

# Psychology of Men & Masculinity

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Online First Publication, November 12, 2012. doi: 10.1037/a0030379

### CITATION

Rothgerber, H. (2012, November 12). Real Men Don't Eat (Vegetable) Quiche: Masculinity and the Justification of Meat Consumption. *Psychology of Men & Masculinity*. Advance online publication. doi: 10.1037/a0030379

# Real Men Don't Eat (Vegetable) Quiche: Masculinity and the Justification of Meat Consumption

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As arguments become more pronounced that meat consumption harms the environment, public health, and animals, meat eaters should experience increased pressure to justify their behavior. Results of a first study showed that male undergraduates used direct strategies to justify eating meat, including endorsing pro-meat attitudes, denying animal suffering, believing that animals are lower in a hierarchy than humans and that it is human fate to eat animals, and providing religious and health justifications for eating animals. Female undergraduates used the more indirect strategies of dissociating animals from food and avoiding thinking about the treatment of animals. A second study found that the use of these male strategies was related to masculinity. In the two studies, male justification strategies were correlated with greater meat consumption, whereas endorsement of female justification strategies was correlated with less meat and more vegetarian consumption. These findings are among the first to empirically verify Adams's (1990) theory on the sexual politics of meat linking feminism and vegetarianism. They suggest that to simply make an informational appeal about the benefits of a vegetarian diet may ignore a primary reason why men eat meat: It makes them feel like real men.

*Keywords:* vegetarianism, meat eating, masculinity, meat justification

“Vegetables are for girls . . .

If your instincts tell you following a vegetarian diet isn't manly, you're right.”

—*Men's Health*

The practice of eating meat has increasingly come under attack. Recent reports by the United Nations (2006) and the Pew Commission on Industrial Farm Animal Production (2008) concluded that farmed animals contribute more to global warming than all transport combined—40% more, to be precise. Livestock, for example, generates 65% of human-related nitrous oxide and 37% of all human-induced methane, which, respectively, have 296 and 23 times the global warming potential as carbon dioxide. A 2008 German study concluded that meat eaters contribute 7 times as much greenhouse gas emissions as vegans (Schiessl & Schwagerl, 2008). The environmental impact of meat extends beyond global warming: The United Nations report characterized the livestock industry as one of the top sources of a broad range of environmental problems, including the loss of biodiversity, land degradation, water shortage, and pollution.

The Pew Commission on Industrial Farm Animal Production (2008) also delineated a number of public health problems caused by meat production (and, by inference, consumption). Briefly, the meat industry increases the potential for pathogen and infectious disease transfer from humans to animals, increases the risk of food-borne infection, increases nontherapeutic antimicrobial use

and resistance, and exposes workers to a number of adverse health conditions, including bronchitis and asthma. Additionally, popular works by Foer (2009) and others have lifted the veil on the meat industry's treatment of animals. Whether it be tremendous overcrowding, unnatural feed—which promotes physical suffering—inhumane (and sometimes ineffective) slaughtering, or many other questionable practices, contemporary factory farming has been criticized on the grounds of animal cruelty. Roberts (2008) raises a different problem for the future of meat consumption: Because it is a highly inefficient use of food resources, meat eating is incompatible with projected population growth. Simply stated, increasing populations will experience starvation if meat consumption is not curtailed.

Given these problems brought on by meat consumption and the numerous benefits of eating a vegetarian diet, then, it is perhaps surprising that, at least in westernized nations, only a small percent self-identity as vegetarians. A 2008 Harris Interactive poll found that 3.2% of U.S. adults follow a vegetarian diet (Vegetarian Times, 2008). Similarly, the estimated percent of vegetarians in Australia (3%), Austria (3%), Belgium (2%), Canada (4%), Denmark (1.5%), France (<2%), Holland (4.3%), Norway (2%), Portugal (0.3%), Spain (4%), and Sweden (3%) comprise a small minority (European Vegetarian Union, 2007).

