

The Attractiveness of Vegetarian Products to Men and Women. The Role of Gender and Type of Experience.

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ABSTRACT

Recommendations to reduce meat consumption increase, particularly for health and environmental protection reasons. In response to these recommendations, more meat substitutes are proposed in supermarkets. However, the adoption of these products appears to be highly dependent on the gender of consumers (more women than men). At this point, we don't identify whether this difference is related to the vegetarian character of the product or to associated perceptions such as the fact that it is good for the environment or for health. This research aims to explain the greater attractiveness of these products for women than for men. The results show that the vegetarian character negatively influences the attractiveness of the product to men. On the other hand, the product is not perceived as more attractive to women. Interestingly, the unattractiveness of the product to men disappears with a direct experience of the product. We then discuss the gender asymmetry of the product in the light of work on the construction of gender patterns. We also discuss the role of the experience and propose recommendations for brands and retailers.

Keywords: Vegetarian; Gender; Food; Health; Environment; Experience

The attractiveness of vegetarian products to men and women. The role of gender and type of experience.

INTRODUCTION

Since the beginning of the twenty-first century, the consumption of meat has been increasingly questioned, particularly when it comes from intensive livestock farming, which is presented as harmful to the environment and to health. At the same time, vegetarian food has gained in popularity and is increasingly presented as an interesting alternative for the environment and health (Beverland, 2014; Stuart, 2009; Thøgersen, 2010). According to Allied Market Research, the global market for meat substitutes (tofu, tempeh, seitan, textured soy protein, pâtés, sausages, plant-based steaks, etc.) is expected to double between 2017 and 2026 to reach \$8.1 billion¹. In 2017, Europe was the leading continent for this market with 38.5% of global income. However, these products are marked by strong gender differences in their adoption (Ruby, 2012; Stevens, Kearney, & Maclaran, 2014). Two interrelated aspects seem to feed this difference: on the one hand, meat is associated with masculinity (Stevens et al., 2014), on the other hand, vegetarian products are perceived as healthier and better for the environment. These two characteristics make them more attractive to women (Brough, Wilkie, Ma, Isaac, & Gal, 2016). Our research therefore aims to better explain the greater attractiveness of meat substitutes for women considering these factors. We will begin by analysing the literature to understand the representations associated with these products and then present the methodology used and the results of our studies. Finally, we will discuss these results.

THEORETICAL BACKGROUND

Femininity of Vegetarian Products and Masculinity of Meat

A specificity of vegetarian products is that they are associated with femininity (and weakness) whereas meat products are associated with masculinity (and power) (Ruby, 2012; Stevens et al., 2014). The link between men and meat in mental representations has long been demonstrated. This association is based on the idea that meat, as a product of hunting, is a male domain (Rozin, Hormes, Faith, & Wansink, 2012) although recent studies have shown that hunting (of large or small animals) was as much a male as a female activity in many prehistoric societies (Cohen, 2017). Another underlying idea of the association between meat and masculinity is physiological through the need for muscle. Men are considered to be those who go out and engage in physical activity, so they must have a powerful constitution with strong muscles (Fiddes, 1991). They should therefore eat more meat, a source of protein and therefore of strength. But Rozin et al (2012) point out that the link between meat and sex is not based on biological similarities. Indeed, products of female origin such as dairy products and eggs are not perceived as being more feminine or less masculine. Thus, the association between men and meat is now more socially constructed than historically or biologically, but it is still deeply rooted and continues to determine the eating behaviour of men and women, as each tends to act as expected for his or her sex (Rozin et al., 2012; Sobal, 2005). The gender of food, in general, is based on culture rather than biology (Zellner, Garriga-Trillo, Rohm, Centeno, & Parker, 1999) and the goal for each sex is to maintain its gender identity (Sobal, 2005). Meals therefore contain less meat for women and more meat for men, and men tend to

¹ <https://www.alliedmarketresearch.com/press-release/global-meat-substitute-market.html>

prefer meals with meat (Sobal, 2005). For their part, vegetarian products are associated with femininity, and more women than men are vegetarian. Men will often prefer a flexitarian diet to a vegetarian diet (Rosenfeld, Rothgerber, & Janet Tomiyama, 2020).

Health and Respect for the Environment for Vegetarian Products

Vegetarian products are also identified as healthy and environmentally friendly (Beverland, 2014; Van Loo, Hoefkens, & Verbeke, 2017). Thus, they have been identified as beneficial to health, weight loss, animal welfare, food safety, fair and ethical trade, and as having a positive impact on the environment (Apostolidis & McLeay, 2016). The same associations are identified for ethical and green products (Brough et al., 2016; Shang & Peloza, 2016). Green products are perceived more as feminine and therefore tend to be avoided by men. One explanation is that even though each sex tries to maintain its gender identity, men are more concerned about maintaining their gender identity. Consequently, they will be more concerned about consuming products that correspond to their gender stereotypes and avoiding those that stereotype them as feminine. Finally, it should be noted that both women and men are aware of this stronger need to maintain gender identity for men (Brough et al., 2016).

