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Short communication

Meat, morals, and masculinity

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ARTICLE INFO

Article history:

Received 27 November 2010

Received in revised form 12 January 2011

Accepted 13 January 2011

Keywords:

Masculinity

Meat

Morality

Vegetarianism

ABSTRACT

Much research has demonstrated that people perceive consumers of “good,” low-fat foods as more moral, intelligent, and attractive, and perceive consumers of “bad,” high-fat foods as less intelligent, less moral, and less attractive. Little research has contrasted perceptions of omnivores and vegetarians, particularly with respect to morality and gender characteristics. In two between-subject studies, we investigated people’s perceptions of others who follow omnivorous and vegetarian diets, controlling for the perceived healthiness of the diets in question. In both studies, omnivorous and vegetarian participants rated vegetarian targets as more virtuous and less masculine than omnivorous targets.

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Introduction

Throughout human history, food has been a central part of daily life, and across the globe, more money is spent on food than on any other major category (Samuelson, 1990). A substantial body of research has emerged on perceptions of consumers of healthy and unhealthy foods (for a review, see Vartanian, Herman, & Polivy, 2007), showing that those with healthy diets are seen as more moral, intelligent, and attractive. Meat, long considered both nutritionally dense (but see Azaïs-Braesco, Goffi, & Labouze, 2006, for an opposing view) and high in pathogen risk, is paradoxically the most cherished and most often tabooed category of food (Fessler and Navarrete, 2003) and is strongly linked with cultural conceptions of masculinity and power (Adams, 1991; O’Laughlin, 1974). However, scant attention has been paid to perceptions of those who abstain from the consumption of meat, and what little research that has compared omnivores and vegetarians has been confounded with the health of the diet. How are vegetarians and omnivores perceived by others? Do observers consider people’s food preferences in their judgments of those people?

Past research on vegetarianism

In recent national polls, 2.5% of Americans and 8% of Canadians self-identify as vegetarians (American Dietetic Association & Dieticians of Canada, 2003; Ipsos-Reid, 2004). Westerners become vegetarian for four principal reasons: concern for animal welfare,

concern for the environment, concern for health, and disgust at the sensory qualities of meat (e.g. Fox & Ward, 2008; Santos & Booth, 1996; Worsley & Skrzypiec, 1998). Although a small subset of individuals are vegetarians primarily because of disgust at the sensory qualities of meat, most converts to vegetarianism make the initial transition because of reasons of animal welfare or personal health, and concerns for the environment and disgust at the sensory qualities of meat develop later (Rozin, Markwith, & Stoess, 1997). Vegetarians’ disgust reactions to meat appear to be fuelled largely by their moral misgiving about the consumption of meat (Fessler, Arguello, Mekdara, & Macias, 2003). Vegetarians have also been shown to differ from omnivores in a number of attitudinal and demographic variables: for example, compared with omnivores, vegetarians report greater concern for environmental issues (Worsley & Skrzypiec, 1995), are less likely to endorse social hierarchies (Allen, Wilson, Ng, & Dunne, 2000), and display greater engagement of empathy-related areas of the brain when viewing scenes of human and animal suffering (Filippi et al., 2010).

Research conducted with North American undergraduates that has explored people’s perceptions of vegetarians found that women were more accepting of vegetarians than men (Walker, 1995), attitudes toward vegetarians were predominantly positive, especially among those scoring low in authoritarianism (Chin, Fisak, & Sims, 2002), and that omnivores tend to rate vegetarians as good, but weak people (Monin & Minson, 2007). Furthermore, Monin and Minson have linked attitudes toward vegetarians with perceived moral reproach—that is, omnivores rated vegetarians more negatively to the extent they thought that vegetarians saw them as morally inferior.

In sum, vegetarians are associated with a number of prosocial characteristics, and they are sometimes recognized as basing their

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dietary choices on such moral issues as animal welfare and a concern for the environment. Hence, we hypothesize that people may come to associate virtue with vegetarianism. This should especially be the case for vegetarians themselves who should be more likely to consider moral issues when judging people's diets.

