How to become an attractive piece of (plant-based) meat

A quantitative study on how to efficiently market plant-based meat substitutes

Abstract

With the sustainability debate growing, one of the most popular ways of contributing to a better future not only for the world but also for one's health is a plant-based diet. The market for plant-based meat substitutes increase annually, but the resistance to reverting from a meat-based diet has proven to be substantial. With meat being the centerpiece of a meal in many Western societies and it having strong social underpinnings, the transition is slower than what could be expected of the rational human. Previous research has established the connection between masculinity and meat, declaring meat consumption as a form of self-expression for masculinity. Therefore, the following thesis applies the underlying presumptions for meat consumption in advertisements for plant-based meat substitutes, in order to empirically test whether the genderization of the product may enhance purchase intention of consumers. The study shows that both men and women, especially individuals showing higher level of self-perceived masculinity, experience a higher level of purchase intention when being exposed to advertisements of plant-based meat substitutes with stereotypically masculine attributes compared to stereotypically feminine attributes. The findings not only challenge the current way of marketing plant-based meat substitutes, but also suggest the driving forces of the decision-making process for such products. Lastly, the study discuss the paradox of the results telling marketers that in order to increase consumption of plant-based meat substitutes that benefit both the environment and the individual, the communication should be based on stereotypical gender roles that go against the neutralization of genders that has been essential for the equality movement in society.

Keywords: Advertising, sustainable consumption, plant-based meat substitutes, masculinity, Theory of Planned Behavior

Authors
Johanna Lundmark, 23397
Julia Olander, 50431

Supervisor
Magnus Söderlund

Presentation date
16 December 2019

Acknowledgements

Table of Contents

List of definitions

Dietary preference
The preferred choice of diet; meat eater, pescetarian, vegetarian or vegan.

Food neophobia
A term used to describe the phenomenon of pickiness and reluctance towards novel or unfamiliar foods (Hoek et al., 2011).

Genderization
Defined as the attribution of a gender to a product or service for marketing purposes.

Herbivore
Defined as eater of vegetables (Kim et al., 2016). Herbivores will from this point be referred to as non-meat eaters.

Omnivore
Defined as eater of vegetables and meat (Kim et al., 2016). Omnivores will from this point be referred to as meat eaters.

Masculinity
The characteristics that are traditionally thought to be typical of, or suitable for men (Cambridge Dictionary, 2019).

Meat consumption frequency
Defined as the amount of times per month one consumes meat (beef, pork or chicken).

Plant-based meat substitutes
For the purpose of this study this refers to products that imitate meat but are plant-based, such as soy, beans, mushrooms or oats (Ercin, Aldaya & Hoekstra, 2012).

Purchase intention
The conscious plan of an individual to make an effort to purchase a product or a service (Spears & Singh, 2004).

Social marketing
An approach used to develop activities aimed at changing people's behavior for the benefit of individuals and society as a whole (UK National Social Marketing Centre, 2011).

Sustainable food consumption
Food that through its production have comparatively low impact on the environment in terms of greenhouse gas emissions and water usage (Stehfest et al., 2009).

1 Introduction

The following chapter includes an introduction to the subject of sustainable food consumption, and how plant-based substitutes have the potential of disrupting the food industry. This will culminate in the purpose of the study and how the silver bullet of marketing plant-based meat substitutes is be identified.

1.1 Background

Sustainable consumption has become one of current times most talked about subjects. With Greta Thunberg scoring more likes than the pop wonder Zara Larsson, activists are inevitably becoming the celebrities of today's society and the question of how we can stop climate change constantly remains on the agenda of politicians worldwide. The reality of this urgency started to become an expression among the bigger masses in connection to the release of *An Inconvenient Truth* in 2006, earning Al Gore the Nobel Peace Prize the following year (United Nations, 2007). However, it is not until now more than ten years later that sustainability is making the shift from only being an expression for progressive environmentalists to becoming a household topic for consumers all around the world. "How dare you..." [Greta Thunberg desperately calls out to world leaders] "...pretend that this can be solved with just 'business as usual' and some technical solutions? With today's emissions levels, that remaining CO^2 budget will be entirely gone within less than 8.5 years" (United Nations, 2019). During the fall of 2019, British media reported that the barrister and head of chambers at Nexus Chambers, Michael Mansfield, was proposing that meat eating should become illegal due to its environmental impact, calling it *ecocide* (Weston, 2019). However, are politicians the only ones to blame for climate change? Is legislation restricting meat consumption required in order for people to start living more sustainably? The solution may be found closer than expected, and marketers could hold a central role in changing behavior towards more sustainable consumption.

Currently 25 percent of global emissions come from agriculture (United States Environmental Protection Agency [EPA], 2019). Livestock produces more greenhouse gas emissions than any other food and is also responsible for a higher water usage, as well as use of biomass and reactive nitrogen mobilization, than plant-based meat substitutes that offer the same nutritional value (Ercin, Aldaya, & Hoekstra, 2012; González, Frostell, & Carlsson-Kanyama, 2011; Mekonnen & Hoekstra, 2012; Pelletier & Tyedmers, 2010; Stehfest et al., 2009). The continuous holding of livestock is therefore ultimately a concern for climate change and could have irreversible consequences for the environment that cannot be helped by technological development (Raphaely & Marinova, 2014). Furthermore, the consumption of meat also constitutes a threat to public health, since it increases the intake of saturated fat and cholesterol, whilst missing out on fibers and antioxidants that is ingested through plant-based meat substitutes (Sabaté, 2003; Scarborough, Allender, & Clarke, 2012). Meat consumption has been agreed upon among scholars as having one of the highest impacts on climate change while also resulting in negative consequences on the consumer's health. The proposed solution for this threat is imposing a transition on agricultural food systems that is in line with the greenhouse gas emission capacity of the earth. This also requires a shift in the consumers' dietary preference, towards a more plant-based diet that still serve nutritional needs (e.g., Kahiluoto, Kuisma, Kuokkanen, Mikkilä, & Linnanen, 2014; Stehfest et al.,

2009). Reports have shown indications of the suggested shift with a decline in meat consumption in some industrialized countries, however the global trend suggest the opposite (Fresco, 2009).

The negative impact meat consumption has on the environment is common knowledge for many. Influencers are promoting vegan diets to inspire their followers towards more sustainable consumption. New plant-based meat substitutes are constantly introduced on restaurant menus and stacked on shelves in grocery stores. Yet another example is the newly released Netflix-documentary *Game Changers*, that not only educate the wider public on the benefits of a plant-based diet, but also busts the myths of meat being the nutritional source of strength gain. The most commonly occurring misconception is that a plant-based diet lacks protein and other necessary nutrients that are needed to build muscle mass. However, in the documentary, scientists explain that the actual source of protein are the plants that animals eat and merely pass on to humans. *Game changers* take a look at the merits (athletic, medicinal and even sexual) of plant-based eating and change the stereotypes of who the vegan of the 21st century is.

However, despite the fact that consumers are familiar to the effects of meat consumption and that plant-based substitutes are in reach, the unwillingness to adapt to the new diet is still high among consumers (Holm & Møhl, 2000; Graça, Calheiros, & Oliveira, 2014; Macdiarmid, Douglas & Campbell, 2016). A forecast by Fiala (2007) suggest that meat consumption would increase globally with 72 percent between 2000 and 2030, and another projection by Steinfeld et al. (2006) argue for a 50 percent increase between 2000 and 2050, as a result of a growing population and economy living in urban areas. At the same time, the market for plant-based products is increasingly growing as more companies are expanding their portfolio with such products. In 2018, the plant-based meat substitute market was estimated to ten billion USD, with the trajectory of reaching 31 billion USD by 2026 (Statista, 2019a). These products will most likely gain parts of their market share from the meat industry, but the initial target group is people who already consume a plant-based diet and wish for pre-cooked alternatives that are adopted for their lifestyle. As statistics show, the market potential for meat substitutes is huge and the health and sustainability incentives for the consumers to revert to a more plant-based diet are many. However, this is based on the possibility of changing the cultural and societal underpinnings of plant-based eating and convince the meat eaters to engage in new habits.

1.2 Problem formulation

Advertisement plays a great role in influencing consumer behavior, especially sustainable consumer behavior. With plant-based meat substitutes being a relatively new product category, there is limited research conducted on how to most efficiently market them. The current way of communicating plant-based products may not be optimal, with marketers failing to address the strategically correct target audience based on the lack of understanding of the desired brand or product focus (Edgar, Boyd & Palamé, 2009). If the goal is to change the behavior of consumers in general, the communication should not only be appropriate for the people who are already users, but more so for potential consumers whose behavior needs to change. Food is categorized as highly emotional and therefore prone to repeat purchasing based on habitual behavior (Power, Bindler, Goetz & Daratha, 2010). As meat is historically considered a symbol of virility and strength, the transition towards a meat-free diet is for many considered even more so a struggle, both personally and

culturally (Schösler, de Boer, Boersema & Aiking, 2015). Reverting from meat purchasing and substituting it with plant-based meat, requires precise marketing that is attractive for the current as well as the desired target audience.

There is extensive research performed on what drives meat- as well as plant-based consumption and the deeply rooted cultural values that affect this process (Graça, Oliveira & Calheiros, 2015a; Latvala et al., 2012). However, there is to the knowledge of the authors, little or no research on how marketing should be performed of such products in order to become an attractive choice for those who are not dedicated to a plant-based diet but would like to engage in it. Today marketing of plant-based products often include content produced for the dominating gender of consumers, females, and therefore exclude a potentially wider target audience (Childs & Maher, 2003). The social connections to meat and its attributes, seems to be so strong that introducing a substitute for it that lacks the actual meat is unthinkable and therefore stereotyped as a product mainly suitable for women. The problem of where to position the plant-based meat substitutes in order to not be associated with only women is therefore a current challenge for marketers and producers around the world. With Sweden being considered one of the most progressive countries in the world, may this local market pose as an indicator of what the global market may look like in the future (Hearn et al., 2012).

1.3 Purpose

The purpose of the following thesis is to empirically study if there is a more efficient way to market plant-based meat substitutes. The aim is to establish how the construction of advertisements can increase consumption of plant-based meat substitutes, while simultaneously decreasing meat consumption. Ultimately, the findings of this study indirectly have a positive impact on the environment if marketers and decision-makers follow the recommendations on how to present plant-based meat substitutes. The research includes an investigation of the self-perception of consumers and how this affects their purchase intention, and the drivers in the decision-making process when choosing a plant-based meat substitute. The authors base the study on findings from previous research on underlying reasons for meat consumption, and the resistance towards transitioning to a plant-based diet. The presumption of the study lies in the hypothesized opportunity to change consumer behavior by making plant-based meat substitutes more attractive through the social underpinnings of meat consumption. The results therefore provide inspiration for marketers whose task is to change consumers' purchase intention towards plant-based meat substitutes, not only for the benefit of their health, but also the planet.

Furthermore, the study aims to question how marketing of plant-based meat substitutes is performed and challenge how gender roles may affect the decision-making process of such a product. More specifically, the study answers the question of whether portraying a plant-based meat substitute with stereotypical gender attributes found in marketing of meat products, can increase consumers' purchase intention. To summarize the chapter above and the purpose of the study, the following research questions are stated:

1. *Does stereotypical genderization of a plant-based meat substitute affect the consumer purchase intention?*
2. *What are the explanatory variables in the decision-making process for a plant-based meat substitute?*

1.4 Expected contributions

This study is expected to contribute with both theoretical and managerial implications. Previous research performed on the topic of resistance towards switching from meat consumption to a plant-based diet has mostly been exploratory and from an interpretivist perspective with anthropological studies trying to understand the psychology behind the decision-making process. These findings are used as the foundation for this study, where theories are applied to an experimental setting where their effectiveness is examined in a purchase-like situation. The results of this study will therefore contribute to the current body of research by empirically replicate previous theoretical findings. Additionally, this study will measure the effect of stereotypically gendered marketing of a plant-based meat substitute. This have, to the authors knowledge, not been investigated and thereby complements existing research with the connection between self-perceived gender congruence and food consumption. Lastly, the study will examine the Theory of Planned Behavior (TPB) (Fishbein & Ajzen 1975; Ajzen, 1985, 1987) in the context of sustainable consumption behavior and provide suggestions for an extension of the TPB model.

Sustainable consumption is a highly relevant topic that is projected to have even more importance within the upcoming years based on the expected growth of the market for plant-based meat substitutes. Given that these plant-based meat substitutes are currently establishing their presence and earning market share from traditional meat products, it is crucial for the producers that the products are accepted with the desired position. The aim of the following study is to determine if stereotypically gendered marketing is beneficial for plant-based meat substitutes and if so, how much increased purchase intention it can generate. The results are expected to contribute with valuable implications for marketers, both in understanding consumer behavior when evaluating plant-based meat substitutes and for practical recommendations on how to market these products.

1.5 Delimitations

Firstly, the study investigates sustainable consumer behavior from a focus delimited to plant-based meat substitutes. The manipulation was only tested on one type of product, namely plant-based burgers. The decision is motivated and explained in 3.2 Preparations for Main Study, but nonetheless counts for a delimitation of the study.

Additionally, the study is delimited to its chosen methodology where the manipulation of the research object is narrow with all else being equal. Therefore, it is only possible to measure the differences in the outcomes based on the chosen manipulations. The manipulation was also delimited to email advertisement, and do not examine potential influences of the media format compared to other formats, nor the respondents' previous knowledge of the type of format. The study is further delimited to the choice of effect measurement, *purchase intention*, whereas other effects such as brand image, could have also been an interesting measurement to investigate. The decision was partly motivated by the scope of the study, but mostly due to the purpose of investigating if consumer behavior, where *purchase intention* was considered the closest predictor of that. Furthermore, the study is delimited to investigating the TPB and additional selected variables in the extended version of the model. It is possible that other variables could have contributed with additional explanatory value as well, but due to the scope of the survey and in order to avoid

respondent fatigue, delimitations had to be made. The choice of variables is further motivated in section 3.3.2 Questionnaire measures.

In addition to this, the study is delimited to the Swedish consumer market. Firstly, Sweden is an unexplored market of this exact study and also a good example of a market with high percentage of vegetarianism and veganism compared to other Western societies. Secondly, due to limited resources and access to potential respondents constrained the study to only be performed on a sample represented by people living in Sweden.

1.6 Thesis disposition

The thesis consists of six main chapters for the different parts of the thesis being: *Introduction*, *Theory*, *Methodology*, *Empirical Findings*, *Discussion* and *Conclusion*. This is the last section of the *Introduction* chapter which has included an overarching description of the subject and the relevance of the study. The following chapter is the *Theory* where previous research is reviewed and the relevant theories that are used for hypothesis generation is presented. Thereafter, the *Methodology* chapter presents the chosen approach for the study, how the research was conducted and what measures were used in collecting the data. The results of the collected data are presented in the chapter for *Empirical findings* with short explanations of the findings and whether the hypotheses were supported or rejected. An in-depth analysis of the findings is presented in the chapter *Discussion* were the results are connected to the theoretical background and the generated hypotheses. Lastly, the implications of the study and the overall reflections on the findings is presented in the chapter *Conclusion* that will conclude the thesis.

2 Theory

The following chapter includes the theoretical background of the problem formulation and pointing to the identified research gap of the study. The overarching theoretical pillars are presented and the hypotheses are generated based on the theory throughout the chapter.

2.1 Theoretical review

2.1.1 Consumer behavior and meat consumption

As stated, there is a consensus about the negative impact meat has on the environment and health, but still a resistance towards changing dietary habits exist (Holm & Møhl, 2000; Graça et al., 2014). Changing accustomed behaviors are in general difficult, and especially so when it comes to food choices. Power et al. (2010) explain this phenomenon with food being an emotive product where the consumer's perception of what is considered a normal diet plays a big part in the decision-making process. Moreover, consumers have a positive bias towards foods that they are familiar with (Tourila, Cardello & Lesher, 1994). The phenomenon of pickiness and reluctance towards novel or unfamiliar foods is often referred to as food neophobia and has been described as one of many obstacles that consumers struggle with when being introduced to plant-based meat substitutes (Hoek et al., 2011). In many societies eating meat is the traditional and dominant eating pattern, and the majority of consumers lack of willingness to reduce meat consumption (Latvala et al., 2012; Schösler et al., 2012). Simultaneously, there is lack of willingness to adopt a plant-based diet, particularly in Western societies (Lea, Crawford & Worsley, 2006a, 2006b).

Previous research has investigated the paradox of meat and the unwillingness to change dietary habits by exploring underlying reasons, justifications, for consuming meat (Arvola, 2008; Holm & Møhl, 2000; Graça et al., 2014). Many researchers argue that people are consuming meat for reasons other than nutritional needs and that meat has cultural and symbolic meaning (Leroy & Praet, 2015). Such reasons can be pleasure, personal identity and to express social and economic status (Fiddes, 1991; Sobal, 2005). Throughout much of European history, meat has been a scarcity, a source of energy and protein and closely associated with strength, power and privilege (Fiddes, 1991; Twigg, 1983). As Ruby and Heine (2011) express "a staple for the gentry and a rare treat for the peasants". The symbolic underpinnings of meat consumption have been debated rigorously throughout the last decades. Adams (1990, 1994, 2010) has continuously been in the forefront of the research and uncovered patriarchal structures that explain the connection between meat consumption and masculinity from a feminist point of view. Adams (2010) links the association to anthropological research and studies on how marketers have established the connection between masculinity and meat through advertisement. This has not only lead to the reinforcement of gender stereotypes, but also contributed to the notion of meat being a self-expressive channel for men. In the original publication by Adams (1990), it is also stated that the oppression of animals that meat consumption implies has negative spillover effects on the perception of women in society. The power structure inevitably includes women as submissive, just as cattle, which can be "consumed". Ultimately, vegetarianism is therefore considered an act of female activism to resist the patriarchal structures of male dominance, partly manifested through meat consumption (Adams, 1990).

2.1.2 Gender differences in dietary preferences

Scholars are unanimous in the that there are differences between men and women when it comes to dietary choices and preferences. Extensive research has been done on the matter and the topic has been growing during the 21st century. The current body of research has proven differences in attitudes, beliefs and actual choices of foods depending on gender identity (Gough, 2007; Sobal, 2005). This has sparked attention from the food industry, which increasingly use gender attributes as stimuli in marketing (Childs & Maher, 2003). Gender has proven to explain parts of the consumer's social identity and their personal history, which according to Bisogni et al. (2002) are determinants for the decision-making process of food. Building on the individual sensemaking in food choices, recent studies have also established the social aspects and the symbolic meaning of food consumption (Cronin & McCarthy, 2011; Cronin, McCarthy, & Collins, 2014). Ultimately, scholars like Newcombe, McCarthy, Cronin and McCarthy (2012) have determined that food choices for men is a complex process where they "use food in their personal and collective performances and as a grounding force for self-expression". For men, food choices have become a channel for openly asserting traditionally manly attributes and tastes that strengthen their own identity as well as relationships towards others (Jensen & Holm, 1999; Roos, Prättälä & Koski, 2001).