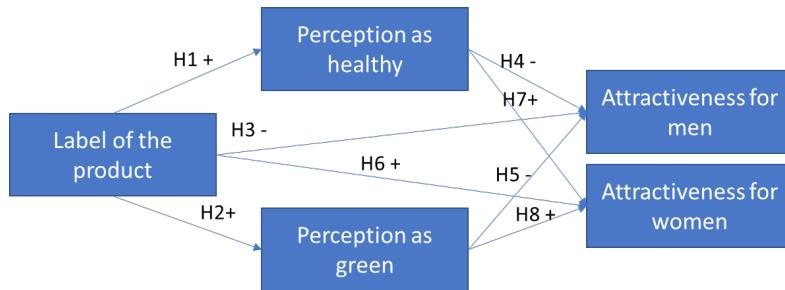
Effect of Direct/ Indirect Experience on the Perception of the Product

A direct experience of the product is an experience engaging all the senses. It could be the taste of the product in the field of food. An indirect experience is, for instance, the read of a review or description, the sight of a product on a display, a media reports or listens to hearsays (Hamilton and Thompson, 2007; Johnstone and Tan, 2015). Hamilton and Thompson (2007) highlight that direct experience leads to concrete mental representations because of the shorter psychological distance with the product whereas indirect experience leads to abstract mental representations of the product because of the greater psychological distance with it. Thus, in an indirect experience previous beliefs and stereotypes will be stronger. Without any experience or with an indirect experience, we expect that the meat-based products will be considered as product for men and plant-based products will be considered as products for women. Conversely, we assume that this effect could not occur in an experiential context.

HYPOTHESIS

Vegetarian products are stereotyped as feminine in two ways: firstly, because they do not contain meat and secondly because they are perceived as good for health and the environment. Our objective will be to identify, in the case of a vegetarian product, a meat substitute, if the tendency of the product to appeal to women and displease men is mediatised by its perception as being a healthy and environmentally friendly product. The following model presents our hypotheses in the context of absence of experience or in the context of indirect experience:

Figure 1: Model to be tested



We hypothesize that these effects will not occur in the context of a direct experience.

METHODOLOGY

To improve the validity of our study, we will conduct the tests with two possible mentions of vegetarian products: without meat or plant-based and in three contexts of product experience: without experience (study 1), indirect experience based on a photo (study 2), direct experience based on a tasting (study 3). (Hamilton and Thompson, 2007). In each study, respondents were asked to evaluate the healthiness, environmental friendliness and attractiveness for men and women. Respondents were placed in one of three conditions regarding the label of the product: a “pâté”, a “plant-based pâté”, a “without-meat pâté”. We chose these labels because they are both used by brands.

In study 1 ($n=126$), only the label was given (pâté, without meat pâté or plant-based pâté). In study 2 ($n=116$), a photo (the same for all conditions) was presented in addition. In study 3 ($n=138$), a pâté was offered for tasting with the three possible labels (some participants tasted a meat-based pâté, others tasted a plant-based pâté to control the effect of the product. No significative difference was observed between the two of them). The table below shows the distribution of respondents in each condition for each of the studies as well as the main characteristics of the respondents.

Table 1: Description of the sample

n	Study 1	Study 2	Study 3
	(Simple label)	(Photo)	(Tasting)
Pâté	41	33	47
Without meat pâté	45	48	46
Plant-based pâté	40	35	35
Average age	19 years old	21 years old	19 years old
Women/Men	45% / 55%	52% / 48%	57% / 43%

The tests are carried out by regression with Hayes' models in SPSS (Process, model 4).

RESULTS

The following table shows the results.