Meat and masculinity

Throughout much of European history, meat has been closely associated with power and privilege—a staple for the gentry and a rare treat for the peasants. In more modern times, such as during World War I, meat was routinely diverted from civilian women to male combatants (Kellman, 2000). Adams (1991) argues that meat is a symbol of patriarchy, due to its long-standing associations with manhood, power, and virility, citing records from Western European, African, and Asian cultures. Fessler and Navarrete (2003) note that arbiters of cultural traditions, usually male, are especially likely to selectively maintain traditions that benefit themselves. This is readily apparent in the disproportionate number of meat taboos that only apply to women, monopolizing many meats so that only they and the other men are allowed to eat them. In contemporary North American society, meat is often viewed as an archetypal food for men, with many men not considering a meal without meat to be a “real” meal (Sobal, 2005), and the concept of the strong and hearty “meat and potatoes man” abounds (Adams, 1991). Given this, we further hypothesize that vegetarians will be perceived as less masculine than omnivores.

You are what you eat

Although a considerable body of research exists on character and personality judgments of those who eat high- and low-fat diets, research on perceptions of those who do and do not eat meat has largely been limited to personality and political leanings. Sadalla and Burroughs (1981) examined ratings of hypothetical target persons who were said to have specific food preferences, such as vegetarian, gourmet, or fast food. Participants most consistently described vegetarians as pacifist, weight-conscious, and liberal, whereas they described fast food lovers as patriotic, pro-nuclear, and conservative. Much later research has delineated food into categories of “good” and “bad,” which, in North American society, has become almost synonymous with “low-fat” and “high-fat.” Research by Fries and Croyle (1993) compared participant ratings of targets described as avoiding meat and high-fat foods, or eating a lot of fast food and avoiding salads and vegetables. Participants described the vegetarian/low-fat target as more fitness-oriented, slender, health-conscious, and intelligent, and rated the omnivore/high-fat target as more likely to party, drink alcohol, be overweight, and be less studious. Similarly, consumers of low-fat diets are seen as more attractive, intelligent, and middle-class than consumers of high-fat diets (Barker, Tandy, & Stookey, 1999). To date, the most comprehensive investigation of the effect of diet on perceived morality was conducted by Stein and Nemeroff (1995), demonstrating that consumers of a “healthy” diet (fruit, salad, whole-wheat bread, chicken and potatoes) were seen as more moral, attractive, and fit, but less masculine and less likeable, than consumers of an “unhealthy” diet (steak, hamburgers, french fries, doughnuts, and double-fudge ice cream sundaes). All three of these studies, however, confounded diet healthiness and meat eating, as all diets contained meat.

With regards to masculinity, research has demonstrated that those who eat “masculine foods” (e.g. pancakes and syrup) are perceived as more masculine than those who eat “feminine foods” (e.g. bagel with cream cheese; Mooney & Lorenz, 1997). Barker et al. (1999) found evidence that high-fat diets were more associated with males, whereas low-fat diets were more associated

with females, and Oakes and Slotterback (2004) found that women following a low-fat diet were rated as more feminine and less masculine than their high-fat counterparts, although ratings of male targets' masculinity and femininity were not different between low- and high-fat targets.

In sum, research suggests that people attend to others' diets as a means of understanding them. In the present study we tested the hypothesis that, holding constant the healthiness of diets in question, people will rate those who abstain from eating meat as more virtuous and less masculine than those who eat meat.

Study 1

Method

Participants

A total of 273 people participated in the study—80 participants completed the study on the University of British Columbia (UBC) campus (age $M = 22$, $SD = 6.36$; 61% women; 83.8% omnivores, 8.8% vegetarians, 7.6% other, e.g. pescatarian, kosher). An additional 193 participants, recruited from Facebook, Livejournal, and Veggieforums completed the survey at SurveyMonkey.com (age $M = 27$, $SD = 7.85$; 89% women; 5.8% omnivores, 85.2% vegetarians, 8.9% other). To facilitate categorization of participants as omnivores or vegetarians, we removed the “other” participants from analysis.¹ Subsequent analyses were performed on the remaining 247 participants (age $M = 25$, $SD = 7.60$; 81% women; 31.6% omnivores, 68.4% vegetarians). The participants were 68% Caucasian, 11% Asian, 15% other, and 6% unspecified. Seventy-five percent were in rungs 3, 4, and 5 of the 10 rung MacArthur scale of perceived socioeconomic status [SES], in which individuals indicate where they stand on a ‘social ladder’ (Cantril, 1965). As ethnicity and SES did not significantly moderate the investigated effects in either this, or the following study, these variables are not discussed further.