2.1.3 Social marketing for environmental- and health benefits

Pidgeon and Fischhoff (2011) address the frustration among climate scientists towards the limited response, which is according to them the greatest threat facing the planet. Climate scientists are calling for collaborations of cross-disciplinary teams of environmentalists and social scientists. They propose that psychological- and social marketing scientists who are experts on assessing the public's beliefs and values are needed in order to achieve effective communication of climate issues to aid climate-related decision-making. Social marketing and was firstly introduced by Andreasen (2002) and has since then been defined as "an approach used to develop activities aimed at changing [...] people's behavior for the benefit of individuals and society as a whole" by the UK National Social Marketing Centre (2011). Social marketing has been used for, and succeeded in, influencing people's behavior for environmental- and health benefits such as anti-tobacco campaigns (Wakefield, Loken & Hornik, 2010; Australian Alliance for Children & Youth [ARACY], 2012), or the VERB campaign implemented in the USA by the Centers for Disease Control and Prevention, with the goal of increasing and maintaining physical activity among teens (Wong et al., 2004). Bogueva and Phau (2016) suggest that reducing meat consumption could be a possible case for social marketing. Edgar et al. (2008) mean that in order to achieve the ultimate goal of social marketing, meaning behavior change, detailed attention must be paid to define the behavioral focus. Much too often, according to the author, campaign planners fail to make a thoughtful decision on what to focus on resulting in confusing both themselves and their target audiences.

2.2 Theoretical research gap

Research on consumer behavior of meat consumption that has been conducted up to date is mostly of exploratory character. The current body of research adapt an inductive approach where researchers, both through qualitative and quantitative methods, seek how and why people consume

meat and the restraint towards behavioral change. In contrary to previous research, this study investigates the possibility of increasing consumption of plant-based meat substitutes instead of focusing on meat consumption. The research approach is deductive with hypotheses derived from previous studies. These theories are tested in an experimental setting aiming to investigate the purchase intention towards plant-based meat substitutes. Researchers have established a connection between meat consumption and masculinity, but has incompletely confirmed if the connection also applies for plant-based meat substitutes.

To the knowledge of the authors, there is no existing research investigating the possibilities of changing consumption behavior for plant-based meat substitutes by the help of marketing activities that has been successful in advertising the original product, in this case meat. Research on social marketing suggest that it is possible to change human behavior for the benefit of the environment with the help of efficient communication (Pidgeon & Fischhoff, 2011). Stehfest et al. (2009) describe an opportunity to induce people to eat less meat by finding ways to create positive attitudes towards meatless diets, and with that contribute to an overall positive environmental impact. To conclude, much has been said but little has been done in social marketing for the benefit of plant-based meat substitutes. Therefore, this study intends to empirically replicate what has been proposed but not yet been tested through an experiment.

The authors believe that the body of research is inadequate as it is not sufficiently explaining the restrain towards reducing meat consumption. The TPB has been rigorously adapted by previous researchers, nonetheless in efforts to investigate food consumption behavior, and even some in particular for meat consumption (Graça, Calheiros & Oliveira, 2015b). What has not been performed is an empirical application and evaluation of the TPB in investigating purchase intention towards plant-based meat substitutes. Ultimately, this study aims to decrease inadequacy by investigating the TPB in relation to plant-based meat substitute as well as contribute with an extended version of the model that is expected to bring additional explanatory value.

Lastly, previous studies have investigated the reduction of meat consumption in Western societies such as Australia (Bogueva & Phau, 2016), Norway (Austgulen, Skulund, Schjøll & Alfnes, 2018) and the United States, Canada, and the United Kingdom (Hopkins, 2015) but there are limited studies of the Swedish market. This is of particular interest since Sweden is i) a country with relatively high percentage of vegetarians and vegans and ii) is perceived as a country were men are less masculine compared to other countries (Statista, 2019b; Anxo et al., 2011).

2.3 Theoretical framework and hypothesis generation

2.3.1 Gender differences in meat consumption

Research indicate that men consume more meat than women, and have done so historically as well. According to Lupton (1996), women choosing meatless alternatives is a way of disconnecting them from the masculinity that is often related to meat consumption. Women are more likely than men to reject food that they do not wish to be associated with, while men actively choose for example meat (Bourdieu, 1984; Fagerli & Wandel, 1999). Studies consistently show that men consume meat more frequently than women do, are more reluctant to reduce their meat consumption, and also less willing to consume plant-based meat substitutes (Graça, Oliveira & Calheiros, 2015a, 2015b;

Kubberød, Ueland, Rødbotten, Westad, & Risvik, 2002; Prättälä et al., 2007; Rothgerber, 2013; Ruby & Heine, 2011; Schösler et al., 2015). Meat has even been considered a taboo for women and being "too heavy" for them (Roos et al., 2001). This concept could partly be explained with the research by Sobal (2005) that stress the importance of symbolism in what one chooses to eat in the relationship and acceptance of others. Just as men want to conform to the stereotype diet of their gender and eat meat, women are driven by the desire to appear feminine and because of this eat less meat and even consume low-calorie foods to strengthen self-esteem (Pilner & Chaiken, 1990; Pliner, Rizvi, & Remick, 2009). Ultimately, this anchors the first hypothesis that women should indicate higher purchase intention towards the plant-based meat substitute than men as stated below:

H1: Women have higher purchase intention towards consuming a plant-based meat substitute than men.

2.3.2 Connection between meat consumption and masculinity

As described by Adams (2010), the justification of meat consumption can be attributed to the consumer's assertion of masculinity through their choice of food. Gender differences are amplified through meat consumption and masculinity is closely connected to the social dimensions of it. Meat is, thanks to its consistency and known high protein nutrition, considered a representation of strength and power, making whoever consumes it virile and muscular (Adams, 1990; Fiddes, 1991; Rozin, Hormes, Faith, & Wansink, 2012). Furthermore, Rothgerber (2012) established that the pro-meat attitude among men is emphasized by traditionally male norms. This finding is also strengthened by the research of Schösler et al. (2015) that empirically confirm that consumers with traditional viewpoints of masculinity has stronger associations between meat consumption and masculinity. Rothgerber (2013) argue that men eat meat because it makes them feel more like real men and the more masculine, they perceive themselves the more direct pro-meat attitudes they present. Furthermore, men are more prone than women to engage in active denial of the potential suffering of animals in meat production and are more likely to justify meat consumption with human dominance. As described by Dhont and Hodson (2014), the belief in human superiority result in people's increased willingness to consume meat not simply "because they enjoy the taste of meat, but because doing so supports dominance ideologies and resistance to cultural change". Furthermore, the correlation between intergroup behavior and human–animal relationships where the consumption of meat is considered an ingroup behavior strengthens the sense of ideological, political and economic belongingness. This makes meat-eating a symbol of dominance and subordination and has been constant ever since the "paradigm of man as a hunter" (Calvert, 2014; Birke, 1994).

Meat is generally considered to be a masculine product, both by men and women. This was established by Rozin et al. (2012) who empirically supported that meat was associated more with masculine words than feminine words. This is explained by the social underpinnings of meat consumption and masculinity, but also because meat even in modern times is mostly marketed as masculine food towards men (Sobal, 2005; Rogers, 2008). To conclude, it is supposed that the consumer's level of self-perceived masculinity influences its belief in human supremacy and

ultimately predicts dietary preferences and frequency in consuming meat, why the second hypothesis is suggested as follows:

H2a: People with higher self-perceived masculinity are more likely to sympathize with human supremacy beliefs than people with lower self-perceived masculinity.

H2b: People with higher self-perceived masculinity are more likely to consume meat than people with lower self-perceived masculinity.

H2c: People with higher self-perceived masculinity are more likely to consume meat at a higher frequency than people with lower self-perceived masculinity.

2.3.3 Gender in advertising

Marketing is often subject to the phenomenon of mirroring, where the messaging in advertising historically has been an indicator of what the norms and understandings of society are during that point in time (Eisend, 2010). Gender differentiation is an essential dimension in marketing that helps the consumers more efficiently categorize products to decide whether or not a product is suitable for them (Avery, 2012; Fugate & Phillips, 2010; Sandhu, 2018). Marketers use gender stereotypes in advertising in order to increase the consumer's perceived need to conform to the idealized norm (Pollay, 1986). In order to convince the consumer to proceed with the purchase, the gender role as well as other social aspects that are communicated in the advertisement, must be congruent with their self-congruence (Fugate & Phillips, 2010). The genderization of brands or products could therefore be considered a targeting strategy where consumers are profiled based on for example gender, presuming that their consumer preferences are similar (Gavett, 2014; Kotler & Keller, 2012). When gender attributes are used in marketing to make a product appear more attractive to men or women, the product is generally performing better in terms of probability to purchase, than if it had been gender-neutral thanks to its more apparent positioning (Lieven et al., 2014; Milner & Fodness, 1996; Sandhu, 2018; Till & Priluck, 2001).

As previously established, meat is a core component in many frequently consumed dishes, and therefore often found in commercials and brand related content. According to Buerkle (2009), meat in for example fast food commercials are generally communicated towards the male population. This is done through emphasizing the masculine aspects of meat and also including men who conform to a stereotype display of manhood. Marketing meat in fast food specifically towards men is common since they are culturally more encouraged to consume protein-heavy foods, while women should avoid fat and remain on a diet (Wardle et al., 2004; Levi, Chan, & Pence, 2006). Furthermore, cheesy or high-fat fast food have also been proven to be more attractive to men experiencing a higher level of masculinity (Stein & Nemeroff, 1995). By communicating stereotypical roles in advertising, which for men are white, young, toned and masculine, the marketer reinforces the consumer's perception of gender roles (Gill, 2008; Goffman, 1979). Recent studies have also proved that men are more prone to consume at a higher value after being exposed to other manly men in connection to the purchase, whilst the purchase pattern for women remained the same regardless of such stimulus (Beard, 2018). The positive effect of using gender attributes to make a product more attractive was considered to be applicable for plant-based meat substitutes as well. A hypothesis was derived from the basis of that receiver and stimuli congruence would increase purchase intention towards a plant-based meat substitute.

Hypothesis 3 suggest that receiver gender and stimuli congruence will increase purchase intention towards a plant-based meat substitute was formulated as follows:

H3a: Men have higher purchase intention towards a plant-based meat substitute with masculine attributes than with feminine attributes.
H3b: Women have higher purchase intention towards a plant-based meat substitute with feminine attributes than with masculine attributes.

Hypothesis 4 suggest that receiver self-perceived masculinity sand stimuli congruence will increase purchase intention towards a plant-based meat substitute and was formulated as follows:

H4a: Men with higher self-perceived masculinity have higher purchase intention towards a plant-based meat substitute with masculine attributes than men with lower self-perceived masculinity.
H4b: Women with higher self-perceived femininity have higher purchase intention towards a plant-based meat substitute with feminine attributes than women with lower self-perceived femininity.

2.3.4 Theory of Planned Behavior

The most commonly used theoretical models for evaluating purchase intention are the Theory of Reasoned Action and foremost the extended model Theory of Planned Behavior, referred to as the TPB in the following thesis (Fishbein & Ajzen 1975; Ajzen, 1985, 1987). The model is based on the presumption that purchase intention is the closest predictor that can be recorded to an actual purchase in an empirical setting with subjective answers from the respondent (Newcombe et al., 2012). According to the model, attitudes, social norms and perceived behavioral control are the main functions of purchase intention. This expectancy value model has been accepted as the most proficient way of examining consumer behavior, especially in the context of health-related decision making and environmental purchasing (Eagly & Chaiken, 1993; Conner & Sparks, 1995; Godin & Kok, 1996). Food choices in particular has been studied extensively with the TPB (Graça, Calheiros & Oliveira, 2015b; Lloyd, Paisley, & Mela, 1993; Sparks, Hedderley, & Shepherd, 1992; Sparks & Shepherd, 1992; Towler & Shepherd, 1992). For the purpose of this study, the TPB should empirically assert the difference in how consumers perceive the different variations of advertising, with masculine attributes and feminine attributes, leading to levels of purchase intention towards a plant-based meat substitute. Thus, hypothesis 5 was suggested as follows:

H5a: Attitude will have a positive effect on purchase intention towards a plant-based meat substitute.
H5b: Social norms will have a positive effect on purchase intention towards a plant-based meat substitute.
H5c: Perceived behavioral control will have a positive effect on purchase intention towards a plant-based meat substitute.

2.3.5 An extended model of TPB

The TPB model has however been criticized by several scholars for simplifying the complexities of the consumer's attitude, since this is considered both an affective and cognitive construct (Zanna & Rempel, 1988; Batra & Ahtola, 1990; Breckler, 1984; Breckler & Wiggins, 1989; Edwards, 1990; Trafimow & Sheeran, 1998; Sheeran, 2002). With this taken into consideration, suggested extensions of the model was proposed in order to fully understand the behavioral intent.

2.3.5.1 Human supremacy

As stated in section 2.3.2 human supremacy beliefs correlate with increased willingness to consume meat not simply because the taste of meat, but because it supports dominance ideologies and resistance to cultural change. The human supremacy ideology is an expression of competitive power where the human race is considered to be the strongest and therefore motivated to exploit and consume animals to remain in the top of the power pyramid (Allen & Ng, 2003; Ruby, 2012; Twigg, 1983). By expressing beliefs of human supremacy and the hierarchical order of humans and animals, the consumer is able to internally justify current exploration of animals (Joy, 2010). The consumer's view on human supremacy ideology may not only affect their meat preference but also their willingness to change eating habits (Dhont & Hodson, 2014). Taken this into consideration, it is likely that the more the consumer sympathizes with human supremacy beliefs, the less they show purchase intention towards a plant-based meat substitute. As a result of this theoretical background, it is suggested that human supremacy have a negative effect on purchase intention towards a plant-based meat substitute and should therefore be added to the extended TPB model.

2.3.5.2 Dietary preferences

Food neophobia, the phenomenon of reluctance towards novel of unfamiliar foods, is described as one of many obstacles that consumers struggle with when being introduced to meat substitutes (Hoek et al., 2011). Although it has been argued that this phenomenon is regardless of consumer's dietary preference, meaning if they are heavy-, low-, or non-users of meat, it is supposed that the level of reluctance varies depending on dietary preferences. Since consumers tend to have a positive bias towards foods that they are familiar with, it is much likely that non-users of meat are more positive towards plant-based meat substitutes than meat-eaters, just as it is evident that meat eaters are more positive towards meat than non-meat eaters (Tourila et al., 1994). Furthermore, Thøgersen (2002) propose that attitudes are not the ultimate determining factor, but instead habits and previous experience. The plant-based meat substitutes are more likely to be accepted by consumers if the look and taste resemble meat, as sensory aspects are proven to be important in the decision making of food (Magnusson et al., 2011). Moreover, this is also a result of consumer's positive bias towards foods that they are familiar towards (Tourila et al., 1994). Pilner & Hobden (1992) empirically established the correlation between trait anxiety and increased food neophobia. In order to prevent the presumed food neophobia Tuorila et al. (1994) suggests that cues regarding the use of the product and the context of the consumption could increase the familiarity of it, resulting in less negative neophobic response. Further, it is considered to be more of a sacrifice and effort for meat eaters to consume plant-based meat substitutes than it is for non-meat eaters. Hence, there should be less obstacles hindering non-meat eater's purchase intention towards plant-based meat substitutes. Therefore, dietary preferences, both in terms of choice of diet and meat consumption frequency, are predicted to have a significant effect on purchase intention towards

plant-based meat substitutes and are suggested to be included in the extended TPB model in order to contribute with additional explanatory value. This led to Hypothesis 6, as stated below:

H6: Extending the TPB model with the independent variables (a-c) provide additional explanatory value for purchase intention towards a plant-based meat substitute.
   a. Human supremacy
   b. Dietary preferences
   c. Meat consumption frequency

2.4 Model of hypotheses

Below is a visualization of the hypotheses, explaining not only the relation between the variables but also what test performed for H1-H6.

Figure 1. Hypothesis model

2.5 List of hypotheses
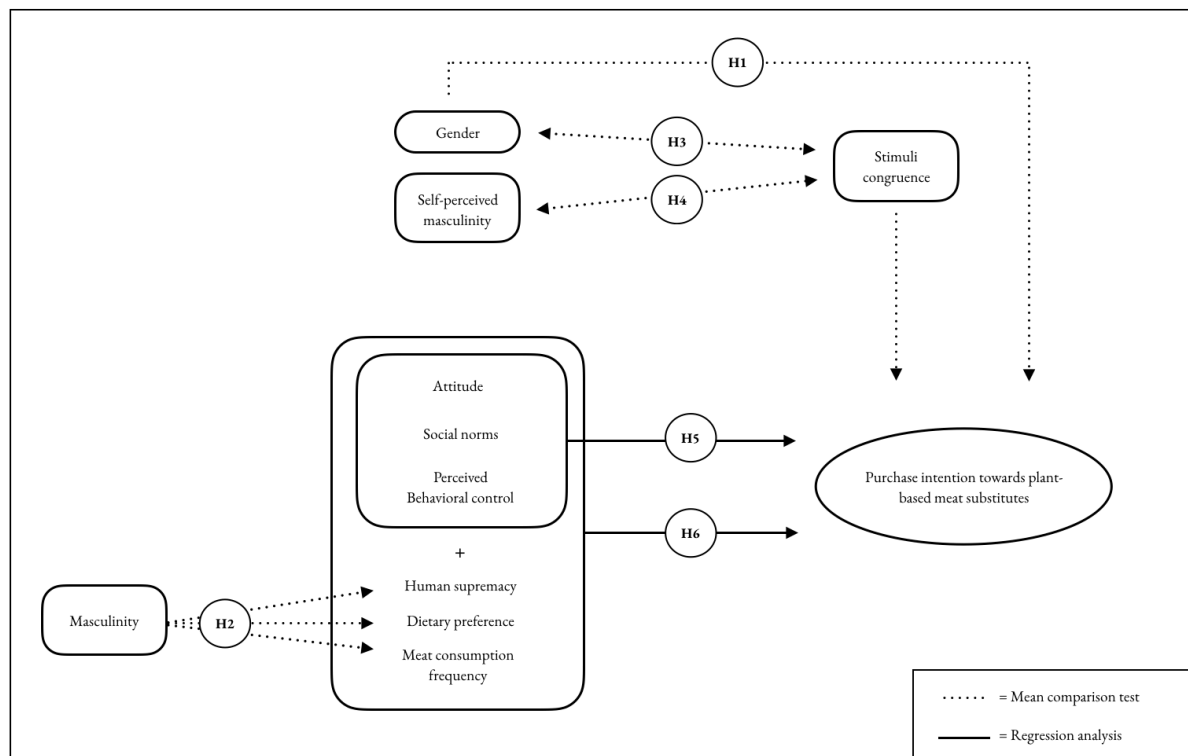
<table>
<tr><td colspan="2" align="center">Summary of Hypotheses</td></tr>
<tr><td rowspan="6">RQ1.</td><td>H1: Women have higher purchase intention towards consuming a plant-based meat substitute than men.</td></tr>
<tr><td>H2a: People with higher self-perceived masculinity are more likely to sympathize with human supremacy beliefs than people with lower self-perceived masculinity.