As the environmental, personal, and ethical arguments for vegetarianism become more pronounced and visible (cf., Corliss, 2002), there is evidence over the last few decades to suggest that a portion of the meat-eating public has become sympathetic to the cause. In a survey of 1,046 U.K. residents, over 25% said they consider themselves to be reducing meat consumption (Richardson, Shepherd, & Elliman, 1993). In Denmark, negative attitudes toward meat have been increasing (Holm & Mohl, 2000). The aforementioned Harris Poll revealed that 10% of Americans claimed to follow a “vegetarian-inclined” diet and 5% expressed

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“definite interest” in following a vegetarian diet in the future. Chin, Fisak, and Sims (2002) found low levels of antivegetarian sentiment in a sample of American college students.

It is a basic contention of the present work that this movement toward vegetarianism among some meat eaters reflects, in part, increasing social sanctions against eating meat. As meat eaters confront the inconsistency that may arise from appeals that their diet is harmful to the planet, to their bodies, and to other animals, they may attempt to feel better by real dietary change. But to the extent that their expression of pro-vegetarian or anti-meat sentiments is merely a strategic self-presentation, such claims should only increase discomfort in those individuals unable or unwilling to change their dietary behavior. There is some evidence to suggest that the latter may be common. For example, Richardson et al. (1993) found that less than 25% of those claiming to reduce meat consumption actually did, and Holm and Mohl (2000) reported that, despite socially desirable statements, the meat-eating behavior of the Danish was not really changing.

A climate of increased scrutiny toward eating meat combined with public, unsuccessful efforts to restrict meat eating, then, should create pressure on meat eaters in contemporary Western society to justify their dietary practices. Adams (2001) defined every meat eater as a blocked vegetarian whose behavior produces no less than 20 emotions, including annoyance, dejection, intimidation, nervousness, perplexity, helplessness, constriction, bewilderment, confusion, immobilization, ambivalence, awkwardness, puzzlement, hesitancy, surprise, depression, bitterness, terror, fear, and guilt! From a vegetarian perspective, how these uncomfortable feelings are reduced—whether through actual behavioral change or through psychological techniques such as denial and rationalization—will be a major determining factor in the success of the movement.

Gender appears to be an important moderator of attitudes toward vegetarianism, animal rights, and the eating of animals. Compared with men, women hold stronger negative attitudes toward animal use (Knight, Vrij, Cherryman, & Nunkoosing, 2004), are more likely to oppose animal experimentation (Broida, Tingley, Kimball, & Miele, 1993), favor the animal protection movement, support increased restrictions on animal use, and are more concerned about the suffering of lab animals (Eldridge & Gluck, 1996).

These attitudes toward animals contribute to attitudinal and behavioral differences toward eating meat. Females express more disgust and negative attitudes toward eating meat than males (Kubberød, Ueland, Rodbotten, Westad, & Risvik, 2002; Kubberød, Ueland, Tronstad, & Risvik, 2002). On the flip side, in modern North American society, many men do not consider a meal to be “real” unless it contains meat (Sobal, 2005). Females report eating less meat across American, Norwegian, English, New Zealand, Finish, Estonian, Latvian, Lithuanian, and Israeli samples (Allen, Wilson, Ng, & Dunne, 2000; Beerman, Jennings, & Crawford, 1990; Goldberg & Stycker, 2002; Harel, 2006; Kubberød, Ueland, Tronstad, et al., 2002; Prättälä et al., 2006; Santos & Booth, 1996; Smart, 1995). One study even found gender differences when controlling for education, rural versus urban dwelling, and age (Prättälä et al., 2006). These differences may not be entirely within the individual’s control: Through historical and cross-cultural analysis, citing records from Western Europe, Asia, and Africa, Adams (1990) notes that, worldwide, men eat more

meat than women, a disproportionate number of meat taboos apply to women, and in poor nations, women are not given opportunities to consume meat at all.