Procedure

In this and the following study, participants received informed consent forms, with all procedures approved by the University of British Columbia (UBC) research ethics board. Participants completed a packet in which they were asked to rate someone's personality from a small amount of information. The study packets were constructed in a 2 (target gender) \times 2 (target dietary choices; meat vs. no meat) design, such that each participant randomly received one of four descriptions of a hypothetical UBC student. A sample profile (female vegetarian) is as follows:

“Cindy is a 20-year-old female student at the University of British Columbia. She describes herself as active and physically fit, and says she regularly enjoys tennis and running. Cindy also enjoys movies, board games, and hanging out with her friends. She is 163 cm (5'4”) tall, and weighs 57 kg (125 lbs). The foods she eats most regularly are tofu, vegetable tempura, salad, whole wheat bread, and lentils.” The omnivore target was identical, except that her most regularly eaten foods were lamb, lean beef, salad, whole wheat bread, and chicken burgers. The male targets were named Mark, and described as 178 cm (5'10”) and 72 kg (158 lbs). Age, activities, and hobbies were kept constant across all four profiles, and male and female heights and weights were the same for omnivore and vegetarian targets. The profiles are a modified and expanded version of those utilized by Stein and Nemeroff (1995).

Following the target profile, participants rated the target on pairs of adjectives separated by an 8-point scale (adapted from Stein & Nemeroff, 1995). The adjective pairs were grouped into two scales: virtue, which we operationalized in the same way as Stein

¹ The overall conclusions in the subsequent analyses were the same when these 23 participants were not removed.

and Nemeroff (1995; tolerant of others/intolerant of others, ethical/unethical, kind-hearted/cruel, considerate/inconsiderate, concerned/unconcerned, virtuous/immoral) and masculinity (masculine/not masculine; not feminine/feminine). Participants also rated the healthiness of the target's food choices on an 8 point scale of healthy/unhealthy, allowing us to statistically control for any potential differences in perceived healthiness of the diets when interpreting the effects of diet choice on our dependent measures.

Results

The virtue scale showed high internal consistency (Cronbach's $\alpha = .89$) and the masculinity scale showed acceptable internal consistency (Cronbach's $\alpha = .76$). A higher score indicates greater perceived virtue, and greater perceived masculinity. To test our hypothesis that (a) participants would rate a vegetarian target as more virtuous than an omnivorous target, controlling for the perceived healthiness of target diet and (b) this effect would be less pronounced among omnivorous participants, we ran a 2 (Omnivorous/Vegetarian Target Diet) \times 2 (Omnivorous/Vegetarian Participant Diet) \times 2 (Man/Woman Target) ANCOVA, including the covariate of the perceived diet healthiness. The main effect of Target Diet was significant, $F(1, 228) = 33.66, p < .001, d = .74$, indicating that participants perceived vegetarian targets as more virtuous ($M = 4.76, SD = 1.71$) than omnivorous targets ($M = 3.86, SD = 1.14$). The interaction between Participant Diet and Target Diet was also significant, $F(1, 228) = 6.60, p < .02$. An analysis of simple effects revealed a greater difference between virtue ratings for vegetarian ($M = 4.92, SD = 1.52$) and omnivorous targets ($M = 3.63, SD = 1.14$) among vegetarian participants, $F(1, 155) = 42.41, p < .001, d = .95$, than between virtue ratings for vegetarian ($M = 4.75, SD = 0.70$) and omnivorous targets ($M = 4.22, SD = 1.04$) among omnivorous participants, although the effect was still significant for them $F(1, 72) = 7.79, p < .01, d = .59$ (see Fig. 1).

