E., Jakobsen, M. U., Overvad, K., Tjonneland, A., Halkjaer, J., Lund, E., Braaten, T., Engeset, D., Odysseos, A., Riboli, E. and Peeters, P. H. (2010) 'Meat consumption and prospective weight change in participants of the EPIC-PANACEA study', *American Journal of Clinical Nutrition*, vol. 92, no. 2, pp. 398–407.

Vinnari, M. & Vinnari, E. (2014) 'A Framework for Sustainability Transition: The Case of Plant-Based Diets', *Journal of Agricultural and Environmental Ethics*, vol. 27, no. 3, pp. 369–396.

Weis, A. J. (2007) *The global food economy: The battle for the future of farming*, London, New York, Zed Books; Distributed in the USA exclusively by Palgrave Macmillan.

Westhoek, H., Lesschen, J. P., Rood, T., Wagner, S., Marco, A. de, Murphy-Bokern, D., Leip, A., van Grinsven, H., Sutton, M. A. and Oenema, O. (2014) 'Food choices, health and environment: Effects of cutting Europe's meat and dairy intake', *Global Environmental Change*, vol. 26, pp. 196–205.

Whitmarsh, L., Seyfang, G. and O'Neill, S. (2011) 'Public engagement with carbon and climate change: To what extent is the public 'carbon capable'?', *Global Environmental Change*, vol. 21, no. 1, pp. 56–65.

Worsley, A. and Skrzypiec, G. (1997) 'Teenage vegetarianism: Beauty or the beast?', *Nutrition Research*, vol. 17, no. 3, pp. 391–404.