Additionally, a number of researchers have discovered that a greater percent of females report being vegetarian. According to a 1992 Yankelovich study, of the 12.4 million people in the United States who called themselves vegetarian, 68% were female, whereas only 32% were male (Smart, 1995). These differences have been seen in other American samples as well as in Australian and British samples (Fides, 1993; Kalof, Dietz, Stern, & Guagnano, 1999; Perry, McGuire, Neumark-Sztainer, & Story, 2001; Worsley & Skrzpiec, 1998). Attesting to the strength of the effect, gender (femaleness) was the single biggest predictor of vegetarianism in a large-scale American database (Gossard & York, 2003).

### Meat and Masculinity

The relative lack of male enthusiasm for animal rights and vegetarianism may best be understood as an outgrowth of the construction of masculinity itself. That is, connections between meat and masculinity have been made salient historically, especially when traditional masculinity has been threatened. In response to a perceived feminizing of the nation around the turn of the 20th century, Kimmel (1996) notes that one vehicle for resurrecting manhood was eating meat. More recently, there has been a resurgence in meat-as-masculinity discourse that writers have attributed to general threats to hegemonic masculinity (Rogers, 2008) and specific threats caused by metrosexuals (Buerkle, 2009). This backlash is evident in a number of popular culture outlets, primarily the fast-food industry, which repeatedly suggests that real men eat more meat and that compromised masculinity can be regained through meat consumption. Domino’s Pizza, Taco Bell, Burger King, McDonald’s, and General Motors have all produced popular TV advertisements in the last decade operating on this theme (for a review, see Rogers, 2008).

*Men’s Health*, a lifestyle magazine for men, with a U.S. circulation of 1.65 million and more than double that worldwide, has been shown to consistently perpetuate the notion that only real men eat meat. Stibbe (2004) analyzed six issues of *Men’s Health* from June through December 2000 and found that meat—especially red meat—was associated with positive images of masculinity; in fact, being a meat eater was explicitly identified as one of the attributes of an ideal man, primarily through increased muscle strength.

According to Adams’s (1990) feminist-vegetarian critique, these are not accidental connections: Meat consumption is a symbol of patriarchy resulting from its long-held alliance with manhood, power, and virility. Women and meat are linked as “absent referents.” Just as dead animals are absent from our language about meat, so, too, Adams (1990) argues, in descriptions of cultural violence, women are also often the absent referent. For example, when the language of sexual violence is used metaphorically (as in “the rape of the land”), women upon whom actual rape is committed become the absent referent. Through the point of intersection in the absent referent, sexual violence and meat eating are interconnected. Meat eating is linked to strength and manhood, then, whereas animal flesh is associated with women and femininity. Supportive of this notion, in wartime, meat is diverted from civilian women to the male soldier—the epitome of the masculine

man. Adams (1990) notes that, historically, the British even attributed their success in military campaigns and in conquering rival armies to their intake of meat, while, in many cases, their opponents consumed vegetable-based diets.

This would suggest that where meat is consumed the most, there should be the greatest gender inequity. Indeed, Sanday (1981) has found in an analysis of over 100 nontechnological cultures that meat-eating societies are characterized by patriarchy; women have the least power performing sex-segregated work, raising children, and worshiping male gods. Plant-based societies are the most egalitarian. At an ultimate level, then, Adams (1990) claims that meat is linked with masculinity because it elevates male power and produces female subjugation. If this analysis were true, then it would stand to reason that, at an individual level, men and women would think about and justify meat consumption in different ways.