To test our hypothesis that participants would rate a vegetarian target as less masculine than an omnivorous target, controlling for diet healthiness, we ran a 2 (Omnivorous/Vegetarian Target Diet) \times 2 (Omnivorous/Vegetarian Participant Diet) \times 2 (Man/Woman Target) ANCOVA. The effect of Target Gender was significant, $F(1, 227) = 134.24, p < .001, d = 1.59$, indicating that men ($M = 4.54, SD = 1.51$) were perceived as more masculine than women ($M = 2.47, SD = 1.05$). The effect of Target Diet was also significant, $F(1, 227) = 9.18, p = .003, d = .34$, indicating that vegetarian targets were perceived as less masculine ($M = 3.29, SD = 1.51$) than omnivorous targets ($M = 3.83, SD = 1.68$). No other main effects or interactions were significant ($ps > .10$).

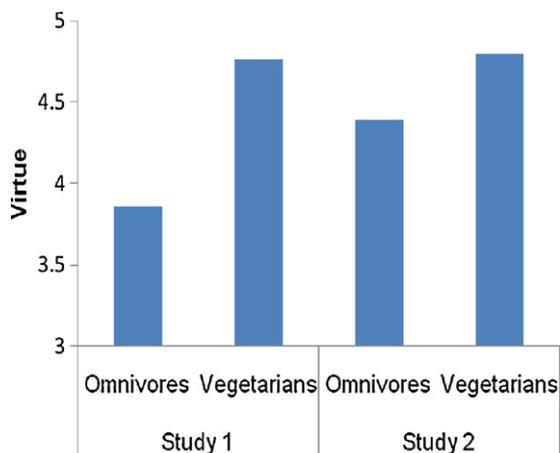


Fig. 1. Perceived virtue of omnivorous and vegetarian targets.

Discussion

Both vegetarian and omnivorous participants perceived the implied vegetarian targets, controlling for perceived healthiness of diet, to be significantly more virtuous than the implied omnivorous targets. Although the effect was more pronounced among vegetarian participants, perhaps because they more strongly associate the eating of or abstention from meat with one's code of ethics, omnivorous participants also rated the vegetarian targets as significantly more virtuous, demonstrating that this is not simply the result of ingroup favoritism. Presumably, omnivore participants perceived the omnivore targets as more similar to themselves, but as perceived similarity/dissimilarity to the self was not measured, this remains uncertain. Also, it is possible that the particular meats favored by the omnivore targets drove the differences in perceived virtue, as participants may have been especially perturbed by the frequent consumption of lamb, a baby animal. Thus, to allow for greater generalizability, in Study 2 we test our hypotheses with older, non-student targets, we test personality and virtue ratings of targets whose diets do not include reference to specific foods, and we measure and control for the extent to which participants feel the target is similar/dissimilar to the self.

Study 2

Method

Participants

A total of 88 omnivores, recruited from the UBC campus, participated in the study (age $M = 21, SD = 2.51$; 63% women).

Procedure

As in Study 1, the packets were constructed in a 2 (target gender) \times 2 (target dietary choices) design, but the targets were older, of unspecified vocation, and explicitly identified as either vegetarian or omnivorous, without mention of specific favorite foods. A sample profile (female vegetarian) follows:

"Suzy is 34 years old and enjoys reading, going to the movies, and hiking in her spare time. She is 165 cm (5'5") tall, and weighs 53 kg (117 lbs). She follows a varied vegetarian diet; eating a broad range of fruits, vegetables, whole grains, nuts and beans (but no fish or meat), and usually cooks for herself. Suzy's favorite styles of music are classical and jazz, and she enjoys frequenting local concerts." The omnivore targets' diet was described as follows: "She follows a varied omnivorous diet; eating a broad range of fruits, vegetables, whole grains, meat and fish, and usually cooks for herself." The male targets were named Jim, and described as 170 cm (5'7") and 67 kg (148 lbs). Age, activities, and favorite types of music were kept constant across all four profiles, and male and female heights and weights were the same for omnivore and vegetarian targets.

Following the target profile, participants rated the target on the same scales as in Study 1, and the additional item of similar/dissimilar to the self.

Results

The virtue scale showed acceptable internal consistency (Cronbach's $\alpha = .70$) and the masculinity scale showed high internal consistency (Cronbach's $\alpha = .91$). To test our hypothesis that the omnivorous participants would rate omnivorous targets as more similar to themselves, we ran a 2 (Omnivorous/Vegetarian Target Diet) \times 2 (Man/Woman Target) on ratings of similarity. The main effect of Target Diet was significant, $F(1, 84) = 4.34, p < .05, d = .45$, indicating that participants perceived omnivore targets as more similar to themselves ($M = 2.76, SD = 1.80$) than vegetarian

targets ($M = 1.96$, $SD = 1.69$). No other effects or interactions were significant, $ps > .50$.