H2b: People with higher self-perceived masculinity are more likely to consume meat than people with lower self-perceived masculinity.

H2c: People with higher self-perceived masculinity are more likely to consume meat at a higher frequency than people with lower self-perceived masculinity.</td></tr>
<tr><td>H3a: Men have higher purchase intention towards a plant-based meat substitute with masculine attributes than with feminine attributes.

H3b: Women have higher purchase intention towards a plant-based meat substitute with feminine attributes than with masculine attributes.</td></tr>
<tr><td>H4a: Men with higher self-perceived masculinity have higher purchase intention towards a plant-based meat substitute with masculine attributes than men with lower self-perceived masculinity.

H4b: Women with higher self-perceived femininity have higher purchase intention towards a plant-based meat substitute with feminine attributes than women with lower self-perceived femininity.</td></tr>
<tr><td rowspan="2">RQ2.</td><td>H5a: Attitude will have a positive effect on purchase intention towards a plant-based meat substitute.

H5b: Social norms will have a positive effect on purchase intention towards a plant-based meat substitute.

H5c: Perceived behavioral control will have a positive effect on purchase intention towards a plant-based meat substitute.</td></tr>
<tr><td>H6: Extending the TPB model with the independent variables (a-c) provide additional explanatory value for purchase intention towards a plant-based meat substitute.

a. Human supremacy

b. Dietary preferences

c. Meat consumption frequency</td></tr>
</table>

3 Methodology

The following chapter includes the methodological reasoning behind the study. The choice of research approach and design will be discussed as well as the pre-tests and how they interplayed in the construction of the main study. Furthermore, the main study is described in detail and thereafter critically reviewed in terms of its data quality.

3.1 Scientific Approach to the Research Design

This study is based on a deductive research approach, meaning that all hypotheses are developed from existing literature, and there is a research gap to be empirically tested (Bryman & Bell, 2015). The findings of this thesis aim to contribute to the existing theories on consumer behavior in regard to sustainable food consumption. The purpose of the main study is to test the causal relationship between stereotypically genderization in advertising and consumption of plant-based meat substitutes. According to Bryman and Bell (2015), the most appropriate scientific approach for such marketing study is deductive. Lastly, the deductive research design is the most common approach for studies within advertisement and has been extensively used by scholars that have conducted studies within the research area this thesis investigates. The main study was performed as a quantitative questionnaire that empirically tested the hypotheses formed on the basis of the recognized theoretical gap. This is considered a good methodological fit given the aim of the study and the scope of the research. A potential alternative study could have been based on an inductive research design since the subject of food consumption and a generational transition towards plant-based diet is a relatively new phenomenon.

3.2 Preparations for Main Study

3.2.1 Pre-study 1: Choice of study object

A first pre-study was conducted in order to ensure that the stimulus for the survey were close to reality in the sense that the respondents would perceive it as potentially being an advertisement for a food item. The most prominent actors with the highest growth within the food industry are the food delivery companies that are aggregators between restaurants and end consumers. They communicate to large cohorts daily and the foods they promote vary. One of the biggest players worldwide is Uber who deliver food through its brand extension Uber Eats, that operate locally in Sweden. Uber Eats was approached as part of the preparations for the main study and an exploratory interview was held on September 30th at the Uber headquarters in Stockholm with Henrik Berglin, General Manager of Uber Eats Sweden. See full question battery in Appendix 8.1 Pre-study 1: Interview questions. In the interview, Berglin suggested that the most commonly used communication method for Uber Eats is email advertisement. These usually include a clickable banner and text explaining the product together with a call to action button leading the consumer directly to the advertised product. Berglin also stated that they are able to increase conversion tremendously for the products they communicate in their email advertisements.

"By showcasing a particular cuisine or product, we can expect an incremental increase in orders up to 150 %, making it a very attractive channel for restaurants to be featured."
- Henrik Berglin

Furthermore, Berglin also confirmed that the most popular dishes on the platform are within the fast food category. Pizza, sushi, Thai are popular items ordered through Uber Eats, however the most popular item is hamburgers. For many, hamburgers are an easy choice given that they usually provide fullness, are easy to transport and a dish consumer are familiar with. Restaurants serving hamburgers generally provide vegetarian and vegan alternatives. Several larger enterprises with higher order volumes have included plant-based meat substitutes for all burgers on the menu.

"The "impossible burger trend" has made its mark on the food delivery industry as well, and we see that customers want to have the option of choosing plant-based meat substitutes when ordering home delivery."
- Henrik Berglin

The interview with Berglin proved that in order to replicate the most common type of communication, an email advertisement had to be designed according to the given description. An appropriate product to showcase that could be sold both as a meat product and plant-based meat substitute is a burger. The burger is considered a top of mind choice for many when ordering home delivery, decreasing the likelihood of unfamiliarity causing the respondents to hesitate towards the advertisement design. Furthermore, scholars have established that consumers choosing between meat dishes are more likely to decide on the alternative with more cheese and other fat intense flavors that are commonly found in for example burgers (Gal & Wilkie, 2010). This ultimately supports the choice of a burger as study object to promote in the advertisement. The burger fits the context of the study, prompts the respondent with the some of the core attributes of a traditional burger, and is closely related to what is often marketed by large industry actors such as Uber Eats.

3.2.2 Pre-study 2: Choice of stimulus design

A second pre-study was conducted to investigate the perceived gender belongingness of adjectives that are commonly used for describing food. This included a quantitative study where 18 words identified as masculine, feminine or neutral were selected on the basis of the likelihood of being used in an advertisement for food (Bem, 1974; Love & Sulikowski, 2018). See full list of words in Appendix 8.2 Pre-study 2: List of words. The data collection for the second pre-study was performed through a survey distributed via Qualtrics. The survey was handed out and completed on October 4th with a total 25 respondents, of which 12 were men and 13 women. The respondents were asked to rate the perceived masculinity or femininity of the selected words with the statement *"Rate the perceived gender associated with…"*, measured on a seven-point Likert scale ranging from *"very masculine"* to *"very feminine"*.

The collected data was analyzed through a one sample t-test was performed to conclude the presence of significant differences between means. The tests showed significant mean differences for words that were expected to be perceived as masculine and expected to be perceived as feminine. However, no words could be established as neutral since all words that had been identified as neutral in the construction of the survey was perceived as feminine. The results indicated that testing of neutral words in the setting of the main study would give insufficient

results, therefore the neutral words were excluded in the stimulus creation for the main study. The words that were perceived most masculine as well as most feminine, indicating a diametrically opposed difference in perceived gender belongingness were chosen for the two stimulus used in the survey. The results of pre-study 2 are presented in table 1.

Dependent variable		Words	N	Mean	Std. Deviation	t	p
Perceived masculinity		Strong	25	2.44	1.193	10.226	.000***
		Tough	25	2.64	1.186	11.130	.000***
	Masculine	Daring	25	3.08	1.525	10.096	.000***
	words	Powerful	25	3.36	1.551	10.829	.000***
		High protein	25	2.12	1.054	10.061	.000***
		Heavy	25	1.96	.978	10.019	.000***
		Appetizing	25	4.38	.576	37.224	.000***
		Energetic	25	4.48	1.358	16.499	.000***
	Neutral	Mouthwatering	25	4.40	1.443	15.242	.000***
	words	Vibrant	25	5.08	1.115	22.779	.000***
		Tasteful	25	5.16	1.068	24.164	.000***
		Good	25	4.80	1.118	21.466	.000***
		Yummy	25	5.32	1.180	22.535	.000***
		Low calorie	25	5.88	1.013	29.016	.000***
	Feminine	Tender	25	4.40	1.607	13.688	.000***
	words	Dreamy	25	5.44	1.583	17.180	.000***
		Light	25	6.00	.707	42.426	.000***
		Gentle	25	5.63	1.173	23.500	.000***

$* = p < .10, ** = p < .05, *** = p < .01$

Table 1. Results of pre-study 2

3.2.3 Pre-study 3: Visual manipulation check

A third pre-study was conducted with the purpose of selecting the visual imagery to include in the advertisement, and performing a manipulation check to establish that the stimulus successfully evoked the intended outcomes. The visual manipulation check was distributed via Qualtrics and ten surveys were handed out and completed on October 10th with a total of 11 respondents, of which five were men and six women. All respondents were exposed to six versions of the stimulus design in the form of an advertisement for a plant-based meat substitute. To ensure that no bias would be recorded as a result of the order of which stimuli the respondents were exposed to, the randomization tool in Qualtrics was used. The visual design of the advertisements varied between showing the plant-based burger, a man or women eating plant-based burger with focus on the burger, and a man or women eating the plant-based burger with focus on the man or women. See full visual manipulation check designs in Appendix 8.3 Pre-study 3: Visual design check.

By including a person eating the burger with more focus on the individual, the consumer would be more likely to perceive the indulgence of eating something unhealthy as a burger less prominent, since the individual on the advertisement indirectly justified the behavior (Poor, Duhacked & Krishnan, 2013). The purpose of testing the same picture of a plant-based burger with two different types of descriptions, one with masculine attributes and one with feminine attributes, was to investigate if solely words could manipulate perceived masculinity or femininity of the product. In extension the survey design would also test if the perceived gender belongingness of the burger could have an effect on the respondents' attitude towards the product. After being exposed to each

stimulus, the respondents were asked to evaluate the perceived level of masculinity or femininity of the plant-based burger, their attitude towards purchasing plant-based burger and the likelihood that the visual design could be an actual advertisement. Masculinity was tested through one item with a seven-point Likert scale ranging from *"very masculine"* to *"very feminine"*, and the statement read *"Indicate whether you perceive the product in the ad as masculine or feminine"*. Attitude was tested through a five-item question battery on a seven-point bipolar scale with a ranging from *"good–bad"*, *"unpleasant–pleasant"*, *"against–for"*, *"harmful–beneficial"* and *"unenjoyable–enjoyable"*. The questions were adopted from the method of Madden, Ellen and Ajzen (1992) and the statement read *"After seeing the advertisement, what do you think about purchasing plant-based burgers?"*. Lastly, the likelihood of the design being an actual advertisement was tested through one item with a seven-point Likert scale ranging from *"Very unlikely"* to *"Very likely"*, and the statement read *"The advertisement you saw could be an actual advertisement from a food delivery company"*.

Firstly, the result of *"The advertisement you saw could be an actual advertisement from a food delivery company"* was investigated in order to ensure the validity of the study in regard to the choice of stimuli. All visual manipulation designs received a mean value over 5.0 on the seven-point Likert scale where *"Very likely"* was indicated with a score of seven, confirming that all advertisements could be used chosen as stimulus for the main study. Secondly, one sample t-tests were conducted with the variable *masculinity* to test for significant mean differences between the perceived level of masculinity for the six visual manipulation designs. All means showed significant differences and confirmed the assumptions of perceived masculinity and femininity. Hence the manipulation check was considered adequate. The designs showing a man or woman eating the burger with focus on the burger, and a man or woman eating the burger with focus on the man or woman received the most distinct mean difference and where therefore chosen for the stimuli. Lastly, the variable *attitude* was examined to create an understanding of what the outcome for the main study would result in whilst taking the small sample into consideration. To test if the four-item question battery measuring *attitude* could be merged into an index, a Cronbach's Alpha test were conducted. The Cronbach's Alpha result exceeded .7 for all items, which are considered acceptable for creating indexes according to Bryman and Bell (2015). The results are presented in table 2.

Dependent variable		Stimuli	N	Mean	Std. Deviation	t	p
Likelihood of the design being an actual advertisement	Feminine	Burger	11	5.364	1.567	11.355	.000***
		Woman eating burger (focus on burger)	11	5.545	1.214	15.156	.000***
		Woman eating burger (focus on woman)	11	5.545	1.440	12.775	.000***
	Masculine	Burger	11	6.000	1.183	16.818	.000***
		Man eating burger (focus on burger)	11	5.455	1.440	12.566	.000***
		Man eating burger (focus on man)	11	5.909	1.221	16.051	.000***
Perceived masculinity	Feminine	Burger	11	4.727	15.538	15.538	.000***
		Woman eating burger (focus on burger)	11	5.909	1.221	16.051	.000***
		Woman eating burger (focus on woman)	11	6.273	1.009	20.618	.000***
	Masculine	Burger	11	3.000	1.183	8.409	.000***
		Man eating burger (focus on burger)	11	2.727	1.191	7.596	.000***
		Man eating burger (focus on man)	11	2.455	1.128	7.216	.000***
Attitude	Feminine	Burger	11	4.4773	1.10936	13.386	.000***
		Woman eating burger (focus on burger)	11	4.2955	1.54846	9.200	.000***
		Woman eating burger (focus on woman)	11	4.6136	1.31987	11.593	.000***
	Masculine	Burger	11	5.6591	1.02636	18.287	.000***
		Man eating burger (focus on burger)	11	4.7955	.96059	16.557	.000***
		Man eating burger (focus on man)	11	5.2045	.97991	17.615	.000***

* = p < .10, ** = p < .05, *** = p < .01

Table 2. Results of pre-study 3

3.3 Main study

The main study of the research was conducted as an experimental study with a between-subjects design. Respondents were randomly assigned to one of the two pre-tested stimuli conditions of the advertisement. All respondents were, in connection to being exposed to one of the two versions of the advertisement, asked to complete a questionnaire designed in Qualtrics.

3.3.1 Survey design

The questionnaire consisted of four blocks and designed to randomly assign respondents to one of the two groups, treatment and control. Regardless of stimuli, each respondent was introduced to the study through a short text explaining the purpose of the survey and the anonymousness of the answers before entering the questionnaire. Both groups were asked to complete the same questionnaire with the only differing element being the stimuli in the first block. Respondents were exposed to a fictional email advertisement including the pre-tested stimuli. The control group saw the feminine advertisement including a picture of a woman as well as feminine words, and the treatment group saw the masculine advertisement including a picture of a man as well as masculine words. The first block also contained questions regarding the respondent's attitude, consideration of subjective norm and perceived behavioral control according to the TBP first introduced by Ajzen (1985, 1987). Lastly, the first block also measured the purchase intention of the respondent after being exposed to the advertisement. The second block was focused on the participant and

included questions measuring their proneness to human supremacy theory and their perception of themselves in terms of masculinity. This block also included the first out of two control questions ensuring that the respondent was paying attention to the questions being asked. The third and final block included the less important questions such as demographics and general food preferences. It also included the last of the two control questions asking about the product they were initially exposed to in the first block of the questionnaire.

The sequence of the questions remained the same for all respondents with the most important measures in the beginning, such as intentional response to the advertisement (Malhotra, 2010). All questions were based on previously successful translations and choice of wording in order to reduce the risk of misinterpretations among the respondents. All questions apart from the demographic measures in block three were structured closed questions and followed a seven-point Likert scale to optimally facilitate the hypothesis testing (Bryman & Bell, 2015).

3.3.2 Questionnaire measures

The measures used in the questionnaire were adopted from previous relevant studies within the field of consumer behavior. Furthermore, all questions presented in the questionnaire was tested for Cronbach's Alpha. The full questionnaire is found in Appendix 8.4 Main study and the sources to each of the question batteries are explained in this section together with the results from the Cronbach's Alpha tests.

3.3.2.1 TPB: Attitude

Measures regarding attitudes was the first out of the three element factors affecting purchase intention according to the TPB. As previously stated, the TPB was introduced by Ajzen (1985, 1987) as a development of the TRA by Ajzen and Fishbein (1975). The measures used to evaluate the attitudes of the respondents in regard to the stimuli were adopted from Madden et al. (1992). Respondents were asked to rate their attitude based on a five-item question battery with a seven-point bipolar scale. The question read "*After seeing the advertisement, what do you think about ordering plant-based burgers?*" and the measures used were "*Good–Bad*", "*Unpleasant–Pleasant*", "*Against–For*", "*Harmful–Beneficial*" and "*Unenjoyable–Enjoyable*". An index was created with the questions regarding attitude and showed high reliability indicated by the Cronbach's Alpha of .945.

3.3.2.2 TPB: Social norms

Measures regarding social norms was the second element factor of the TPB model by Ajzen (1985, 1987) to be tested. Respondents were asked to rate the perceived presence of social norms in regard to the product after being exposed to the advertisement. The measures on social norms were based on a three item questions battery with a seven-point Likert scale ranging from *"Strongly disagree"* to *"Strongly agree"*. The questions were adopted from Madden et al. (1992) and read *"Most people who are important to me think I should choose the plant-based meat substitute next time I order a burger"*, *"Magazines and media think that I should choose the plant-based meat substitute, the next time I order a burger"* and *"When it comes to choosing plant-based meat substitutes for burgers, I want to do what most people that are important to me want me to do"*. When testing the reliability of the three items Cronbach's Alpha showed a value

under the acceptable level (Cronbach's Alpha >.7). However, it exceeded .7 if the item *"Magazines and media think that I should choose the plant-based meat substitute, the next time I order a burger"* was deleted. Hence, an index was created with only two of the items and showed high reliability indicated by the Cronbach's Alpha of .739.

3.3.2.3 TPB: Perceived behavioral control

Measures regarding perceived behavioral control was the third and final element factor of the TPB model by Ajzen (1985, 1987) to be tested. The measures on perceived behavioral control were based on a four item questions battery with a seven-point Likert scale. The questions were adopted from Madden et al. (1992) and read *"For me eating plant-based burgers in the next two weeks would be..."* with its scale ranging from *"Very easy"* to *"Very difficult"*, *"If I wanted to, I could easily eat plant-based burgers in the next two weeks"* with its scale ranging from "Strongly disagree" to "Strongly agree", *"How much control over eating plant-based burgers in the next two weeks?"* with its scale ranging from *"Absolutely no control"* to *"Complete control"* and *"The number of events outside my control which could prevent me from eating plant-based burgers in the next two weeks are"* with its scale ranging from *"numerous"* to *"very few"*. An index was created with the questions regarding attitude and showed high reliability indicated by the Cronbach's Alpha of .741.

3.3.2.4 TPB: Purchase intention

The last question battery of the first part of the questionnaire measured purchase intention, which is the second dimension in the TPB model by Ajzen (1985, 1987) based on the TRA model by Ajzen and Fishbein (1975). The purchase intention is a result of the element factors; attitudes, social norms and perceived behavioral control. The measurement was based on a six item questions battery with a seven-point Likert scale ranging from *"Strongly disagree"* to *"Strongly agree"*. The questions were adopted from Madden et al. (1992) and read *"I intend to eat plant-based burgers in the next two weeks"*, *"I will try to eat plant-based burgers in the next two weeks"* and *"I will make an effort to eat plant-based burgers in the next two weeks"*. Furthermore, to gain a more nuanced answer on purchase intention for a frequently consumed product category such as food, questions were also adopted from Magnusson et al. (2001), Tarkiainen and Sundqvist (2005), Thøgersen and Ölander (2006) and read *"I intend to eat plant-based burgers frequently in the next two weeks"*, *"I am willing to pay extra for plant-based burgers"* and *"The next time I order burgers, I will choose the plant-based meat substitute"*. An index was created with the questions regarding attitude and showed high reliability indicated by the Cronbach's Alpha of .913.