### Study 1

Because resistance to following a vegetarian diet may have numerous negative societal consequences, the present study had two primary objectives: (a) to identify justifications that meat eaters employ and develop a questionnaire to measure these justifications; and (b) to examine how gender may be related to choice of meat-eating justification (MEJ) strategy and, secondarily, to diet. The author is unaware of any research on this topic to date. The study also examined meat consumption and possible associations between MEJ and dietary behavior. Because women are revealed in the literature to be more animal sensitive, it was hypothesized that they would use different justifications for eating meat than men. Given their greater concern for animal welfare, women should make lesser use of strategies that denigrate animals and justify their use, and instead, rely on strategies that take attention away from the act of eating animals, such as avoidance, dissociation, and underreporting their meat-eating behavior. Men, on the other hand, should use more direct ways to reduce guilt, such as various justifications, denial of animal pain, and embracing pro-meat attitudes. It was also expected that men would report greater meat consumption than women and that those consuming more meat would score higher on direct strategies that justify meat eating.

### Method

**Participants and procedure.** Undergraduate students (73 women; 52 men) enrolled in introductory psychology at a small private university in Louisville, Kentucky, received extra credit for their participation. The median age was 20.5 ( $SD = 3.44$ ) years. Participants were predominately White (90%), with 6% reporting being African American, 2% Asian, and 2% Hispanic. Each participant was asked to complete the following self-report measures.

#### Measures.

**MEJ.** To assess the extent to which participants used different strategies to justify meat consumption, a 27-item scale was developed for this research (a copy is provided in the Appendix). MEJ items were generated using four methods: (a) interviews with vegetarians; (b) interviews with nonvegetarians; (c) a review of the literature on vegetarianism; and (d) brainstorming and critique by the research team.

Nine strategies for justifying eating meat were identified conceptually and each was assessed with three items. The strategies are as follows: (a) pro-meat attitude ( $\alpha = .77$ ); (b) denial ( $\alpha = .71$ ); (c) hierarchical justification ( $\alpha = .71$ ); (d) dichotomization ( $\alpha = .55$ ); (e) dissociation ( $\alpha = .81$ ); (f) religious justification ( $\alpha = .83$ ); (g) avoidance ( $\alpha = .78$ ); (h) health justification ( $\alpha = .87$ ); and (i) human destiny/fate justification ( $\alpha = .55$ ). All items were scored on a 9-point Likert scale (1 = *strongly disagree*; 9 = *strongly agree*) indicating agreement with the statements. The 27 items together displayed solid reliability ( $\alpha = .85$ ). Table 1 presents correlations between the MEJ scales. With the exception of dichotomization, the scales tended to be significantly correlated with each other. Dissociation and avoidance tended to be negatively correlated with the other scales.

**Diet.** Eating behavior was assessed for a variety of meals, specifically those involving beef, chicken, pork, fish, or those completely vegetarian. For each, respondents were asked two items: “How often do you eat \_\_\_\_\_?” with response options ranging from 1 (*very infrequently*) to 9 (*very frequently*); and “Estimate how many times in an average week you eat \_\_\_\_\_,” with options ranging from 0 to 20. Responses on each two-item scale were positively correlated (i.e., beef,  $r[122] = .61, p < .001$ ; chicken,  $r[122] = .43, p < .001$ ; pork,  $r[122] = .70, p < .001$ ; fish,  $r[122] = .58, p < .001$ ; and vegetarian,  $r[122] = .71, p < .001$ ). Thus, the two items were summed to create an overall index

Table 1  
Correlations Between MEJ Scales, Study 1

Scale	1	2	3	4	5	6	7	8	9
1. Pro-meat	—								
2. Denial	.51*	—							
3. Hierarchical justification	.62*	.49*	—						
4. Dichotomization	.00	-.15	.06	—					
5. Dissociation	-.14	-.22	-.14	.52*	—				
6. Religious justification	.47*	.37*	.65*	.03	-.04	—			
7. Avoidance	-.13	-.26	-.24	.48*	.72*	-.18	—		
8. Health justification	.62*	.37*	.65*	-.06	-.10	.50*	-.11	—	
9. Human destiny/fate justification	.58*	.47*	.60*	-.07	-.08	.62*	-.06	.64*	—

Note. Correlations significant at  $p$  values other than .001 not reported.  
\*  $p < .001$ .

of beef consumed, chicken consumed, pork consumed, fish consumed, and vegetarian meals consumed. The average of these items was taken as a measure of overall consumption.