Table 2: Regression results (Process, Hayes 2018)

DV	Hyp	IV	Study 1		Study 2		Study 3	
			Pâté without meat pâté	vs.	Pâté plant-based pâté	vs.	Pâté without meat pâté	vs.
Healthy	H1	Vegetarian	$\beta=1,69***$		$\beta=2,76***$		$\beta=0,51$	$\beta=0,54$
Green	H2	Vegetarian		$\beta=0,33$	$\beta=2,27***$		$\beta=0,09$	$\beta=0,02$
Attractive to men	H3	Vegetarian		$\beta=-2,77***$	$\beta=-2,50***$		$\beta=-1,50**$	$\beta=-1,31*$
	H4	Healthy		$\beta=0,04$	$\beta=-0,99$		$\beta=0,09$	$\beta=-0,12$
	H5	Green		$\beta=-0,33*$	$\beta=-0,14$		$\beta=-0,14$	$\beta=0,25$
Attractive to women	H6	Vegetarian		$\beta=-1,62**$	$\beta=-0,009$		$\beta=-0,27$	$\beta=-0,59$
	H7	Healthy		$\beta=-1,36$	$\beta=-0,10$		$\beta=0,30$	$\beta=0,26$
	H8	Green		$\beta=0,32$	$\beta=-0,19$		$\beta=0,42**$	$\beta=0,29$
							$\beta=0,18$	$\beta=0,19$
							$\beta=0,18$	$\beta=0,09$

* p-value<0.10 **p-value<0.05 ***p-value<0.01

The results show that without experience, vegetarian products are perceived as better for health (H1). On the other hand, the perception of the product as being good for the environment without experiential support is only true for the mention "plant-based" (H2). The hypothesis is not valid when individuals have a direct or indirect experience. The perception of the vegetarian product as unattractive to men is verified when individuals have no experiential support and when they see a picture of the product (indirect experience). On the other hand, when they taste it (direct experience), the hypothesis is not confirmed. The perception of the product as being good for health and good for the environment does not influence its perceived attractiveness to men (H4 and H5). Labelling the product as vegetarian only negatively influences its perceived attractiveness to women when it is labelled as "without meat" and without experiential support. In the other cases ("plant-based" label and direct or indirect experience), no effect is found (H6). The perception of the product as healthy only positively influences its perceived attractiveness to women when it is labelled as "plant-based" and in a direct experience (H7). Finally, the perception of the product as being good for the environment positively influences its perceived attractiveness to women only when it is labelled as "without meat" and accompanied by an indirect experience.

DISCUSSION

The results of this research deepen the knowledge on the perception of vegetarian products and respond to a gap identified in the literature (Hartmann & Siegrist, 2017). More specifically, they help to better explain the effect of vegetarian product labelling on the attractiveness of a product for men and women. First, we show that the perception of vegetarian products as being healthy and good for the environment is only true without any experience. When a photo is presented (indirect experience) or when the product is tasted

(direct experience), vegetarian labelling has no effect. In this respect, our work confirms the need to test the perceptions of meat substitutes in consumption contexts (Elzerman, Hoek, van Boekel, & Luning, 2011; Elzerman, van Boekel, & Luning, 2013) and show that a concrete mental process occurs which annihilate the abstract representations. However, our result also highlight a motivation to buy (green and healthy) which may disappear during consumption and therefore raises questions about potential re-purchasing.

We confirm our hypothesis that vegetarian labelling negatively influences the perception of attractiveness of the product for men without experience and with an indirect experience. These results shed light on the reasons for the greater adoption of the vegetarian diet by women. As substitutes are perceived as unattractive for men (regardless of the gender of the respondent), men see the diversity of their food choice reduced in the vegetarian diet. However, the third study shows that when individuals taste the product, the perception of non-attractiveness for men disappears. It also confirms that abstract representations disappear with experience and a concrete mental process (Hamilton and Thompson, 2007). This is an interesting result for brands and retailers who wish to democratise their vegetarian products and extend them to male consumers: first purchase and tasting are keys to changing gendered perceptions. Concerning the attractiveness for women, only one condition negatively influences this perception: the mention "pâté without meat" in the simple labelling study (without experience). This result suggests that the statement itself makes the product unattractive whether the target is male or female. This lack of attractiveness could be explained by an incongruence between the product (pâté) and the statement because "without meat pâté" is probably still little known by the general public. We therefore observe that depending on the product's label, the results vary. Previous research has not tested different mentions of vegetarian products and it would be interesting to deepen this research angle to understand the representations associated with each mention.

Finally, this research highlights above all a gender asymmetry in the perception of the products. Indeed, the perception of the product as less attractive to men is not linked to its perception as more attractive to women. The greater need to maintain one's gender identity for men and the shared awareness between men and women of this need surely explains this result (Brough et al., 2016). Also, girls integrate very early on (from the age of 3) that the gender valued in society is the male gender, so they are more likely to adopt male gender behaviour than boys adopt female gender behaviour (Bauer, 1993; Le Maner-Idrissi & Renault, 2006; O'Brien et al., 2000; Signorella, Bigler, & Liben, 1993). Our results therefore show the extension of these gender patterns into adulthood and food consumption. Work on other vegetarian products will have to be carried out to confirm these results. It will also be necessary to conduct research on products perceived as attractive to men to verify the presence of this asymmetry.

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