3.3.2.5 Human supremacy

The second part of the questionnaire focused on the respondents' personal beliefs. The first question battery included measures on the respondents' human supremacy beliefs. These were tested through a three-item question battery with a seven-point Likert scale ranging from *"Strongly agree"* to *"Strongly disagree"*. The statements were adopted from Dhont and Hodson (2014) and read *"The life of an animal is just not of equal value as the life of a human being"*, *"Animals are inferior to humans"* and *"There is nothing unusual at all in the fact that humans dominate other animal species"*. An index was

created with the questions regarding attitude and showed high reliability indicated by the Cronbach's Alpha of .747.

3.3.2.6 Masculinity

The second question battery of the second part of the questionnaire was focused on the measures regarding the respondents' self-ascribed masculinity or femininity. These were adopted from the Traditional Masculinity-Femininity (TMF) scale by Kachel, Steffens, & Niedlich (2016) and were tested through a four-item question battery with a seven-point Likert scale ranging from *"Very feminine"* to *"Very masculine"*. The adopted statements read *"I consider myself as..."*, *"Ideally, I would like to be..."*, *"Traditionally, my interests would be considered as..."*, *"Traditionally, my attitudes and beliefs would be considered as..."*, *"Traditionally, my behavior would be considered as…"*. An index was created with the questions regarding attitude and showed high reliability indicated by the Cronbach's Alpha of .896.

3.3.3 Data collection

Participants for the main study was approached via Facebook, LinkedIn and through direct email. The online questionnaire was distributed via an anonymous Qualtrics link that randomized the stimuli with equally large respondent groups to the two conditions. The data was collected between October 11th and October 17th. In total 255 respondents opened the questionnaire, and out of these 252 completed it. All completed responses were checked with having successfully answered the two control questions that were embedded in the middle and at the end of the questionnaire. The control questions were included in order to control for fatigue for the respondent and were used to eliminate inapplicable responses. If the respondent did not answer correctly in the first or second control question, the respondent was excluded from the dataset. The dataset was further screened for extreme outliers in terms of survey completion time combined with recorded data, in order to eliminate respondents who had not answered the survey in a satisfactory way. Ultimately, the data collection resulted in 247 complete responses that were used for hypothesis testing. The final sample where a mix between male and female respondents in the age between 18 and 66 years old. The gender distribution was 44.4 percent female, 55.2 percent male and 0.4 percent defining as other, with their collective age median being 25 years old. Se table 3 for full demographic characteristics of respondents.

3.4 Analytical tool

IBM SPSS Statistics Version 25 was used for the analysis of the data. The data collected through Qualtrics were directly exported to SPSS to reduce risk of any intermediary part affecting it. Batteries of three or more questions were tested using Cronbach's Alpha, and accepted on a level equal to or higher than .7 (Bryman & Bell, 2015; Bearden, Netemeyer & Haws, 2011). Regressions were tested for autocorrelation with a Durbin Watson test were approximately 2.0 was considered as a good value were a risk for autocorrelation could be excluded. Further, multicollinearity was tested with the VIF and Tolerance Value to be able to reject high correlations among predictor variables, where VIF was considered acceptable if lower than 1.0, and tolerance was acceptable if higher than .4. Scatter-plots and histograms were analyzed in order to ensure that no problem with

heteroscedasticity prevailed, and that the requirements of normal distribution and absence of outliers was met (Saunders, Lewis & Thornhill, 2012).

3.5 Critical review of data quality

As in all quantitative studies, there was a concern about the quality of the collected data (Bryman & Bell, 2015). Therefore, the data quality has been critically reviewed. A discussion of the reliability, validity and replicability of this study is presented below.

3.5.1 Reliability

This study is considered reliable, since hypothesis testing was carried out in a methodologically rigorous way, meeting the requirements of the internal reliability and stability (Bryman & Bell, 2015). Firstly, the internal reliability can be assured since the theoretical frameworks of the study has been used in prior research that has been rigorously cited and accepted by the research community. Furthermore, the data of the multi-item scales were tested with Cronbach's Alpha before created into indexes that were later used in the hypothesis testing. If they scored a value equal or higher than .7 the internal reliability was considered satisfactory. Secondly, the stability of the data was investigated and considered sufficient. Considering the requirements of consistency and repeatability over time, one could question the fact that the quantitative study was only performed once. However, the reliability is high taken into consideration the scope of the study, and multiple pre-studies also increased the reliability of the study design (Jacobsen, 2002). Summarized, the reliability is considered acceptable enough to determine this study as reliable.

3.5.2 Validity

This study is considered valid, based on a review of the four parameters; internal validity, measurement validity, external validity and ecological validity, which are presented in the following sections (Bryman & Bell, 2015).

3.5.2.1 Internal validity

Firstly, the internal validity is considered satisfactory due to the experimental design of this study. Meaning that one can with confidence establish that it was the manipulation in the stimuli that caused the effects on the dependent variable, in this case *purchase intention* (Lynn & Lynn, 2003). Furthermore, since respondents were randomly assigned to one of the two stimuli designs for the advertisements and sample sizes were close to equal. The stimulus of the advertisements was the only parameter that differed, all other equal, and therefore differences in outcome variables between control (feminine stimuli) and treatment (masculine stimuli) groups could be attributed to the independent variable. However, it is important to take into consideration that even though the feminine and the masculine stimulus were constructed to be as comparable as possible, it is difficult to isolate factors that might affect the respondent such as perceived attractiveness of the model in the advertisement. Further, the independent variables and the dependent variables correlated to large extent, especially in accordance with the TPB (Fishbein & Ajzen 1975; Ajzen, 1985, 1987). Summarized, the internal validity should be considered adequate for this study.

3.5.2.2 Measurement validity

Secondly, to increase measurement validity, the questionnaire used well-established scales from previous research (Saunders et al., 2012) and also pre- tested two times to ensure that the variables measured what they were aimed to. In conclusion, there is no concern regarding the measurement validity of this study.

3.5.2.3 External validity

Thirdly, when reviewing external validity and the extent to which the results of the study is applicable or generalizable to the real marketing environment of interest (Lynn & Lynn, 2003). The sample group was analyzed to determine in which degree the sample can be viewed as a representation of the population. The sample groups were relatively evenly distributed by gender, age, occupation, educational level and income, which limit the risk of a skewed dataset and prevail misrepresentation of the population. However, this study was only distributed in Sweden, and results can therefore only be generalized for the Swedish market or any market similar to it. Summarized, the external validity is considered acceptable for the scope of the study.

3.5.2.4 Ecological validity

The fourth validity parameter is the ecological validity. To ensure high ecological validity of the study, it would have been required to perform the experiment in a real-life setting, however this was considered not within the scope of the study. To compensate for the study being conducted as a survey-based experiment, the visual manipulation was designed to replicate what was described in pre-study 1, the interview with Uber Eats. Since the most commonly used communication method for Uber Eats is email advertisement, the choice of exposing the stimuli for respondents as an advertisement in email format through an online questionnaire seemed not far from reality. The layout and design of the advertisement was created to resemble an Uber Eats email, except not showing the logo to avoid brand associations affecting the measured outcome effect, delimiting a difference between the stimuli advertisement and an actual advertisement. Furthermore, the likelihood of the stimuli design being an actual advertisement was tested for in pre-study 3 and received high positive results. However, the format of a questionnaire in itself can risk bringing a feeling of unnaturalness to the respondent (Bryman & Bell, 2015). There is a concern that attitudes and purchase intentions were measured using self-reported data rather than actual purchase behavior might limit ecological validity. This is caused by the predictive value of how behavior may differ from actual purchase behavior. Summarized, there is an improvement for ecological validity, but not to the extent that this study should not be considered having acceptable validity.

3.5.3 Replicability

This study is considered replicable through a well-detailed and described theoretical, methodological and empirical section (Bryman & Bell, 2015). This is exemplified by the inclusion of the full questionnaire found in Appendix 8.4 Main study, and by the described methodology process and the presentation of results from both the pre-studies and hypothesis testing in the main study.

4 Empirical findings

The following chapter will include a description of the data and the empirical findings from the hypothesis testing. Firstly, the results of H1-H4 connected to the research question "Does stereotypical genderization of a plant-based meat substitute affect the consumer purchase intention?" will be presented and thereafter the results of H5-H6 connected to the research question "What are the explanatory variables in the decision-making process for a plant-based meat substitute?". The section ends with a presentation of additional results and a summary of the results from the hypothesis testing.

4.1 Sample respondent characteristics

Table 3 present the demographic characteristics of the respondents, grouped by what stimuli they were exposed to. The table shows an even gender distribution as well as an even distribution between what stimuli the respondents were exposed to. Age, monthly income, education and occupancy were also similar between the groups. To conclude, the demographic variables of the groups were evenly balanced, hence the demographic factors are not expected to have affected the results. Although the distribution for dietary preferences between meat eaters and non-meat eaters is high, it reflects the national distribution of the Swedish population where 9 percent claims to be vegetarian or vegan (Statista, 2019b). See table 3.

Stimuli	Masculine	Feminine	Total
N	121	126	247
Gender (%)			
Male	46	42	44
Female	54	57	55
Other	0	1	1
Age			
Max	63	66	66
Min	19	18	18
Mean	28	28	28
Median	25	25	25
Income per month (%)			
<10 000 SEK	12	11	11
10 000 - 30 000 SEK	36	37	37
30 001 - 50 000 SEK	38	38	38
>50 001 SEK	14	14	14
Education (%)			
Masters degree	31	27	29
Bachelors degree	54	52	53
High school degree	15	20	17
Below High school	0	1	1
Occupancy (%)			
Employee	59	60	60
Self-employed	4	7	5
Student	36	33	34
Unemployed	1	0	1
Diet preference (%)			
Meat eater	83	86	84
Pescetarian	8	11	10
Vegetarian	7	2	5
Vegan	2	1	1
Meat consumption frequency			
(Eat meat # times per month)			
Mean	16	16	16
Median	15	15	15

Table 3. Demographic characteristics of respondents

4.2 Hypothesis testing

4.2.1 Men and meat

The first hypothesis states that women have a higher purchase intention towards consuming a plant-based meat substitute than men. Firstly, to investigate the relation between gender and dietary preference a crosstabs chi-square test was conducted. The results show that among women, 78.8 percent eat meat, 13.9 percent are pescetarians, 5.8 percent are vegetarians and 1.5 percent vegans. Meanwhile, among men, 90.8 percent eat meat, 4.6 percent are pescetarians, 3.7 percent are vegetarians and .9 percent vegans. Hence, a larger percentage of the female respondents claim to follow a plant-based diet, compared to the male respondent which suggest that H1 is supported. Secondly an independent sample t-test was performed with the test variable *purchase intention* and grouping variable *gender* to see if mean differences would be significantly different from zero. The test showed significant mean differences (*p*<.05) between men and women, where women had higher purchase intention than men (M$_{women}$=3.58 versus M$_{men}$=3.15). See table 4.

Gender		Dietary preference				
		Meat eater	Pescetarian	Vegetarian	Vegan	Total
Men	Count	99	5	4	1	109
	% within Gender	90,8%	4,6%	3,7%	0,9%	100,0%
	% within Dietary preference	47,6%	20,8%	33,3%	33,3%	44,1%
Women	Count	108	19	8	2	137
	% within Gender	78,8%	13,9%	5,8%	1,5%	100,0%
	% within Dietary preference	52,4%	79,2%	66,7%	66,7%	100,0%
Other	Count	1	0	0	0	1
	% within Gender	100,0%	0,0%	0,0%	0,0%	100,0%
	% within Dietary preference	0,1%	0,0%	0,0%	0,0%	0,0%
Total	Count	208	24	12	3	247
	% within Gender	84,2%	9,7%	4,9%	1,2%	100,0%
	% within Dietary preference	100,0%	100,0%	100,0%	100,0%	100,0%

Dependent variable	Gender	N	Mean	Std. Deviation	t	p
Purchase intention	Men	109	3.147	1.597		
	Women	137	3.575	1.631	-2.066	.040**

* = p < .10, ** = p < .05, *** = p < .01

Table 4. Gender and dietary preference cross-tabulation and independent sample t-test

H1: Women have higher purchase intention towards consuming a plant-based meat substitute than men. **Supported**

4.2.2 Masculinity and meat

The second hypothesis states that the consumer's level of self-perceived masculinity predict their human supremacy beliefs and dietary preference. To investigate H2a an independent sample t-test was performed with the test variable *human supremacy* and the grouping variable *masculinity*, re-coded into a dummy variable defined as "less masculine" or "masculine". The test showed significant

mean differences ($p<.01$) where the group with higher self-perceived masculinity presented a higher mean for human supremacy beliefs ($M_{masculine}=4.03$ versus $M_{lessmasculine}=3.38$), supporting H2a. Since dietary preference and meat consumption frequency were measured through an ordinal scale, H2b and H2c were tested with the non-parametric Mann Whitney test. Two tests were performed using the same dummy variable of *masculinity*, as used for H2a, as grouping variable, one with *dietary preference* as test variable and one with *meat consumption frequency*. Both tests showed significant mean differences ($p<.01$). Results from H2b indicated that dietary preference received a lower score for high self-perceived masculinity (where 1 = eating meat and 4 = vegan), which supports H2b. The same pattern can be established for meat consumption frequency; the group with high self-perceived masculinity show a higher score, meaning that they consume meat more often, than the group with low self-perceived masculinity, confirming H2c. See table 5.

Dependent variable	Self-perceived masculinity	N	Mean	Std. Deviation	t	p
Human supremacy	Less masculine	118	3.384	1.455		
	Masculine	129	4.031	1.427	-3.522	.001***

* = p < .10, ** = p < .05, *** = p < .01

	Self-perceived masculinity	N	Meanrank	Median	Mann-Whitney U	Asymp. Sig. (2-tailed)
Dietary preference	Less masculine	118	132.54			
	Masculine	129	116.19	1	6603.000	.005***
Meat consumption frequency	Less masculine	118	99.58			
	Masculine	128	145.55	15	4730.000	.000***

* = p < .10, ** = p < .05, *** = p < .01

Table 5. Result from independent sample t-test & Mann Whitney test

> **H2a**: People with higher self-perceived masculinity are more likely to sympathize with human supremacy beliefs than people with lower self-perceived masculinity. **Supported**
> **H2b**: People with higher self-perceived masculinity are more likely to consume meat than people with lower self-perceived masculinity. **Supported**
> **H2c:** People with higher self-perceived masculinity are more likely to consume meat at a higher frequency than people with lower self-perceived masculinity. **Supported**

4.2.3 Gender-stimuli congruence

The third hypothesis states that gender stimuli congruence positively affect purchase intention, meaning that men have higher purchase intention towards a plant-based meat substitute described with masculine attributes than with feminine attributes, and vice versa. An independent sample t-test was conducted with the test variable *purchase intention* and grouping variable *stimuli*, split by gender. The result show statistical significance ($p<.10$) establishing that men have a higher purchase intention towards a plant-based meat substitute with masculine attributes than with feminine attributes ($M_{masculine}=3.41$ versus $M_{feminine}=2.87$). Furthermore, the mean values indicate that women have higher purchase intention towards a plant-based meat substitute with masculine attributes than with feminine attributes ($M_{masculine}=3.77$ versus $M_{feminine}=3.40$) hence showing results that contradict from what was hypothesized. However, this pattern cannot be supported with statistical significance ($p>.10$).

See table 6.

Gender	Dependent variable	Stimuli	N	Mean	Std. Deviation	t	p
Men	Purchase intention	Masculine attributes	56	3.414	1.553		
		Feminine attributes	53	2.865	1.610	-1.812	.073*
Woman	Purchase intention	Masculine attributes	65	3.769	1.713		
		Feminine attributes	72	3.401	1.545	-1.325	.187

* = p < .10, ** = p < .05, *** = p < .01

Table 6. Result from independent sample t-test

H3a: Men have higher purchase intention towards a plant-based meat substitute with masculine attributes than with feminine attributes. **Supported**

H3b: Women have higher purchase intention towards a plant-based meat substitute with feminine attributes than with masculine attributes. **Not Supported**

The fourth hypothesis states that respondents' congruence in terms of self-perceived masculinity have positive effect on purchase intention, meaning that men who perceive themselves as more masculine have higher purchase intention towards a plant-based meat substitute with masculine attribute than those who perceive themselves as less masculine, and vice versa. The variable *masculinity* was re-coded so that men were divided into two groups; masculine for the ones identifying themselves as more masculine than the median of men, and less masculine for those under. The same variables were re-coded for women in terms of their femininity. An independent sample t-test was performed to investigate the male respondents and the effect self-perceived masculinity had on the test-variable purchase intention. A second independent sample t-tests was also performed on the women in terms of their self-perceived femininity. The findings showed significant mean differences for men exposed to a plant-based meat substitute with masculine attributes ($p<.05$), supporting H4a that men who perceive themselves as more masculine have higher purchase intention towards a plant-based meat substitute with masculine attribute than men who perceive themselves as less masculine ($M_{masculine}=3.52$ versus $M_{lessmasculine}=3.36$). Furthermore, men with low self-perceived masculinity indicate higher mean value for purchase intention towards a plant-based meat substitute with feminine attribute than men with high self-perceived masculinity ($M_{masculine}=2.48$ versus $M_{lessmasculine}=3.13$), although not statistically supported ($p>.10$). A mean difference cannot be stated for women ($p>.10$), however the data indicate that women with high self-perceived femininity show higher purchase intention toward a plant-based meat substitute with feminine attributes than women with low self-perceived femininity ($M_{feminine}=3.55$ versus $M_{lessfeminine}=3.25$). The opposite pattern is indicated for a plant-based meat substitute with masculine attributes, where women with high self-perceived femininity show higher intentions than women with low self-perceived femininity, although not statistically supported ($p>.10$). See table 7.

Gender	Self-perceived masculinity/femininity	Dependent variable	Stimuli	N	Mean	Std. Deviation	t	p
Men	Less masculine	Purchase intention	Masculine attributes	36	3.356	1.436		
			Feminine attributes	31	3.134	1.789	-.563	.575
	Masculine		Masculine attributes	20	3.517	1.780		
			Feminine attributes	22	2.485	1.259	-2.185	.035**
Woman	Less feminine	Purchase intention	Masculine attributes	30	3.6667	1.565		
			Feminine attributes	35	3.2476	1.359	-1.155	.252
	Feminine		Masculine attributes	35	3.8571	1.848		
			Feminine attributes	37	3.5450	1.709	-.745	.459

* = p < .10, ** = p < .05, *** = p < .01

Table 7. Result from independent sample t-test

> **H4a:** Men with higher self-perceived masculinity have higher purchase intention towards a plant-based meat substitute with masculine attributes than men with lower self-perceived masculinity. **Supported**
>
> **H4b:** Women with higher self-perceived femininity have higher purchase intention towards a plant-based meat substitute with feminine attributes than women with lower self-perceived femininity. **Not Supported**

4.2.4 TPB: Attitude, Social norms and Perceived behavioral control

The fifth hypothesis proposes that the TPB model can be used to explain plant-based consumption behavior. A regression analysis was conducted to investigate how the independent variables *attitude, social norms* and *perceived behavioral control* jointly influence the dependent variable *intention* (Newbold et al., 2013). An F-test was conducted to test if the combination of the independent variables had significant effect on the dependent variable. The results presented in table 8 evidently show that all independent variables have significant effect on purchase intention (*p*<.01). This suggests that H5a, H5b and H5c is supported. Further, t-tests were performed to investigate if each independent variable was significantly different from zero. As expected, all independent variables have significant positive effect on the dependent variable *purchase intention. Social norms* have the most positive effect (*b*=.40) followed by *attitude* (*b*=.29) and last *perceived behavioral control* (*b*=.24).