## Results

### MEJ.

**Overall MEJ.** A one-way ANOVA indicated that males ( $M = 5.44$ ,  $SD = 0.98$ ) scored higher on overall MEJ than females ( $M = 5.07$ ,  $SD = 1.03$ ),  $F(1, 123) = 4.15$ ,  $p < .05$ ,  $d' = .37$ .

**MEJ strategies.** Post hoc tests were then conducted on each MEJ subscale to test the hypothesis that males and females endorse different justification strategies. Means, standard deviations,  $F$ , and  $d'$  values<sup>1</sup> for each strategy by gender are presented in Table 2.

As predicted, males were more likely than females to endorse pro-meat attitudes, denial, hierarchical justification, religious justification, health justification, and human destiny/fate justification as ways to justify eating meat. Females were more likely than males to dissociate animals from the meat they consume and to avoid thinking about where meat comes from and how it is processed. There were no significant differences in how much females and males dichotomized animals that people eat into one group and other animals, such as pets, into another group.

### Diet.

**Overall consumption.** Males ( $M = 5.21$ ,  $SD = 1.24$ ) reported consuming the listed types of food more frequently than did females ( $M = 4.65$ ,  $SD = .92$ ),  $F(1, 121) = 8.50$ ,  $p < .01$ ,  $d' = .51$ .

**Consumption by food type.** Further tests examined gender differences in eating specific types of food. Means, standard deviations,  $F$ , and  $d'$  values for each food by gender are presented in Table 2.

Males reported consuming more beef, chicken, and pork than females and reported eating marginally more fish. Females were more likely than males to report eating meals that were completely vegetarian.

Correlations between diet and MEJ strategies are presented in Table 3. To prevent capitalizing on chance because of the large number of comparisons, only diet and MEJ variables correlated at  $p < .001$  will be reported, as indicated by Bonferroni correction. The reported amount of beef eaten was positively correlated with pro-meat attitudes, hierarchical, religious, health, and human destiny/fate justifications. The reported amount of chicken consumed was positively correlated with pro-meat attitudes, denial, hierarchical, religious, health, and human destiny/fate justifications, and negatively correlated with avoidance. The reported amount of pork eaten was positively correlated with pro-meat attitudes, hierarchical, and health justifications. The reported amount of vegetarian meals consumed was negatively correlated with pro-meat attitudes, hierarchical, religious, and health justifications, and positively correlated with avoidance. In general, even if not reaching the desired significance, meat consumption was positively related to male strategies and negatively related to female strategies, whereas the opposite was true for vegetarian consumption. The reported amount of fish eaten was uncorrelated with MEJ strategies. The direction of these correlations tended to be the same for males and females, although the associations were slightly stronger for females.

## Discussion

The primary focus of the first study was to determine if men and women embrace different strategies to justify meat consumption. As expected, men and women managed the psychological consequences of consuming animals in different ways. In line with predictions, men expressed more favorable attitudes toward eating meat, denied animal suffering, believed that animals were lower in a hierarchy than humans, provided religious and health justifications for consuming animals, and believed that it was human destiny to eat meat. These are direct, unapologetic strategies that embrace eating meat and justify the practice. They are the types of strategies that would be expected from a group that is more favorable toward animal use (Knight et al., 2004), supportive of animal experimentation, and less favorable toward the animal protection movement (Broida et al., 1993). In a sense, it appears that men are more comfortable eating meat: They score higher on overall justification strategies and have decided that animals are inferior, that they do not really suffer, that we are justified in eating them, and that they simply taste too good to not eat. Unsurprisingly, the more these beliefs are endorsed, the more meat and fewer vegetarian meals are reported consumed.