To test our hypothesis that omnivorous participants would rate a vegetarian target as more virtuous than an omnivorous target, controlling for the perceived healthiness of target diet and similarity to the self,² we ran a 2 (Omnivorous/Vegetarian Target Diet) \times 2 (Man/Woman Target) ANCOVA, including the covariates of similarity to the self and perceived diet healthiness. The main effect of Target Diet was significant, $F(1, 81) = 6.77$, $p < .02$, $d = .58$, indicating that participants perceived vegetarian targets as more virtuous ($M = 4.80$, $SD = 0.80$) than omnivorous targets ($M = 4.39$, $SD = 0.81$). No other effects or interactions were significant, $ps > .10$.

To test our hypothesis that participants would rate a vegetarian target as less masculine than an omnivorous target, we first ran a (Omnivorous/Vegetarian Target Diet) \times 2 (Man/Woman Target) ANCOVA on participant's ratings of the target's masculinity, with the same covariates as before. The effect of Target Gender was significant, $F(1, 78) = 12.90$, $p < .001$, $d = .75$, indicating that men were perceived as more masculine ($M = 3.80$, $SD = 1.66$) than women ($M = 2.70$, $SD = 1.22$). The effect of Target Diet was marginally significant, $F(1, 80) = 2.90$, $p = .09$, $d = .37$, and the interaction between Target Diet and Target Gender was significant, $F(1, 80) = 5.97$, $p < .02$. An analysis of simple effects revealed that among women, the effect of Target Diet was not significant, $p > .50$, but among men, the effect of Target Diet was significant, $F(1, 40) = 5.29$, $p < .03$, $d = .74$, indicating that vegetarian men were perceived as less masculine ($M = 3.25$, $SD = 1.85$) than were omnivore men ($M = 4.38$, $SD = 1.32$).

Discussion

The results for the older, explicitly vegetarian targets in Study 2 followed the same pattern as the younger, implied vegetarian targets in Study 1. Controlling for perceived healthiness of diet, omnivorous participants again rated the vegetarian targets as significantly more virtuous than the omnivorous targets. It is also of note that the omnivorous participants in Study 2 rated the vegetarian targets as more virtuous, despite rating the omnivorous targets as more similar to themselves. By avoiding mention of potentially value-laden specific foods (e.g. lamb and tofu), we removed the possibility that the effects were driven by the associations people have with specific foods. Once again, vegetarian men were perceived as less masculine than omnivorous men, underscoring the link between men, meat, and masculinity (e.g. Adams, 1991; Sobal, 2005), but ratings of female targets' masculinity did not differ according to their dietary status.

General discussion

Taken together, the two studies support the notion that, above and beyond the previously found effects of diet healthiness, people infer a stronger sense of virtue and morality in those who abstain from eating meat. Especially for male targets, participants perceived vegetarians as less masculine than omnivores. Our results are concordant with the literature on perilous masculinity (e.g. Gilmore, 1990; Kimmel, 1996), which holds that manhood is tenuous and fragile. That is, in most cultures, manhood is earned through social displays, competition, and aggression, and is socially, rather than biologically determined. Recent research by Vandello, Bosson, Cohen, Burnaford, & Weaver (2008) has shown that in North America, manhood is still considered a precarious state, easily lost and requiring constant validation. Through purposefully abstaining from meat, a widely established symbol of power, status, and

masculinity, it seems that the vegetarian man is perceived as more principled, but less manly, than his omnivorous counterpart. People may benefit from knowing about this consequence in how their diet affects the way that others perceive them. It should not be forgotten where the bulk of the data were collected. UBC is known to be a rather liberal university, and is located in Vancouver, a city where vegetarianism is relatively common. As such, it is important to continue our future studies in both student and non-student samples, in different cultural settings, and with varied methods (see Henrich, Heine, & Norenzayan, 2010).

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² We also conducted analyses without controlling for perceived similarity to the self, which did not change the overall findings.