The TPB model was further investigated in terms of applicability when the respondents were separated by gender and stimuli. Comparing the two regressions, it is evident that the TPB model has more explanatory value for purchase intention towards plant-based consumption by women than by men. The f-test show that for women, the combination of the independent variables *attitude*, *social norms* and *perceived behavioral control* had a significant effect on the dependent variable *purchase intention*. This statement held true both for a plant-based meat substitute with feminine attributes and masculine attributes (*p*<.01). The t-test also indicate that each independent variable

was significantly different from zero. Women showed higher positive significant effect in terms of explanatory value for purchase intention when exposed to an advertisement with feminine attributes than with masculine attributes (Adjusted $R^2_{feminine}$=.42 versus Adjusted $R^2_{masculine}$=.37). For the advertisement with feminine attributes, *social norms* had the highest positive effect on *purchase intention*, followed by *attitude* and last *perceived behavioral control*. For the advertisement with masculine attributes, *social norms* also had the highest positive effect on *purchase intention*, although *perceived behavioral control* had stronger positive effect than *attitude*. For men, the combination of the independent variables *attitude*, *social norms* and *perceived behavioral control* also had a significant effect on the dependent variable *purchase intention*. This held true for both stimulus as shown in the results from the f-test (p<.01). However, the results show lower explanatory value for the purchase intention of men than of women, regardless if the advertisement has masculine of feminine attributes (Adjusted $R^2_{feminine}$=.38 versus Adjusted $R^2_{masculine}$=.33). Furthermore, the t-test proved that *behavioral control* no longer can be established as significantly different from zero (p>.10) for any of the stimulus. Summarized, the TPB model have higher explanatory value for the purchase intention of women than of men. Both genders have higher significant effect on purchase intention towards a plant-based meat substitute with feminine attributes over masculine attributes. *Social norms* and *attitude* have higher positive effect on the purchase intention of men than women, while *perceived behavioral control* is a significant predictor for the purchase intention of women but not men. See table 8.

	Total	Men		Women	
		Masculine attribute	Feminine attribute	Masculine attribute	Feminine attribute
(Constant)	-1,538	-.257	-1.310	-2.354	-1.953
	(.489)	(.885)	(1.130)	(1.112)	(.869)
Attitude	.286***	.265**	.365***	.218**	.333***
	(.058)	(.130)	(.144)	(.115)	(.094)
Social norms	.404***	.425***	.395***	.375***	.398***
	(.054)	(.101)	(.132)	(.116)	(.100)
Perceived behavioral control	.244***	.156	.101	.367***	.300***
	(.077)	(.147)	(.179)	(.164)	(.137)
Observations	246	55	52	64	71
Adjusted R²	.389	.325	.376	.366	.422
F-test	53.132	9.824	11.463	13.328	18.244

Standard errors in parentheses
* = p < .10, ** = p < .05, *** = p < .01

Table 8. Result from regression analysis

H5a: Attitude will have a positive effect on purchase intention towards a plant-based meat substitute. **Supported**
H5b: Social norms will have a positive effect on purchase intention towards a plant-based meat substitute. **Supported**
H5c: Perceived behavioral control will have a positive effect on purchase intention towards a plant-based meat substitute. **Supported**

4.2.5 An extension of the TPB model to add explanatory value

Although stated that the TPB model predict purchase intention towards plant-based consumption behavior, it is evident that the model is not sufficient to explain the complete variance of purchase intention towards a plant-based meat substitute based on the adjusted R^2. The sixth and final hypothesis propose an extension of the TPB model. The additional independent variables *human supremacy, dietary preference* and *mean consumption frequency* are expected to significantly predict the dependent variable *purchase intention* in the TPB model and by doing so add explanatory value. In order to investigate H6, additional regression analyses were performed. This was done in the same manner as described in section 4.2.4 TPB: Attitude, Social norms and Perceived behavioral control, but adding the independent variables *human supremacy, dietary preference* and *mean consumption frequency* to the already existing independent variables *attitude, social norms* and *perceived behavioral control.* These were conducted with gender and stimuli separately, investigating the purchase intentions of men and women towards a plant-based meat substitute with both feminine attributes and masculine attributes. The F-tests show that the combination of the independent variables have a significant effect on the dependent variable *purchase intention.* However, when conducting a t-test to investigate whether each independent variable was significantly different from zero, not all variables show significant effect. Hence, those were excluded from the extended regression model.

When investigating the purchase intention of women towards a plant-based meat substitute with feminine attributes, *human supremacy* and *meat consumption frequency* showed no significance and was thus excluded, and a new regression was conducted. Results indicate that the explanatory value improved when adding *dietary preference*, as it has significant negative effect on *purchase intention (p<.01)* and increased the explanatory value by 17 percentage points (New Adjusted R^2=.59). *Dietary preference* in terms of eating meat was the highest significant predictor, with a negative effect on *purchase intention (b=-.42)*, followed by *attitude (b=.37), social norms(b=.35)* and *perceived behavioral control b=.22).* For women's purchase intention towards a plant-based meat substitute with masculine attributes, the *meat consumption frequency* coefficient showed no significance in the results of the t-test and was thus excluded. The results establish that *human supremacy* and *dietary preference* are significant predictors of *purchase intention*, improving the adjusted R^2 with 16 percentage points (New Adjusted R^2=.53). *Dietary preference* in terms of eating meat was the highest significant predictor, with a negative effect on *purchase intention (b=-.38)*, followed by *behavioral control (b=.34), social norms (b=.32)* and *human supremacy (b=-.24). Attitude* was no longer a significant predictor of *purchase intention (p>.10).* Comparing the purchase intention of women between the stimulus, *dietary preference* has more negative effect and *social norms* has more positive effect on purchase intention towards a plant-based meat substitute with feminine attributes than masculine attributes. *Perceived behavioral control* has on the contrary a more positive effect on purchase intention towards a plant-based meat substitute with masculine attributes than feminine attributes. *Attitude* was no longer a significant predictor for purchase intention of women towards a plant-based meat substitute with masculine attributes.

Investigating the purchase intention of men towards plant-based meat substitute with feminine attributes, *dietary preference* in terms of eating meat showed no significance and was thus excluded from the regression. Results indicated that the explanatory value improved by adding *human supremacy* and *meat consumption frequency* as they have a significant negative effect on *purchase intention*

(p<.01) and increased the explanatory value with six percentage points (New Adjusted R^2=.44). *Social norms* was the highest significant predictor, with a positive effect on *purchase intention* (*b*=.39), followed by *attitude* (*b*=.31), *meat consumption frequency* (*b*=-.21) and *human supremacy b*=-.19). As expected, *perceived behavioral control* had no significant effect on *purchase intention* (*p*>.10). For the purchase intention of men towards an advertisement with masculine attributes, *human supremacy meat* and *consumption frequency* no longer showed significance and were thus excluded, while *dietary preference* in terms of eating meat was a significant predictor adding additional explanatory value to the model by four percentage points (New Adjusted R^2=.37). *Social norms* was the highest significant predictor, with positive effect on *purchase intention* (*b*=.40), followed by *attitude* (*b*=.29) and *dietary preference* in terms of eating meat (*b*=-.23). *Behavioral control* had no significant effect on *purchase intention* (*p*>.10).

Summarized, the extended TPB model increased the explanatory value for the purchase intention of women more than for men. H6 is partly supported among women, where *dietary preferences* showed a significant negative effect for both stimuli which suggest that H6b is supported, and *human supremacy* had a significant negative effect for a plant-based meat substitute with masculine attributes suggesting that H6a is partly supported. However, since H6b was supported for men exposed to the masculine stimuli but not for feminine stimuli, H6b could only be established as partly supported. In similar, H6a was supported among men for feminine stimuli but not for masculine stimuli, resulting in H6a being partly supported. H6c received no support among women, and only support among men when exposed to the feminine stimuli. Therefore, *meat consumption frequency* was considered contributing with insufficient explanatory value and hence H6c was not supported. See table 9.

	Men		Women	
	Masculine attribute	Feminine attribute	Masculine attribute	Feminine attribute
(Constant)	.996	-.105	.983	.185
	(1.036)	(1.159)	(1.195)	(.834)
Attitude	.299**	.312***	.081	.370***
	(.126)	(.140)	(.105)	(.080)
Social norms	.402***	.392***	.318***	.350***
	(.098)	(.125)	(.104)	(.085)
Perceived behavioral control	.146	.144	.340***	.215***
	(.143)	(.173)	(.148)	(.118)
Human supremacy	-	-.189**	-.239***	-
	-	(.115)	(.112)	-
Dietary preference	-.233**	-	-.378***	-.418***
	(.648)	-	(.366)	(.321)
Meat consumption frequency	-	-.207**	-	-
	-	(.356)	-	-
Observations	55	52	64	71
Adjusted R^2	.369	.439	.526	.589
F-test	9.035	9.127	15.192	26.445

Standard errors in parentheses
* = p < .10, ** = p < .05, *** = p < .01

Table 9. Result from independent sample t-test

H6: Extending the TPB model with the independent variables (a-c) provide additional explanatory value for purchase intention towards a plant-based meat substitute.
  a. Human supremacy **Partly Supported**
  b. Dietary preferences **Partly Supported**
  c. Meat consumption frequency **Not Supported**

4.3 Additional results

When H3b received contradicting results to what was hypothesized and previously proposed in marketing theory, there was a need to perform an additional t-test. This investigated if the whole sample preferred the advertisement with masculine attributes as the results suggested. An independent sample t-tests was performed with in the same manner as described in section 4.2.3 Gender-stimuli congruence, with the test variable *purchase intention* and the grouping variable *stimuli*. The test showed significant mean differences ($p<.05$), where the advertisement with masculine attributes received higher mean value for *purchase intention* than the advertisement with feminine attributes ($M_{masculine}=3.60$ versus $M_{feminine}=3.16$). Thus, it can be concluded that both genders preferred the advertisement with masculine attributes. See table 10.

Dependent variable	Stimuli	N	Mean	Std. Deviation	t	p
Purchase intention	Masculine attributes	121	3.6047	1.64375		
	Feminine attributes	126	3.1561	1.59412	-2.177	.030**

* = p < .10, ** = p < .05, *** = p < .01

Table 10. Result from independent sample t-test

During hypothesis testing, other split by groups besides *gender* was tested such as *age* and *educational level*. These tests received mainly insignificant results and were not included in the hypothesis testing. However, the testing of *purchase intention* and *human supremacy beliefs* compared between different *educational levels* showed interesting findings. Initially, it was hypothesis that the higher education, the more likely one would be well-informed about negative impact meat consumption has on climate and health, hence be more likely to adopt a plant-based diet. To investigate this, two independent sample t-tests were conducted, the first with the test variable *human supremacy* and the second with *purchase intention*, both with the grouping variable *educational level* split as a dummy of "higher level" (bachelor degree or higher) and "lower level" (high school degree or lower). Both tests received significant results, implying that mean differences were significantly different ($p <.05$). Results from the first test observing *human supremacy*, showed that the group with higher education stated human supremacy beliefs as more important than the group with lower education ($M_{high}=3.85$ versus $M_{low}=3.13$). The same pattern was concluded regarding *purchase intention*, were the group with lower education showed higher purchase intention toward consuming a plant-based meat substitute than the group with higher education ($M_{high}=3.27$ versus $M_{low}=3.85$). Hence, the results contradicted to what was initially proposed, showing that people with higher educational level are less likely to adapt a plant-based diet. See table 11.

Dependent variable	Educational level	N	Mean	Std. Deviation	t	p
Purchase intention	Higher level	203	3.272	1.799		
	Lower level	44	3. 852	1.577	2.153	.032**
Human supremacy	Higher level	203	3.850	1.463		
	Lower level	44	3.128	1.447	-2.993	.003***

* = p < .10, ** = p < .05, *** = p < .01

Table 11. Result from independent sample t-test

4.4 Summary of findings

	Summary of Results from Hypotheses testing	
	H1: Women have higher purchase intention towards consuming a plant-based meat substitute than men.	**SUPPORTED**
	H2a: People with higher self-perceived masculinity are more likely to sympathize with human supremacy beliefs than people with lower self-perceived masculinity.	**SUPPORTED**
	H2b: People with higher self-perceived masculinity are more likely to consume meat than people with lower self-perceived masculinity.	**SUPPORTED**
	H2c: People with higher self-perceived masculinity are more likely to consume meat at a higher frequency than people with lower self-perceived masculinity.	**SUPPORTED**
RQ1.	**H3a:** Men have higher purchase intention towards a plant-based meat substitute with masculine attributes than with feminine attributes.	**SUPPORTED**
	H3b: Women have higher purchase intention towards a plant-based meat substitute with feminine attributes than with masculine attributes.	**NOT SUPPORTED**
	H4a: Men with higher self-perceived masculinity have higher purchase intention towards a plant-based meat substitute with masculine attributes than men with lower self-perceived masculinity.	**SUPPORTED**
	H4b: Women with higher self-perceived femininity have higher purchase intention towards a plant-based meat substitute with feminine attributes than women with lower self-perceived femininity.	**NOT SUPPORTED**
RQ2.	**H5a:** Attitude will have a positive effect on purchase intention towards a plant-based meat substitute.	**SUPPORTED**
	H5b: Social norms will have a positive effect on purchase intention towards a plant-based meat substitute.	**SUPPORTED**
	H5c: Perceived behavioral control will have a positive effect on purchase intention towards a plant-based meat substitute.	**SUPPORTED**
	H6: Extending the TPB model with the independent variables (a-c) provide additional explanatory value for purchase intention towards a plant-based meat substitute. a. Human supremacy b. Dietary preferences c. Meat consumption frequency	**PARTLY SUPPORTED** **PARTLY SUPPORTED** **NOT SUPPORTED**

5 Discussion

The following chapter will include a discussion of the results from the hypothesis testing in regard to the research question. Firstly, the results from the hypothesis testing are presented, followed by a complementary discussion on the additional findings that were found in the data analysis.

5.1 Discussion of results from hypothesis testing

The findings conclude that H1 was supported, implying that women show a higher purchase intention towards plant-based meat substitutes than men. This finding is in line with the national statistics on the demographic profile of the general population that prefer a plant-based diet over meat, with women constituting the majority of the group (Statista, 2019b). Furthermore, this result is also in line with previous data presented by scholars stating that women are more likely to engage in products that are meat free in order to strengthen their stereotypical femininity (Lupon, 1996; Bourdieu, 1984; Fagerli & Wandel., 1999; Wardle et al., 2004; Levi, et al., 2006).

The testing also confirmed that H2a, H2b and H2c were supported, establishing that human supremacy beliefs and food preferences were affected by the level of the respondent's self-perceived masculinity. According to the results, this connection holds true for the relation between self-perceived masculinity and human supremacy as tested in H2a, where respondents with higher level of self-perceived masculinity were more likely to sympathize with such ideologies than those with lower self-perceived masculinity. This finding is in line with the studies of Dhont and Hodson (2014) proving meat consumption as a way to express dominance ideologies that are connected to masculine attributes and assertion of social belongingness. The power dynamics of human-animal relationships can be traced back to when men were hunters and women gatherers, which can still be recalled in social contexts (Calvert, 2014; Birke, 1994). Such context was staged in the stimulus and proven to hold true as hypothesized in H2a where people with high level of self-perceived masculinity found human supremacy more important than those with low self-perceived masculinity. The testing of H2b explicitly examined the level of masculinity in regard to meat eaters. The results showed that respondents with higher levels of self-perceived masculinity were more likely to consume meat than those with lower levels of self-perceived masculinity. These findings are in line with the theory on the connection between masculinity and dietary preferences, where stereotypically manly men consume meat to reinforce this image (e.g. Adams, 1990, 1994, 2010; Roos et al., 2001; Sobal, 2005; Schösler et al., 2015). Lastly, the relation between level of masculinity and meat consumption was further tested in regard to meat consumption frequency in H2c. Results established that the higher level of self-perceived masculinity the more frequently meat was consumed. According to the theories behind the hypothesis, this finding is relevant since it confirms that meat consumption become an outlet for self-expression where a consumer with high self-perceived masculinity ultimately expresses it through meat consumption (Jensen & Holm, 1999; Roos et al., 2001).

The results from testing H3 contradict marketing theories proposing that gender stereotypical marketing should generate positive marketing effects, meaning that men will prefer stimuli with masculine attribute and women will prefer stimuli with feminine attributes. Results from H3a

confirm that men prefer advertisement with masculine attributes over the advertisement with feminine attributes. This is aligned with marketing theories of gender advertisement, proposing that each gender should identify more with an advertisement with content relatable for them and therefore prefer content that have a clear gender profile congruent with their own image (Avery, 2012; Fugate & Phillips, 2010; Sandhu, 2018). However, the presumption of self-congruence and genderization of products did not hold true for female respondents when testing H3b. Results indicate that purchase intention among women were higher for the advertisement with masculine attributes than the advertisement with feminine attributes, although not statistically supported. This ultimately poses the question of whether women are more likely to purchase the burger projected with masculine attributes because the burger itself, from a female perspective, is a male-oriented item and therefore creating less dissonance when presented in such setting, or if women overall prefer advertisement with masculine attributes. According to Rozin et al. (2012), meat products such as burgers are perceived masculine, and even though the burger in the advertisement was plant-based, the social underpinnings may still be prevalent for the female respondents resulting in them preferring the advertisement with masculine attributes over the advertisement with feminine attributes. The contradicting result may find its explanation in that stereotypically unhealthy food such as burgers are considered manly, resulting in the advertisement with masculine attributes being more attractive (Bourdieu, 1984; Fagerli & Wandel 1999). According to Silveira (1980) and Hamilton (1991), the sexist constructs in society has created a bias towards masculinity and male words, making the advertisement with masculine attributes implicitly more familiar than advertisement with feminine attributes.