Conversely, women were more likely to dissociate the animal from the food on their plate and to avoid thinking about how the animal was treated before arriving on the plate. These are indirect, apologetic strategies used to maintain the practice of meat eating. They minimize thinking about the animal and how it has been processed, and represent a more “look-the-other-way” approach than the direct justifications offered by men. Because women are more concerned about the suffering of lab animals, favor the animal protection movement more, and favor increased restrictions on animal use, it follows that they do not embrace meat eating in the same way as men. Women seem to be more uncomfortable consuming animals, report doing it less, are not able to justify it as much as males, and prefer not to think about it.

## Study 2

The second study was designed to replicate the first study and also to specifically investigate the effects of masculinity on MEJ and diet. As previously suggested, masculinity may help explain why men and women justify meat consumption differently. In conforming to traditional masculine norms, men may more strongly identify with at least several of the male MEJ strategies. For example, denial of animal suffering is congruent with male norms of stoicism, toughness, and emotional restriction. Masculine men are not supposed to relate to the less fortunate, to display sensitivity or empathy, or to discuss their feelings. In fact, they have the greatest difficulty in expressing emotions that reflect a sense of vulnerability and in expressing attachment (see Levant, 1992), two attributes that would better enable individuals to identify with animal suffering. To raise concerns about the injustices of factory farming and to feel compelled by them would seem emotional, weak, and sensitive—feminine characteristics. In this sense, masculine men would be less likely to acknowledge or accept feelings that may lead them to consider adopting a vegetarian lifestyle. Masculine men may score higher in health justifications

<sup>1</sup> Cohen's  $d$  of .20 is considered small; .50, medium; and .80, large.

Table 2  
Gender Differences in MEJ Strategies and Diet, Study 1

Measure	Males		Females		F Value	Cohen's <i>d</i>
	Mean	SD	Mean	SD		
<b>MEJ Strategy</b>						
Pro-meat	6.01	1.70	4.79	2.04	12.39***	.64
Denial	3.59	1.81	2.82	1.57	6.39*	.45
Hierarchical justification	5.40	1.68	4.30	1.56	14.13***	.68
Dichotomization	5.94	1.18	6.28	1.90	1.28	.21
Dissociation	5.52	1.71	6.47	2.21	6.74*	.49
Religious justification	5.68	1.89	4.64	2.17	7.73**	.51
Avoidance	5.42	1.67	6.83	2.14	15.96***	.75
Health justification	6.06	1.83	4.90	1.91	11.68***	.62
Human destiny/fate justification	5.38	1.50	4.60	1.45	8.45**	.53
<b>Diet</b>						
Beef consumption	7.37	2.87	4.66	2.81	27.38***	.95
Chicken consumption	7.84	2.34	6.43	2.57	9.70**	.57
Pork consumption	4.20	2.51	3.22	2.13	5.39*	.42
Fish consumption	4.14	1.87	3.41	2.21	2.97	.34
Vegetarian consumption	2.55	2.32	5.51	3.50	9.43***	.99

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

for consuming meat because such men especially value toughness, strength, and athleticism, and may believe that meat is necessary for these outcomes. That is, masculine men may overemphasize the importance of being muscular and may erroneously believe

that meat is indispensable for this projection of toughness. Finally, norms of dominance and competitiveness may lead masculine men to believe that humans are at the top of a hierarchy and thus intended to eat animals. To the extent that dominance and accep-

Table 3  
Correlations Between MEJ Strategies and Diet, Overall, and by Females and Males, Study 1