H4a and H4b was tested to study whether the connection between gender-stimuli congruence and positive marketing effects hold true in terms to self-perceived masculinity and femininity. This implied that the advertisement with masculine attributes should generate higher purchase intention among men with high self-perceived masculinity, than men with low self-perceived masculinity. Equally, the advertisement with feminine attributes should generate higher purchase intention among women with high self-perceived femininity than women with low self-perceived femininity. Results from H4a suggest that the connection hold true for men, which aligns with theory stating that the stereotypical gender marketing may reinforce the gender roles and therefore nudge men into masculinity (Gill, 2008). This also connects to the psychological process of gender role conformity described by Pollay (1986). The study concludes that people who are presented with stereotypical gender roles, usually experience a need to conform to that role. The theory of Pollay (1986) applied to this study should ultimately lead to both sexes indicating a higher sense of self-perceived masculinity or femininity if exposed to a stimulus featuring congruent attributes. A man exposed to an advertisement with masculine attributes should indicate higher self-perceived masculinity and have higher purchase intention towards the product since it is communicated with stereotypical features that he wants to share. The avoidance behavior of rejecting what is not self-congruent was also demonstrated with masculine men indicating lower purchase intention towards the same product presented with an advertisement with feminine attributes. Supposingly because it was no longer within what was socially acceptable for them in regard to their masculinity (Fagerli & Wandel, 1999; Rothgerber et al., 2013).

Interestingly enough, the same pattern could not be found for the female respondent group in H4b. Women with high self-perceived femininity indicated higher purchase intention for the

advertisement with feminine attributes than those with lower self-perceived femininity, which was in line with the expected results. However, when exposed to the advertisement with masculine attributes, women with high self-perceived femininity had once again higher purchase intention than those with less self-perceived femininity. The results could not be rejected at a 95 percent confidence level, but indicated a pattern that is of interest for the purpose of the study. Although the result was not in line with the hypothesized theories, it strengthens the results of H3b. Women proved not to be as bound to their gender role in regard to the advertised food as men. This could therefore just as in the previous hypothesis be explained by the societal bias towards the male gender expression (Silveira, 1980; Hamilton, 1991). The overall result of change in purchase intention for men but not for women can also be explained by the previous findings of Beard (2018), where men are affected by the exposure of manly men when about to make a purchase, while women remain unprovoked.

The fifth hypothesis was generated based on the presumption that the TPB model would hold true for decision-making when being exposed to the stimulus of the advertisements (Fishbein & Ajzen 1975; Ajzen, 1985, 1987). The results supported H5a, confirming that the model could be used for the testing, which is in line with previous research within sustainable consumption (e.g Eagly & Chaiken, 1993; Conner & Sparks, 1995; Godin & Kok, 1996; Lloyd, Paisley, & Mela, 1993; Sparks, Hedderley, & Shepherd, 1992; Sparks & Shepherd, 1992; Towler & Shepherd, 1992). Each variable in the original model of the TPB was tested separately in order to confirm the correlation of the entire model and H5a, H5b and H5c was supported. This ultimately confirms the reliability of the study.

Lastly, the results of H6 proved to differ considerably between male and female respondents. For women the model could be extended with a) human supremacy, b) dietary preference and c) meat consumption frequency. These are all dimensions of the decision-making process that could be described as rational. The amount of meat a female generally consumes and the relation she has to animals will ultimately affect her purchase intention towards consuming plant-based meat substitutes (Calvert, 2014; Birke, 1994). As previously mentioned, women are more likely than men to avoid products that they do not wish to be associated with, which may explain why the female population show a significant predictability in their decision-making and men not when testing the extended model of the TPB (Bourdieu, 1984; Fagerli & Wandel, 1999). When examining the test of the extended model for the male population, the most telling results were how the different ground-pillars of the model shifted as they were exposed to different stimuli. Attitude towards the plant-based burger have the highest explanatory value for the purchase intention of men when exposed to an advertisement with masculine attributes. However, when men are exposed to an advertisement with feminine attributes, they become more reliant on the social norms of the product and how well it fits with their perception of whether the product is suitable for them according to the people in their proximity, as well as society as a whole. This finding is in line with theory stating that food consumption for men is a way of externally communicate self-expression and asserting of masculinity (Jensen & Holm, 1999; Roos et al., 2001). The differing results for the gender groups are indicating the same pattern as for the previous hypotheses, where women are not as affected by the different stimulus as men are, and also not reacting to them according to what marketing theories of gender advertisement traditionally have suggested. This could potentially be explained by the theory formulated by Eagly and Chaiken (1993) discussing the

difference between affective and cognitive constructs of attitude as such that affect is connected to the emotive response towards the product and cognition is connected to thoughts or perceptions about the product. The emotive dimension of attitude is therefore essential to understand when investigating the outcome of the behavioral intent (Lavine, Thomsen, Zanna, & Borgida, 1998). The complexity of the attitude measure in its connection to purchase intention is described by Gorton and Barjolle (2014) as "likely to be weaker where individuals possess attitudinal ambivalence – simultaneously holding both positive and negative attitudes towards an object. Regarding food choices, for instance, an individual may hold both positive and negative attitudes to 'junk food', liking the taste but disliking the high-fat content". While researchers agree on the importance of attitudes in shaping behavior, it is important to note that the model does not explain how attitudes are created or modified. The latter is particularly important for food agencies and commercial practitioners that wish to change behavior. The complexity of this psychological phenomena cannot be identified entirely by the TPB, but the results suggest that the social underpinnings of food consumption related to plant-based meat substitutes do play a role in the decision-making process. The study therefore initiates an interpretivist discussion on what narrative the results are telling through the gaps that cannot be explained through the available theory on consumption of meat and meat-substitutes in regard to the normative role of manhood. This is further discussed in section 6.4 Limitations and criticism of the study.

5.2 Discussion of additional findings

The data testing provided additional findings that was not part of the initial set of hypotheses, but gave insights that had explanatory value for the research question and the purpose of the thesis. The data recorded that *people exposed to a plant-based meat substitute with masculine attributes will have higher purchase intentions towards the advertisement than those exposed to the same product but described with feminine attributes*. This statement held true on a confidence level of 95 percent and therefore reflect the overall purchase intention of the entire population and what advertisement they preferred. The finding allows for the authors to empirically prove that an advertisement for a plant-based meat substitute with masculine attributes increases the likelihood of purchase through higher purchase intention. This holds true despite gender, preferences or beliefs of the consumer, indicating that the rule of thumb for meat-substitute marketers should be to genderize the product towards men. This should be implemented in order to cater not only the male consumers but also the female consumers. The reason for this being could be the previously mentioned bias towards men and masculinity in society, and the mentioned pattern among women to avoid what they wish to not be associated with which in this case would be the feminine stereotype of a plant-based consumer (Silveira, 1980; Hamilton, 1991; Bourdieu, 1984; Fagerli & Wandel, 1999).

Furthermore, a secondary finding was the significant correlation between educational level and meat consumption. The results showed that *people with higher educational level are more likely to sympathize with human supremacy beliefs than people with lower educational level*. This finding proves that higher education, usually leading to enlightenment of societal concerns such as animal rights, does not lead to less human supremacy beliefs but rather the opposite. This pattern also held true when extending the test to investigate the purchase intention, where *people with higher educational level have lower purchase intention towards plant-based meat substitutes than people with lower educational level*. This could potentially be explained with that social belongingness and identity may be expressed through food

choices, and meat has traditionally been considered a symbol of wealth and status (Macdiarmid et al., 2016; Popkin, 2006; Smil, 2002). Historically, meat was a scarce resource and not a commodity for the poor and during times of war in the 20th century, meat was rationed away from women and civilians, and given to the military and the socialites (Ruby & Heine 2011; Kellman, 2000). Sobal (2005) makes the connection between meat and privilege even in modern times, especially among men who assert their status through consumption of meat. Furthermore, connecting back to the theory of Dhont & Hodson (2014) explaining meat eating as an expression of human supremacy beliefs, the study sample also revealed that the ideological findings were more prominent among right wing adherents. This suggest that political ideologies that can be generalized as more common within high income households, share stronger human supremacy beliefs, leading to higher meat consumption, as statistically proven through the data collection.

6 Conclusion

The following chapter will include a summary of the conclusions that can be drawn from the discussion of the empirical findings and what contributions the study has made theoretically, as well as practical implications. Lastly, the chapter will also address the limitations of the study and the suggested future research on the topic.

6.1 Overall conclusion

6.1.1 Stereotypical genderization affects purchase intention

The purpose of this study was to investigate the marketing of plant-based meat substitutes in regard to stereotypical gender roles and how they may affect the decision-making process of such products. The starting point would ultimately lead to the formulation of the first research question; *Does stereotypical genderization of a plant-based meat substitute affect the consumer purchase intention?*

The conclusion of the empirical findings is that the gender of the consumer affects the perception of a plant-based meat substitute. Women are more likely to favor a plant-based meat substitute than men through higher level of purchase intention. The dietary preferences of the consumer also affect the purchase intention towards a plant-based meat substitute such as the one exposed in the stimulus. The findings empirically support that masculinity is closely related to human supremacy and dietary preference. Consumers with higher self-perceived masculinity are more likely sympathize with human supremacy ideologies, more likely to eat meat, recorded eating more meat on a monthly average, than consumers with lower self-perceived masculinity. This contributes to the current research on the correlation between meat and masculinity with the finding that not only dietary preference but also meat consumption frequency is affected by self-perceived masculinity.

The effect of gender and level of masculinity was tested empirically and the results concluded that men showed higher purchase intention towards the stimuli with masculine attributes than feminine attributes. This strengthened the theory of men feeling an increased sense of congruence with the product when it was exposed in a stereotypically masculine setting. However, the findings proved that the same conclusion could not be drawn for the female population. Women show lower levels of purchase intention when being exposed to the feminine stimuli than to the masculine stimuli. Therefore, the population cannot be generalized into different target audiences based on gender, since both genders show higher purchase intention towards consuming a product marketed with stereotypically masculine attributes over feminine attributes. The plant-based meat substitutes that are marketed with masculine attributes does not only invite consumers of the male sex that have a high self-perceived masculinity, but also increase the likelihood of a female purchasing the product. Ultimately, the consumer-stimuli congruence is a driving force for men but not women in the decision-making process for plant-based meat substitutes. In conclusion, to answer the first research question; *Yes, stereotypical genderization of a plant-based meat substitute affect the consumer purchase intention, where congruence has positive effect on men.*

6.1.2 Social values explain the decision-making process

In order to fully investigate the underpinning explanatory variables, and as to what causes the outcome of the decision-making process for plant-based meat substitutes, the second research question was formulated; *What are the explanatory variables in the decision-making process for a plant-based meat substitute?*

The data concludes that the decision-making process for plant-based meat substitutes can be explained by the TPB model in such a way that the consumer's attitude, social norms and perceived behavioral control affect the purchase intention towards the product. It is also possible to conclude that the TPB can be extended with category relevant variables such as human supremacy, dietary preference and meat consumption frequency in order to increase the explanatory value of the regression model. However, these variables were not statistically accepted as predictors for both stimulus, and therefore only received partly support. Both the TPB and the extended model showed higher explanatory value for women than men. It is therefore possible to conclude that the male population have a more complex process than women for the plant-based meat substitute products. As the study has empirically established, part of this complexity can be explained by the dimension of masculinity and its connection to the reluctance of meatless diets. The findings ultimately shed light on the paradox of meat and masculinity (Arvola, 2008; Dowsett et al., 2018). The complexity of food choices for men is described by Newcombe et al. (2012) as process where they "use food in their personal and collective performances and as a grounding force for self-expression" and is therefore challenging to empirically study. This is also supported with the findings that social norms have higher effect on purchase intention for men than women. Furthermore, the results conclude that women are more prone to experience perceived behavioral control as a factor in choosing a plant-based meat substitute, while men did not prove to perceive this variable equally as relevant. This result is an indication that the male population either have less perceived control over what they eat than women, or are less likely to experience this as a factor in their decision-making process for plant-based meat substitutes. In conclusion, to answer the second research question; *attitude, social norms, perceived behavioral control, human supremacy and dietary preference are concluded as explanatory variables in the decision-making process for a plant-based meat substitute. However, these vary depending on the gender of the consumer. Out of the explanatory variables tested in this study, social norms is the highest significant predictor of purchase intention for men, and dietary preference is the highest significant predictor of purchase intention for women.*

6.2 Theoretical contributions

Firstly, in contrast to most studies in the current body of research within this field, the study is based on an experimental approach instead of an explorative approach. The results of this study measures effects in terms of purchase intention towards plant-based consumption and thus bring empirical evidence to what has previously been discussed, but not empirically tested. Additionally, instead of investigating sustainable consumption from the viewpoint of meat consumption, this study takes on the viewpoint of consumption of plant-based meat substitutes. Furthermore, this study is based on a sample of Swedish respondents, which to the authors knowledge has not previously been performed.

Secondly, the results of this study contribute to theory within the field of sustainable consumption behavior by confirming previous research with the support on the first two hypotheses. The first hypothesis confirms previous research stating that women are to a larger extent adapting to a plant-based diet. Further, the results from the second hypothesis confirms the relationship between meat consumption, masculinity and human supremacy beliefs, that has previously been theorized from inductive research but now confirmed with empirical replication. The study provides synthesized coherence with previous marketing theory on gender-stimuli congruence combined with sustainable consumption behavior problematizing the resistance of men towards changing meat consumption behavior. Answering to Pidgeon and Fischhoff (2011) urging marketers and environmental researchers to collectively identify solutions on how to raise purchase intention towards plant-based meat substitutes, this study applies previous marketing theory on meat consumption behavior. The results indicate that gender-stimuli congruence can help increase purchase intention towards plant-based meat substitutes for men. However, by indicating that non gender-stimuli congruence showed higher purchase intention among women, this study partly contradict previous marketing theory when tested in the context of consumption of plant-based meat substitutes.

Thirdly, this study provides progressive coherence with consumption behavior theory by showing that the TPB model is a useful predictor of purchase intention within the context of consumption of plant-based meat substitutes. The results of this study show that attitude, social norms and perceived behavioral control are significant predictors of purchase intention for plant-based meat substitutes. Furthermore, the results contribute to the TPB by showing that the model have a higher explanatory value for women than men in the context of plant-based consumption. Results suggest that TPB may not be as suitable in predicting the sustainable consumption behavior of men as it is for women, although only confirmed for plant-based meat substitutes.

Lastly, the results of this study suggest a need for developing the TPB with an extended version of the model with additional predictors in the research on plant-based consumption. This is shown as human supremacy and dietary preference provided additional explanatory value on purchase intention towards plant-based meat substitutes and that dietary preference had a higher explanatory value on purchase intention for women than the original pillars of the TPB model.

6.3 Managerial implications

First and foremost, the results of this study contribute with practical implications for companies selling plant-based meat substitutes and marketers creating the communication for these products. The study empirically confirms the potential benefits of using alternative ways of marketing plant-based meat substitutes in order to engage a larger audience. With the help of the findings from this study, decision-makers could ultimately penetrate the market by attracting new consumers while increasing sales from the existing target group. The study suggests that by promoting plant-based meat substitutes in similar ways that meat is being portrayed, the purchase intention of consumers is likely to increase. In other words, advertisements with masculine attributes should increase the purchase intention of new customers (men in general), while increasing the purchase intention of existing customers (women in general). Further, the study attempts to explain the decision-making process for a plant-based meat substitute with an extended version of the TPB model, which could

be useful for marketers to take into consideration. The results present variables that affect purchase intention, both positively and negatively, and also pinpoints variables that have no effect on purchase intention and should therefore be in focus.

However, marketers must also consider the potential negative spillover effects that masculine genderization of plant-based meat substitutes may bring. The prevailing discussion on sexism and gender inequality becomes evident if marketers start adopting communication that for decades has been damaging for women and their role in society. Applying stereotypically masculine attributes may consolidate the power imbalance between the sexes and their relationship to food. This connects back to the initial theories of Adams (1990), stating that the genderization of meat negatively affects the female role in society, forcing her to a role submission. This opens up for a societal implication of fundamental proportion. Ultimately, by promoting sustainable consumption in accordance with the findings of this study, marketers could neglect other important societal issues such as gender equality.

Lastly, the study confirms previous research by emphasizing the skewed gender balance among meat eaters and non-meat eaters, despite the shared common knowledge of the negative environmental impact of meat consumption among the two groups. This brings indirect implications for policy makers and the general public. The alarming amount of people rejecting plant-based diet calls for a joint commitment from multiple stakeholders to take action forcing a change. Such initiatives could for example be politicians raising the tax on meat products, thereby burdening meat eaters and benefiting non-meat eaters. Eventually, if no change is in made, the provocative idea of *ecocide* may become reality and not only a subject of popular debate.

6.4 Limitations and criticism of the study

The study is subject to several limitations. Firstly, a criticism that can be directed towards whether or not the research questions are answered. Regarding the first research question, the results showed statistical support for men, but could not be supported for women on the desired confidence level. Since the aim of the study was to first and foremost investigate if marketing could help change the purchase intention of plant-based meat substitutes, it would be desired to receive statistical support for both genders in this question. However, the research questions were directed towards both genders and the study was able to fully answer them in regard to the whole sample, as presented in the additional findings. Further the answer for the second research question can be considered not fully complete. This because the additional variables only received partly statistical support, and also taken into consideration that only a selected number of explanatory variables were tested and collectively not successful in explaining the whole variance of purchase intention.

Secondly, criticism can be directed to the choice of measurement variables. The experiment was performed through a questionnaire and was not based on live observations. Consequently, the measurement for the effect of congruence relies on the respondent's self-reporting behavioral intention and not actual behavior. However, since purchase intention is agreed upon by researchers as a powerful predictor of actual behavior (Morwitz, 2014) it was nevertheless considered a valid measurement.

Thirdly, the design of the stimuli advertisement implies limitations for this study. The study aims to explore how alternative marketing can improve intention towards plant-based meat substitutes. There are numerous ways of presenting a plant-based meat substitute in an advertisement, and the design choices made for this study may ultimately have affected purchase intention. By adding elements of for example environmental protection or health issues, the outcome of the study could have been different, and not restricted to the level of masculinity. Furthermore, the stimulus design was chosen to replicate an email advertisement by a food delivery company. It is possible that other types of advertisements, such as social media images could have generated different results. Also, it is conceivable that the choice of product could have impacted the result. Since burgers is generally perceived as a masculine product (Gal & Wilkie, 2010), it is possible that the product choice is the reason for why the plant-based burger described with masculine attributes was preferred by both men and women. Another choice of food with more gender-neutral attributes, that is also commonly offered as both a meat product and plant-based meat substitute, could perhaps generated other results.

Lastly, it can be questioned whether this type of marketing could be considered as social marketing. Even though it fulfills the definition of "an approach used to develop activities aimed at changing [...] people's behavior for the benefit of individuals and society as a whole", the direct managerial implications could be seen as simply benefiting the producers of plant-based meat substitutes (UK National Social Marketing Centre, 2011). This if the direct effect of increasing sales of plant-based products does not have the desired indirect effect of reducing meat consumption in general. It is important to note that increased consumption of plant-based meat substitutes does not automatically imply a decrease in meat consumption.

6.5 Suggestions for future research

The study of this thesis is based the possibility of changing behavior in a complex process were social underpinnings and self-expressive beliefs disrupt the decision-making process of the consumer. It is therefore of utter interest to further investigate why the consumers indicated such results. According to existing research on meat consumption and the resistance towards plant-based meat substitutes, the explanations for the consumer decision-making process should have been found in the study. However, since especially the female population did not react as predicted, there are still areas that ought to be investigated further.

A potential suggestion for future studies is replicating the stimulus in a real-life setting where consumer groups independently are exposed to masculine or feminine attributed advertisements to study whether the same patterns of higher purchase frequency appeared for the masculine stimuli. Such study would also reveal interesting findings on the transition from intention to actual purchase. The results could potentially differ when the consumer is faced with the situation of choosing a product that they may never have ordered before, and by doing so also avoiding a product they have previous experience of. With meat and plant-based meat substitutes being somewhat provocative products in the current era of sustainable consumption, there is also a risk factor for studies, such as this, that respondents may answer differently than they would have if faced with the situation in a real-life setting. This type of experimental study with an anthropological approach is therefore suggested.

Furthermore, the environmental aspect of the decision-making process was excluded from the scope of this study since it was based on the meat paradox, and whether the desired attributes of meat could be applied to its plant-based substitute in order to increase purchase intention. By including environmental- and health benefits of consumption in the stimulus for the plant-based meat substitutes, the results may change drastically since previous research has already confirmed the explanatory variable of knowledge about environmental issues in predicting purchase intention through the TPB model. To the knowledge of the authors, such a study has not been performed explicitly for plant-based meat substitutes in an extended model similar to the one presented in this study.

Lastly, given the weaker results of the explanatory variables for the male population it is suggested that an in-depth study is conducted in order to understand what the driving forces behind their decision-making process are. Such study could involve interpretivist research targeting the consumption of plant-based meat substitutes, ultimately with the goal of finding new or stronger predictors for the decision-making process. Such research would also benefit from conducting a second study where the predicting variables are tested in a similar matter to what was performed in this thesis. By doing so, the researchers are able to replicate the empirical hypothesis testing of this study but with even greater explanatory results. However, since the results of this study has proven the complexity of the decision-making process for men and that the current research is insufficient in explaining the driving forces of it, it is most likely required of future researchers to study the phenomenon from several angles. This is needed in order to pinpoint why plant-based meat substitutes are so fundamentally hard for meat consumers to transition to, whilst remaining true to their gender congruence and preferred self-expression through food consumption.

7 References

Adams, C. J. (1990). The Sexual Politics of Meat, Retrieved from SCOPUS database.

Adams, C. J. (1994). Neither man nor beast: Feminism and the defense of animals. New York: Continuum.

Adams, C. J. (2010). Why feminist-vegan now? Feminism & Psychology, 20(3), 302–317. https://doi.org/10.1177/0959353510368038

Ajzen I. (1985) From Intentions to Actions: A Theory of Planned Behavior. In: Kuhl J., Beckmann J. (eds) Action Control. SSSP Springer Series in Social Psychology. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-69746-3_2

Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In L. Berkowitz (Ed.), Advances in experimental social psychology, Vol. 20 (p. 1–63). Academic Press. https://doi.org/10.1016/S0065-2601(08)60411-6

Allen, M. W. & Ng, S. H. (2003). Human values, utilitarian benefits and identification: The case of meat. European Journal of Social Psychology, 33, 37-56.

Andreasen, A. R. (2002). Marketing Social Marketing in the Social Change Marketplace. Journal of Public Policy & Marketing, 21(1), 3–13. https://doi.org/10.1509/jppm.21.1.3.17602

Anxo, D., Flood, L., Solaz, A., Mencarini, L., Pailhé, A. & Tanturri, M. (2011). Gender Differences in Time Use over the Life Course in France, Italy, Sweden, and the US. Feminist Economics. 17. 159-195. 10.1080/13545701.2011.582822.

Arvola, A., Vassallo, M., Dean, M., Lampila, P., Saba, A., Lähteenmäki, L., et al. (2008). Predicting intentions to purchase organic food: The role of affective and moral attitudes in the theory of planned behaviour. Appetite, 50(2-3), 443-454. doi:10.1016/j.appet.2007.09.010

Austgulen, M. H., Skuland, S. E., Schjøll, A., & Alfnes, F. (2018). Consumer readiness to reduce meat consumption for the purpose of environmental sustainability: Insights from norway. Sustainability (Switzerland), 10(9) doi:10.3390/su10093058

Australian Alliance for Children & Youth [ARACY]. (2012). Annual Report 2012. Collected from: https://www.aracy.org.au/publications-resources/command/download_file/id/221/filename/ARA0200_ARACY_Ann_Rep_080413.pdf

Avery, J. (2012). Defending the markers of masculinity: Consumer resistance to brand gender-bending. International Journal of Research in Marketing, 29(4), 322–336.

Batra, R. & Ahtola, O. (1991). Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes. Marketing Letters. 2. 10.1007/BF00436035.

Beard, A. (2018). Men buy more from manly men. Harvard Business Review, 2018(September-October) Retrieved from SCOPUS database.

Bearden, W.O., Netemeyer, R.G. & Haws, K.L. (2011). Handbook of Marketing Scales. Multi-Item Measures for Marketing and Consumer Behavior Research. 10.4135/9781412996761.

Bem, S. L. (1974). The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 42(2), 155-162. doi:10.1037/h0036215

Birke, L. I. A. (1994). Feminism, animals, and science: The naming of the shrew.

Bogueva, D., & Phau, I. (2016). Meat Myths and Marketing. In T. Raphaely, & D. Marinova (Eds.), Impact of Meat Consumption on Health and Environmental Sustainability (pp. 264-276). Hershey, PA: IGI Global. doi:10.4018/978-1-4666-9553-5.ch015

Bourdieu, P. (1984). Distinction: A social critique of the judgement of taste. London: Routledge & Kegan Paul.

Breckler, S. J. (1984). Empirical validation of affect, behavior, and cognition as distinct components of attitude. Journal of Personality and Social Psychology, 47(6), 1191-1205. doi:10.1037/0022-3514.47.6.1191

Breckler, S. J., & Wiggins, E. C. (1989). Affect versus evaluation in the structure of attitudes. Journal of Experimental Social Psychology, 25(3), 253-271. doi:10.1016/0022-1031(89)90022-X

Bryman, A., & Bell, E. (2015). Business research methods. Oxford: Oxford University Press.

Buerkle, C. W. (2009). Metrosexuality can stuff it: Beef consumption as (heteromasculine) fortification. Text and Performance Quarterly, 29(1), 77-93. doi:10.1080/10462930802514370

Calvert, A. (2014). You Are What You (M)eat: Explorations of Meat-eating, Masculinity and Masquerade. Journal of International Women's Studies, 16(1), 18-33. Available at: https://vc.bridgew.edu/jiws/vol16/iss1/3

Childs, N. & Maher, J. (2003). Gender in Food Advertising to Children: Boys Eat First. British Food Journal. 105. 408-419. 10.1108/00070700310497219.

Conner, M., Norman, P., & Bell, R. (2002). The theory of planned behavior and healthy eating. Health Psychology, 21(2), 194-201. doi:10.1037/0278-6133.21.2.194

Cronin, J. & McCarthy, M. (2011). Fast food and fast games: An ethnographic exploration of food consumption complexity among the videogames subculture. British Food Journal. 113. 720-743. 10.1108/00070701111140070.

Cronin, J. M., McCarthy, M. B., & Collins, A. M. (2014). Covert distinction: How hipsters practice food-based resistance strategies in the production of identity. Consumption Markets & Culture, 17(1), 2-28. doi:10.1080/10253866.2012.678785

Dhont, K., & Hodson, G. (2014). Does Lower Cognitive Ability Predict Greater Prejudice? Current Directions in Psychological Science, 23(6), 454–459. https://doi.org/10.1177/0963721414549750

Dowsett, E., Semmler, C., Bray, H., Ankeny, R. A., & Chur-Hansen, A. (2018). Neutralising the meat paradox: Cognitive dissonance, gender, and eating animals. Appetite, 123, 280-288. doi:10.1016/j.appet.2018.01.005

Eagly, A. H., & Chaiken, S. (1993). The psychology of attitudes. Orlando, FL, US: Harcourt Brace Jovanovich College Publishers. Retrieved from RIS Format UTF-8

Edgar, T., Boyd, S.D. & Palamé, M.J. (2009). Sustainability for behaviour change in the fight against antibiotic resistance: A social marketing framework. The Journal of antimicrobial chemotherapy. 63. 230-7. 10.1093/jac/dkn508.

Edwards, K. (1990). The interplay of affect and cognition in attitude formation and change. Journal of Personality and Social Psychology, 59(2), 202-216. doi:10.1037/0022-3514.59.2.202

Eisend, M. (2010). A meta-analysis of gender roles in advertising. Journal of the Academy of Marketing Science, 38(4), 418-440. doi:10.1007/s11747-009-0181-x

Ercin, E., Aldaya, M. & Hoekstra, A. (2012). The water footprint of soy milk and soy burger and equivalent animal products. Ecological Indicators. 18. 10.1016/j.ecolind.2011.12.009

Fagerli, R., & Wandel, M. (1999). Gender differences in opinions and practices with regard to a "healthy diet.". Appetite, 32(2), 171-190. doi:10.1006/appe.1998.0188

Fiala, N. (2007). Meeting the Demand: An Estimation of Potential Future Greenhouse Gas Emissions from Meat Production. Ecological Economics. 67. 412-419. 10.1016/j.ecolecon.2007.12.021.

Fiddes, N. (1991). Meat: A natural symbol. London: Routledge.

Fishbein, M. & Ajzen, Icek. (1975). Belief, attitude, intention and behaviour: An introduction to theory and research.

Fresco, L. O. (2009). Challenges for food system adaptation today and tomorrow doi:https://doi.org/10.1016/j.envsci.2008.11.001

Fugate, D. L., & Phillips, J. (2010). Product gender perceptions and antecedents of product gender congruence. Journal of Consumer Marketing, 27(3), 251-261. doi:10.1108/07363761011038329

Gal, D., & Wilkie, J. (2010). Real men don't eat quiche: Regulation of gender-expressive choices by men. Social Psychological and Personality Science, 1(4), 291-301. doi:10.1177/1948550610365003

Gavett, G. (2014). What You Need to Know About Segmentation. Harvard Business Review, [online] (8219). Available at: https://hbr.org/2014/07/what-you-need-to-know-about-segmentation/ [Accessed 10 Mar. 2016].

Gill, R. (2008). Empowerment/Sexism: Figuring Female Sexual Agency in Contemporary Advertising. Feminism & Psychology, 18(1), 35–60. https://doi.org/10.1177/0959353507084950

Godin, G. & Kok, G. (1996). The Theory of Planned Behavior: A Review of Its Applications to Health-Related Behaviors. American journal of health promotion : AJHP. 11. 87-98. 10.4278/0890-1171-11.2.87.

Goffman, E. (1979). Gender advertisements. New York: Harper & Row.

González, A. D., Frostell, B., & Carlsson-Kanyama, A. (2011). Protein efficiency per unit energy and per unit greenhouse gas emissions: Potential contribution of diet choices to climate change mitigation doi:https://doi.org/10.1016/j.foodpol.2011.07.003

Gorton, M. & Barjolle, D. (2014). Theories of Food Choice. Food Consumer Science: Theories, Methods and Application to the Western Balkans. 15-26. 10.1007/978-94-007-5946-6_2.

Gough, B. (2007). 'Real men don't diet': An analysis of contemporary newspaper representations of men, food and health. Social science & medicine (1982). 64. 326-37. 10.1016/j.socscimed.2006.09.011.

Graça, J., Calheiros, M. M., & Oliveira, A. (2014). Moral disengagement in harmful but cherished food practices? an exploration into the case of meat. Journal of Agricultural and Environmental Ethics, 27(5), 749-765. doi:10.1007/s10806-014-9488-9

Graça, J., Oliveira, A., & Calheiros, M. M. (2015a). Meat, beyond the plate. data-driven hypotheses for understanding consumer willingness to adopt a more plant-based diet. Appetite, 90, 80-90. doi:10.1016/j.appet.2015.02.037

Graça, J., Calheiros, M. M., & Oliveira, A. (2015b). Attached to meat? (un)willingness and intentions to adopt a more plant-based diet doi:https://doi.org/10.1016/j.appet.2015.06.024

Hamilton, M. C. (1991). Masculine Bias in the Attribution of Personhood: People = Male, Male = People. Psychology of Women Quarterly, 15(3), 393–402. https://doi.org/10.1111/j.1471-6402.1991.tb00415.x

Hearn, J., Nordberg, M., Andersson, K., Balkmar, D., Gottzén, L., Klinth, R., et al. (2012). Hegemonic masculinity and beyond: 40 years of research in sweden. Men and Masculinities, 15(1), 31-55. doi:10.1177/1097184X11432113

Hoek, A. C., Luning, P. A., Weijzen, P., Engels, W., Kok, F. J., & de Graaf, C. (2011). Replacement of meat by meat substitutes. A survey on person- and product-related factors in consumer acceptance. Appetite, 56(3), 662-673. doi:10.1016/j.appet.2011.02.001

Holm, L., & Møhl, M. (2000). The role of meat in everyday food culture: An analysis of an interview study in copenhagen doi:https://doi.org/10.1006/appe.2000.0324

Hopkins, P. D. (2015). Cultured meat in western media: The disproportionate coverage of vegetarian reactions, demographic realities, and implications for cultured meat marketing. Journal of Integrative Agriculture, 14(2), 264-272. doi:10.1016/S2095-3119(14)60883-2

Jacobsen, I. D. (2002). Vad, hur och varför? – Om metodval i företagsekonomi och andra samhällsvetenskapliga ämnen. Lund: Studentlitteratur.

O'Doherty Jensen, K. & Holm, L. (1999). Preferences, quantities and concerns: Sociocultural perspectives on the gendered consumption of foods. European Journal of Clinical Nutrition, 53, 351-359.

Joy, M. (2010). Why we love dogs, eat pigs, and wear cows: An introduction to carnism. San Francisco, CA: Conari Press.

Kachel, S., Steffens, M. C., & Niedlich, C. (2016). Traditional masculinity and femininity: Validation of a new scale assessing gender roles. Frontiers in Psychology, 7(JUL) doi:10.3389/fpsyg.2016.00956

Kahiluoto, H., Kuisma, M., Kuokkanen, A., & Mikkilä, M. & Linnanen, L. (2014). Taking planetary nutrient boundaries seriously: Can we feed the people?. Global Food Security. 3. 16-21. 10.1016/j.gfs.2013.11.002.

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

Kim, S., Cho, Y., Kim, H.m., Chung, O. & Kim, H., Jho, S. (2016). Comparison of carnivore, omnivore, and herbivore mammalian genomes with a new leopard assembly. Genome Biology. 17. 10.1186/s13059-016-1071-4.

Kotler, P. & Keller, K.L. (2012) Marketing Management. 14th Edition, Pearson Education.

Kubberød, E., Ueland, Ø., Rødbotten, M., Westad, F., & Risvik, E. (2002). Gender specific preferences and attitudes towards meat doi:https://doi.org/10.1016/S0950-3293(02)00041-1

Latvala, T., Niva, M., Mäkelä, J., Pouta, E., Heikkilä, J., Kotro, J., et al. (2012). Diversifying meat consumption patterns: Consumers' self-reported past behaviour and intentions for change doi:https://doi.org/10.1016/j.meatsci.2012.04.014

Lavine, H., Thomsen, C. J., Zanna, M. P., & Borgida, E. (1998). On the primacy of affect in the determination of attitudes and behavior: The moderating role of affective-cognitive ambivalence. Journal of Experimental Social Psychology, 34(4), 398-421. doi:10.1006/jesp.1998.1357

Lea, E., Crawford, D. & Worsley, A. (2006). Public views of the benefits and barriers to the consumption of a plant-based diet. European journal of clinical nutrition. 60. 828-37. 10.1038/sj.ejcn.1602387.

Leroy, F. & Praet, I. (2015). Meat traditions. The co-evolution of humans and meat. Appetite. 90. 200-211. 10.1016/j.appet.2015.03.014.

Levi, A., Chan, K. & Pence, D. (2006). Real Men Do Not Read Labels: The Effects of Masculinity and Involvement on College Students' Food Decisions. Journal of American college health : J of ACH. 55. 91-8. 10.3200/JACH.55.2.91-98.

Lieven, T., Grohmann, B., Herrmann, A., Landwehr, J.R. and van, Tilburg, M. (2014), The Effect of Brand Gender on Brand Equity. Psychol. Mark., 31: 371-385. doi:10.1002/mar.20701

Lloyd, H.M., Paisley, C.M., & Mela, D.J. (1993). Changing to a low fat diet: attitudes and beliefs of UK consumers. European journal of clinical nutrition, 47 5, 361-73 .

Love, H. J., & Sulikowski, D. (2018). Of meat and men: Sex differences in implicit and explicit attitudes toward meat. Frontiers in Psychology, 9 doi:10.3389/fpsyg.2018.00559

Lupton, D. (1996). Food, the body and the self. London: Sage Publications, http://www.loc.gov/catdir/enhancements/fy0656/96067744-t.html

Lynn, A., & Lynn, M. (2003). Experiments and quasi-experiments: Methods for evaluating marketing options. The Cornell Hotel and Restaurant Administration Quarterly, 44(2), 75-84.

Macdiarmid, J. I., Douglas, F., & Campbell, J. (2016). Eating like there's no tomorrow: Public awareness of the environmental impact of food and reluctance to eat less meat as part of a sustainable diet. Appetite, 96, 487-493. doi:10.1016/j.appet.2015.10.011

Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A Comparison of the Theory of Planned Behavior and the Theory of Reasoned Action. Personality and Social Psychology Bulletin, 18(1), 3–9. https://doi.org/10.1177/0146167292181001

Magnusson, M. K., Arvola, A., Koivisto Hursti, U. -., Åberg, L., & Sjödén, P. -. (2001). Attitudes towards organic foods among swedish consumers. British Food Journal, 103(3), 209-227. doi:10.1108/00070700110386755

Mekonnen, M. & Hoekstra, A. (2012). A Global Assessment of the Water Footprint of Farm Animal Products. Ecosystems. 15. 10.1007/s10021-011-9517-8.

Milner, M.L., & Fodness, D. (1996). Product gender perceptions: the case of China. International Marketing Review, 13(4), 40-51.

Morwitz, V. (2012). Consumers' Purchase Intentions and their Behavior. Foundations and Trends® in Marketing. 7. 181-230. 10.1561/1700000036.

Newbold, P., Carlson, W., & Thorne, B. (2013). Statistics for business and economics. Upper Saddle River, NJ: Pearson Education.

Newcombe, M., McCarthy, M., Cronin, J. & McCarthy, S. (2012). "Eat like a man". A social constructionist analysis of the role of food in men's lives. Appetite. 59. 391-8. 10.1016/j.appet.2012.05.031.

Pelletier, N. & Tyedmers, P. (2010). Forecasting potential global environmental costs of livestock production 2000-2050. Proceedings of the National Academy of Sciences of the United States of America. 107. 18371-4. 10.1073/pnas.1004659107.