	Beef	Chicken	Pork	Fish	Vegetarian
<b>Overall (<math>n = 123</math>)</b>					
Pro-meat	.56*	.44*	.44*	-.05	-.46*
Denial	.26	.37*	.26	-.08	-.19
Hierarchical justification	.43*	.38*	.31*	-.03	-.35*
Dichotomization	-.05	-.20	-.06	-.06	-.10
Dissociation	-.23	-.20	-.18	-.04	.21
Religious justification	.35*	.35*	.17	-.11	-.32*
Avoidance	-.20	-.35*	-.19	-.11	.33*
Health justification	.45*	.33*	.37*	-.09	-.34*
Human destiny/fate justification	.35*	.33*	.20	-.15	-.32
<b>Females (<math>n = 72</math>)</b>					
Pro-meat	.54*	.41*	.50*	-.19	-.50*
Denial	.21	.36	.39*	-.21	-.21
Hierarchical justification	.40*	.28	.28	-.27	-.38*
Dichotomization	-.06	-.28	-.16	-.04	.09
Dissociation	-.25	-.32	-.35	-.01	.09
Religious justification	.34	.33	.23	-.26	-.29
Avoidance	-.07	-.42*	-.26	-.09	.26
Health justification	.42*	.21	.28	-.29	-.31
Human destiny/fate justification	.35	.28	.24	-.36	-.32
<b>Males (<math>n = 51</math>)</b>					
Pro-meat	.46*	.37	.29	.03	-.43*
Denial	.17	.30	.06	.00	.05
Hierarchical justification	.28	.38	.25	.16	-.33
Dichotomization	.13	.07	.19	-.04	-.01
Dissociation	.03	.18	.18	.01	.18
Religious justification	.18	.27	-.01	.01	-.25
Avoidance	-.01	-.02	.07	.04	.09
Health justification	.31	.38*	.41*	.06	-.22
Human destiny/fate justification	.19	.29	.06	.03	-.31

Note. Correlations significant at  $p$  values other than .001 not reported.

\*  $p < .001$ .

tance of inequality are part of social constructions of masculinity, men may feel less discomfort exercising power and control over (lesser) animals. It seems likely, then, that masculine ideology is positively related to “male-style” MEJ strategies that may discourage following a vegetarian diet.

None of this analysis has been empirically tested at the individual level. That is, there is no quantitative research addressing whether males that are more masculine eat more meat and hold differing attitudes about it (i.e., justify meat consumption differently). Empirically, several studies indirectly suggest a link between eating meat and masculinity. Middle-aged Finnish carpenters favored meat more than engineers and embraced masculinity and rejected femininity more (Roos, Prättälä, & Koski, 2001). Ruby and Heine (2011) demonstrated that, in two studies, omnivorous and vegetarian participants evaluated vegetarian targets as less masculine than omnivorous targets. Although this study demonstrates that others may associate images of masculinity with those who eat meat, it does not address whether men who are higher in masculinity themselves report engaging in greater meat justification and meat consumption. In the present research, then, a procedure similar to that used in the first study was followed. In addition, each participant’s level of masculinity was assessed. It was expected that masculinity should predict MEJ and dietary behavior, with those highest in masculinity preferring direct, unapologetic justification strategies and reporting the greatest meat consumption.

## Method

**Participants and procedure.** Undergraduate students (45 women; 44 men) enrolled in introductory psychology at a small private university in Louisville, Kentucky, received extra course credit for their participation. The median age was 19.5 ( $SD = 3.04$ ) years. Participants were predominately White (88%), with 9% reporting being African American, 2% Asian, and 1% Hispanic. Each participant was asked to complete the following self-report measures.

### Measures.

**MEJ.** MEJ was assessed with the same 27-item instrument as in Study 1. The overall reliability reached .89. Reliabilities for each strategy were generally high: pro-meat attitudes,  $\alpha = .89$ ; denial,  $\alpha = .71$ ; hierarchical justification,  $\alpha = .83$ ; dichotomization,  $\alpha = .53$ ; dissociation,  $\alpha = .83$ ; religious justification,  $\alpha =$

.89; avoidance,  $\alpha = .76$ ; health justification,  $\alpha = .92$ ; and human destiny/fate justification,  $\alpha = .79$ . Table 4 provides correlations between MEJ scales, which largely followed the same pattern as in Study 1.