Pidgeon, N. & Fischhoff, B. (2011). The Role of Social and Decision Sciences in Communicating Uncertain Climate Risks. Nat Clim Chang. 1. 10.1038/nclimate1080.

Pliner, P., & Hobden, K. (1992). Development of a scale to measure the trait of food neophobia in humans. Appetite, 19(2), 105-120. doi:10.1016/0195-6663(92)90014-W

Pliner, P., & Chaiken, S. (1990). Eating, social motives, and self-presentation in women and men. Journal of Experimental Social Psychology, 26(3), 240-254. doi:10.1016/0022-1031(90)90037-M

Pliner, P., Rizvi, S. & Remick, A. (2009). Competition Affects Food Choice in Women. The International journal of eating disorders. 42. 557-64. 10.1002/eat.20649.

Pollay, R. (1986). The Distorted Mirror: Reflections on the Unintended Consequences of Advertising. The Journal of Marketing. 50. 18–36. 10.1353/asr.2000.0012.

Poor, M., Duhachek, A., & Krishnan, H. S. (2013). How images of other consumers influence subsequent taste perceptions. Journal of Marketing, 77(6), 124-139.

Popkin, B. (2006). Global nutrition dynamics: The world is shifting rapidly toward a diet linked with noncommunicable diseases. The American journal of clinical nutrition. 84. 289-98. 10.1093/ajcn/84.1.289.

Power, T.G., Bindler, R.C., Goetz, S. and Daratha, K.B. (2010) Obesity Prevention in Early Adolescence: Student, Parent, and Teacher Views. Journal of School Health, 80, 13-19. http://dx.doi.org/10.1111/j.1746-1561.2009.00461.x

Prättälä, R., Paalanen, L., Grinberga, D., Helasoja, V., Kasmel, A., & Petkeviciene, J. (2007). Gender differences in the consumption of meat, fruit and vegetables are similar in finland and the baltic countries. European Journal of Public Health, 17(5), 520-525. doi:10.1093/eurpub/ckl265

Raphaely, T. & Marinova, D. (2014). Flexitarianism: A more moral dietary option. Int. J. of Sustainable Society. 6. 189 - 211. 10.1504/IJSSOC.2014.057846.

Rogers, R. (2008). Beasts, burgers, and hummers: Meat and the crisis of masculinity in contemporary television advertisements. Environmental Communication: A Journal of Nature and Culture, 2, 281–301.

Roos, G., Prättälä, R., & Koski, K. (2001). Men, masculinity and food: Interviews with finnish carpenters and engineers doi:https://doi.org/10.1006/appe.2001.0409

Rothgerber, H. (2013). Real men don't eat (vegetable) quiche: Masculinity and the justification of meat consumption. Psychology of Men & Masculinity, 14(4), 363-375. doi:10.1037/a0030379

Rozin, P., Hormes, J., Faith, M. & Wansink, B. (2012). Is Meat Male? A Quantitative Multimethod Framework to Establish Metaphoric Relationships. Journal of Consumer Research. 39. 629-643. 10.1086/664970.

Ruby, M. B., & Heine, S. J. (2011). Meat, morals, and masculinity. Appetite, 56(2), 447-450. doi:10.1016/j.appet.2011.01.018

Ruby, M. (2012). Vegetarianism: A blossoming field of study. Appetite, 58, 141–150.

Sabaté, J. (2003). The contribution of vegetarian diets to health and disease: A paradigm shift?. The American journal of clinical nutrition. 78. 502S-507S. 10.1093/ajcn/78.3.502S.

Sandhu, N. (2018). Impact of Gender Cues in Advertisements on Perceived Gender Identity Meanings of the Advertised Product. FIIB Business Review, 7(4), 293–303. https://doi.org/10.1177/2319714518805829

Saunders, M., Lewis, P. and Thornhill, A. (2012) Research Methods for Business Students. Pearson Education Ltd., Harlow.

Scarborough, P., Allender, S., Clarke, D., Wickramasinghe, K. & Rayner, M. (2012). Modelling the health impact of environmentally sustainable dietary scenarios in the UK. European journal of clinical nutrition. 66. 710-5. 10.1038/ejcn.2012.34.

Schösler, H., de Boer, J., Boersema, J. J., & Aiking, H. (2015). Meat and masculinity among young chinese, turkish and dutch adults in the netherlands doi:https://doi.org/10.1016/j.appet.2015.02.013

Sheeran, P. (2002). Intention—Behavior Relations: A Conceptual and Empirical Review. European Review of Social Psychology. 12. 1-36. 10.1080/14792772143000003.

Shepherd, R. & Towler, G. (1992) Nutrition knowledge, attitudes and fat intake: application of the theory of reasoned action. Journal of Human Nutrition and Dietetics; 5, 387-397.

Silveira, J. (1980). Generic masculine words and thinking doi:https://doi.org/10.1016/S0148-0685(80)92113-2

Smil, V. (2002). Eating Meat: Evolution, Patterns, and Consequences. Population and Development Review. 28. 599-639. 10.1111/j.1728-4457.2002.00599.x.

Sobal, J. (2005). Men, meat, and marriage: Models of masculinity. Food and Foodways, 13(1-2), 135-158. doi:10.1080/07409710590915409

Sparks, P., Hedderley, D., & Shepherd, R. (1992). An investigation into the relationship between perceived control, attitude variability and the consumption of two common foods. European Journal of Social Psychology, 22(1), 55-71. doi:10.1002/ejsp.2420220107

Sparks, P., & Shepherd, R. (1992). Self-identity and the theory of planned behavior: Assessing the role of identification with "green consumerism.". Social Psychology Quarterly, 55(4), 388-399. doi:10.2307/2786955

Spears, N. & Singh, S. N. (2004). Measuring Attitude Toward the Brand and Purchase Intentions. Journal of Current Issues and Research in Advertising. 26. 53-66. 10.1080/10641734.2004.10505164.

Statista. (2019a). Forecasted market value of plant-based meat worldwide from 2018 to 2026. Colleted from: https://www.statista.com/statistics/877369/global-meat-substitutes-market-value/

Statista. (2019b). Sweden: Are you vegetarian or vegan?. Collected from: https://www-statista-com.ez.hhs.se/statistics/684820/survey-on-vegetarianism-and-veganism-in-sweden/

Stehfest, E., Bouwman, L., Van Vuuren, D. P., Den Elzen, M. G. J., Eickhout, B. & Kabat, P. (2009). Climate benefits of changing diet. Climatic Change, 95(1-2), pp. 83-102, doi: http://dx.doi.org/10.1007/s10584-008-9534-6

Stein, R. I., & Nemeroff, C. J. (1995). Moral overtones of food: Judgments of others based on what they eat. Personality and Social Psychology Bulletin, 21(5), 480-490. doi:10.1177/0146167295215006

Steinfeld H., Gerber P., Wassenaar T., Castel V., Rosales M.& de Haan C.. 2006. Livestock's long shadow: environmental issues and options.Rome, Italy: FAO. Google Scholar

Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. British Food Journal, 107(11), 808-822. doi:10.1108/00070700510629760

Thøgersen, J., & Ölander, F. (2006). The dynamic interaction of personal norms and environment-friendly buying behavior: A panel study. Journal of Applied Social Psychology, 36(7), 1758-1780. doi:10.1111/j.0021-9029.2006.00080.

Till, B. D., & Priluck, R. L. (2001). Conditioning of meaning in advertising: Brand gender perception effects. Journal of Current Issues & Research in Advertising, 23(2), 1-8. doi:10.1080/10641734.2001.10505116

Tuorila, H., Cardello, A. V., & Lesher, L. L. (1994). Antecedents and consequences of expectations related to fat-free and regular-fat foods. Appetite, 23(3), 247–263. https://doi.org/10.1006/appe.1994.1057

Trafimow, D., & Sheeran, P. (1998). Some tests of the distinction between cognitive and affective beliefs. Journal of Experimental Social Psychology, 34(4), 378-397. doi:10.1006/jesp.1998.1356

Twigg, J. (1983). Vegetarianism and the meanings of meat. In: A. Murcott (Ed.) The Sociology of Food and Eating. Pp. 18–30. Aldershot: Gower Publishing.

UK National Social Marketing Centre. (2011). Social Marketing Benchmark Criteria. Collected from: https://www.culturehive.co.uk/wp-content/uploads/2014/01/51.-Benchmark-criteria-NSMC.pdf

United Nations. (2007). Intergovernmental Panel on Climate Change (IPCC) and Albert Arnold (Al) Gore Jr.. Collected 2019-11-01 from https://www.un.org/en/sections/nobel-peace-prize/intergovernmental-panel-climate-change-ipcc-and-albert-arnold-al-gore-jr/index.html

United Nations. (2019). Greta Thunberg tells world leaders 'you are failing us', as nations announce fresh climate action. Collected 2019-11-01 from https://news.un.org/en/story/2019/09/1047052

United States Environmental Protection Agency [EPA]. (2019). Global Greenhouse Gas Emissions Data. Collected 2019-11-01 from https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data

Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). Use of mass media campaigns to change health behaviour. The Lancet, 376(9748), 1261-1271. https://doi.org/10.1016/S0140-6736(10)60809-4

Wardle, J., Haase, A., Steptoe, A., Nillapun, M., Jonwutiwes, K. & Bellisle, F. (2004). Gender Differences in Food Choice: The Contribution of Health Beliefs and Dieting. Annals of behavioral medicine: a publication of the Society of Behavioral Medicine. 27. 107-16. 10.1207/s15324796abm2702_5.

Weston, P. (2019, 23 September). Top British barrister says eating meat could become illegal. The Independent. Collected 2019-11-01 from https://www.independent.co.uk/environment/eating-meat-illegal-vegans-michael-mansfield-qc-labour-conference-a9115656.html

Wong, F., Huhman, M., Patnode, C., Asbury, L., Bretthauer-Mueller, R., McCarthy, S. & Londe, P. (2004). VERB™ — A Social Marketing Campaign to Increase Physical Activity Among Youth. Preventing chronic disease. 1. A10.

Zanna, M. P., & Rempel, J. K. (1988). Attitudes: A new look at an old concept. (pp. 315-334). Paris, France: Editions de la Maison des Sciences de l'Homme. Retrieved from RIS Format UTF-8

8 Appendix

8.1 Pre-study 1: Interview questions

Q1 What is the role of Uber Eats in the value chain between restaurants and consumers?
Q2a How do Uber Eats contact its customer base?
Q2b How often do Uber Eats contact its customer base?
Q2c What is the purpose when Uber Eats contact its customer base?

Q3a What components are usually included in the contact with the customer base?
Q3b What type of content is usually included in the contact with the customer base?

Q4a Are particular items or dishes promoted in the communication?
Q4b What measurements are used to evaluate the performance of such communication?

Q5a What are the most common items or dishes sold through the platform?
Q5b What type of items or dishes have been trending recently?
Q5c Do restaurants in general offer alternatives for non-meat eaters, such as plant-based meat substitutes?
Q5d Are plant-based meat substitutes becoming more popular on the platform?

8.2 Pre-study 2: List of words

Maskulina	Neutrala	Feminina
Stark	Aptitretande	Mumsig
Tuff	Energifylld	Kalorisnål
Utmanade	Munvattnande	Slank
Kraftfull	Sjudande	Drömmig
Proteinrik	Smakrik	Lätt
Tung	God	Varsam

8.3 Pre-study 3: Visual design check

Stimuli control group: feminine attributes, focus female

Stimuli control group: feminine attributes, focus female & burger

Stimuli control group: feminine attributes, focus burger

Stimuli control group: masculine attributes, focus male

Stimuli control group: masculine attributes, focus man & burger

Stimuli control group: masculine attributes, focus burger

8.4 Main study

Prova den kalorisnåla, växtbaserade burgaren
Välj det mumsiga alternativet för en lättare dag

Beställ nu →

Missa inte en lätt nyhet

Nu har den äntligen anlänt, den nya kalorisnåla, växtbaserade burgaren. Fylld med varsamma smaker för dig av njuta av. Prova den nya burgaren och känn lättheten genom hela dagen,

Vad väntar du på? Prova den nya växtbaserade burgaren idag!

Beställ nu →

Stimuli control group: feminine attributes

Prova den proteinrika, växtbaserade burgaren
Välj det starka alternativet för de tuffaste dagarna

Beställ nu →
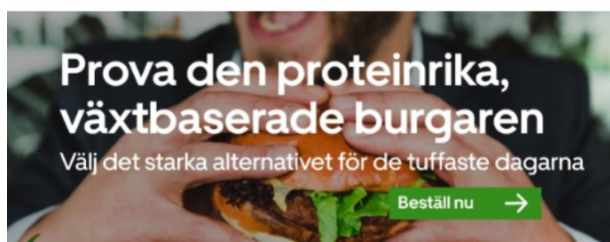
Missa inte en tung nyhet

Nu har den äntligen anlänt, den nya proteinrika, växtbaserade burgaren. Packad med tunga smaker för dig av njuta av. Prova den nya burgaren och känn styrkan genom hela dagen.

Vad väntar du på? Prova den nya växtbaserade burgaren idag!

Beställ nu →

Stimuli treatment group: masculine attributes

8.4.2 Questionnaire main study

Introduction

Det här är en undersökning för en Masteruppsats inom Marknadsföring på Handelshögskolan i Stockholm. Undersökningen tar ungefär 5 minuter att slutföra och vi ber dig vänligen noggrant läsa beskrivningarna för respektive fråga.

Stort tack för att du deltar i undersökningen, dina svar kommer givetvis vara anonyma.

Har du frågor kring undersökningen är du välkommen att kontakta oss,
Johanna Lundmark (23397@student.hhs.se)
Julia Olander (50431@student.hhs.se)

Bloc 1

Hur väl stämmer följande påståenden in på dig? (1 = Instämmer inte alls och 7 = Instämmer helt)

	1	2	3	4	5	6	7
Personer som är viktiga för mig tycker att jag borde välja det växtbaserade alternativet när jag beställer burgare nästa gång							
Tidningar och media tycker att jag borde välja det växtbaserade alternativet när jag beställer burgare nästa gång							
När det kommer till att välja mellan växtbaserade- och icke växtbaserade burgare, väljer jag det som personer i min närhet tycker jag borde							

Att äta växtbaserade burgare inom de kommande två veckorna skulle för mig vara...

	1	2	3	4	5	6	7	
Mycket svårt								Mycket enkelt

Om jag hade velat hade jag enkelt kunnat äta växtbaserade burgare inom de kommande två veckorna...

	1	2	3	4	5	6	7	
Stämmer inte alls								Stämmer helt

Hur mycket kontroll har du över att äta växtbaserade burgare inom de kommande två veckorna?

	1	2	3	4	5	6	7	
Ingen kontroll								Full kontroll

Antalet situationer utanför min kontroll som hade kunnat hindra mig från att äta växtbaserat inom de kommande två veckorna är...

	1	2	3	4	5	6	7	
Väldigt många								Väldigt få

Hur väl stämmer följande påståenden in på dig? (1 = Instämmer inte alls och 7 = Instämmer helt)

	1	2	3	4	5	6	7
Jag har för avsikt att äta växtbaserade burgare inom de kommande två veckorna							
Jag kommer att försöka äta växtbaserade burgare inom de kommande två veckorna							
Jag har för avsikt att vid upprepade tillfällen välja växtbaserade burgare							
Jag kommer att anstränga mig för att äta växtbaserade burgare inom de kommande två veckorna							
Jag är villig att betala extra för växtbaserade burgare							
Nästa gång jag beställer burgare kommer jag välja det växtbaserade alternativet							

Bloc 2

Tack för att du har slutfört den första delen av enkäten. Du kommer nu att få svara på några frågor om dig själv.

Vänligen ange dina kostpreferenser nedan:

Köttätare

Pescetarian

Vegetarian

Vegan

Oavsett din kostpreferens, hur många gånger i månaden äter du kött? (biff, fläsk eller kyckling)
Ange antalet i siffror, exempelvis 10.

_____

Hur väl stämmer följande påståenden enligt dig? (1 = Instämmer inte alls och 7 = Instämmer helt)

	1	2	3	4	5	6	7
Djurs liv har inte lika mycket värde som människors							
Djur är sämre än människor							
Det är inte konstigt att människor dominerar andra arter							

Bloc 3

Det är viktigt att du läser påståendena i undersökningen noggrant, därför kommer här en fråga om din uppmärksamhet. Vänligen markera siffran 8 nedan:

    1

    4

    7

    8

    11

    23

Slutför följande meningar... (1 = Mycket maskulin och 7 = Mycket feminin)

	1	2	3	4	5	6	7
Jag anser mig själv vara...							
Idealt skulle jag vilja vara...							
Traditionellt skulle mina attityder och åsikter anses vara...							
Traditionellt skulle mitt beteende anses vara...							

Bloc 4

Vänligen ange dina kostpreferenser nedan:

Man

Kvinna

Annat

Ålder (ange din ålder i siffror, exempelvis 25)

Primär sysselsättning:

Anställd

Egenföretagare

Student

Arbetslös

Högsta utbildningsnivå:

    Masterexamen eller högre

    Kandidatexamen

    Gymnasieexamen

    Grundskola

Inkomst per månad:

    < 10 000 SEK per månad

    10 000 - 30 000 SEK per månad

    30 001 - 50 000 SEK per månad

    > 50 001 SEK per månad

Vilken produkt såg du i annonsen i början av enkäten?

    Vegetarisk pizza

    Växtbaserad burgare

    Vegansk pasta

8.5 Cronbach's Alpha measurements for main study

Index	Questions	N	Cronbach's Alpha if Item Deleted	Final Cronbach's Alpha
Attitude	Good–Bad	247	.934	
	Unpleasant–Pleasant	247	.930	
	Against–For	247	.924	.945
	Harmful–Beneficial	247	.932	
	Unenjoyable–Enjoyable	247	.938	
Social norms	Most people important to me think I should..	247	.398	
	Magazines and media think I should..	247	.739	.739
	I want to do what most people that are important to me want me to do	247	.540	
Perceived behavioral control	For me eating plant-based burger is… easy	247	.789	
	If I wanted to, I could easily eat plant-based burgers..	247	.586	.741
	How much control over eating plant-based burgers in the next two weeks	247	.611	
	The number of events outside my control which could prevent	247	.705	
Purchase intention	I intend to eat..	247	.887	
	I will try to eat..	247	.892	
	I will make an effort to eat..	247	.890	
	I intend to eat plant-based burgers frequently in the next two weeks	247	.900	.913
	Willing to pay extra	247	.920	
	Next time I order burgers, I will choose the plant-based meat substitute	247	.895	
Human supremacy	The life of an animal is just not of equal value as the life of a human being	247	.504	
	Animals are inferior to humans	247	.548	.747
	There is nothing unusual at all in the fact that humans dominate other animal species	247	.757	
Masculinity	I perceive myself as…	247	.837	
	Ideally I want to be…	247	.851	.896
	Traditionally my attitude and beliefs would be perceived as…	247	.900	
	Traditionally my behavior would be perceived as…	247	.871	