Diet was assessed for beef consumption, chicken consumption, pork consumption, fish consumption, and vegetarian consumption, with the same two scales used in the first study. For each food type, the two items were significantly correlated: beef,  $r(85) = .69$ ,  $p < .001$ ; chicken,  $r(85) = .61$ ,  $p < .001$ ; pork,  $r(85) = .67$ ,  $p < .001$ ; fish,  $r(85) = .75$ ,  $p < .001$ ; and vegetarian,  $r(85) = .82$ ,  $p < .001$ .

**Masculinity.** The 26-item Male Role Norms Scale (MRNS; Thompson & Pleck, 1986) was used to determine how masculine the participants reported themselves. The scale consists of three subscales: status norm (“Success in his work has to be man’s central goal in this life,”  $\alpha = .90$ ); toughness (“When a man is feeling a little pain he should try not to let it show very much,”  $\alpha = .82$ ); and antifemininity (“It bothers me when a man does something that I consider ‘feminine,’”  $\alpha = .81$ ). Together, the items displayed strong internal consistency ( $\alpha = .93$ ) and were highly correlated: status–tough,  $r(80) = .68$ ,  $p < .001$ ; status–antifemininity,  $r(80) = .68$ ,  $p < .001$ ; and tough–antifemininity,  $r(80) = .73$ ,  $p < .001$ . As such, all 26 items were aggregated to form a composite score of masculinity.

The order of scales was counterbalanced so that half of the participants completed the MEJ and diet scales, followed by masculinity, whereas the other half first completed the masculinity measure. Order of presentation did not significantly affect responses on any of the MEJ items, on the diet items, or on masculinity, so responses were collapsed across order.

## Results

### MEJ.

**Overall MEJ.** A one-way ANOVA indicated that males ( $M = 5.51$ ,  $SD = 1.34$ ) scored higher on overall MEJ than females ( $M = 5.00$ ,  $SD = 1.08$ ),  $F(1, 88) = 4.05$ ,  $p < .05$ ,  $d' = .42$ .

**MEJ strategies.** Follow-up tests were conducted to assess gender differences in each specific strategy. Means, standard deviations,  $F$ , and,  $d'$  values for each strategy by gender are presented in Table 5.

In line with predictions and results from the previous study, males were more likely than females to endorse pro-meat attitudes,

Table 4  
Correlations Between MEJ Scales, Study 2

Scale	1	2	3	4	5	6	7	8	9
1. Pro-meat	—								
2. Denial	.59*	—							
3. Hierarchical justification	.66*	.75*	—						
4. Dichotomization	.42*	.25	.24	—					
5. Dissociation	-.23	-.45*	.36*	.19	—				
6. Religious justification	.53*	.60*	.80*	.27	-.29	—			
7. Avoidance	-.21	-.44*	-.34	.25	.78*	-.18	—		
8. Health justification	.72*	.48*	.65*	.36*	-.15	.56*	-.08	—	
9. Human destiny/fate justification	.71*	.63*	.73*	.26	-.37	.72*	-.30	.70*	—

Note. Correlations significant at  $p$  values other than .001 not reported.

\*  $p < .001$ .

Table 5  
Gender Differences in MEJ Strategies and Diet, Study 2

Measure	Males		Females		F Value	Cohen's d
	Mean	SD	Mean	SD		
MEJ Strategy						
Pro-meat	6.37	2.24	4.24	2.30	19.67****	.94
Denial	3.84	2.02	2.55	1.20	13.55****	.78
Hierarchical justification	5.78	2.05	4.36	1.66	12.82****	.76
Dichotomization	5.71	1.89	5.82	1.72	0.83	.06
Dissociation	5.37	1.99	6.83	1.56	15.00****	.82
Religious justification	5.68	2.43	4.65	1.98	4.89*	.46
Avoidance	5.60	1.94	7.04	1.65	14.18****	.80
Health justification	5.88	2.34	5.04	2.09	3.21*	.38
Human destiny/fate justification	5.43	2.22	4.48	1.58	5.41**	.49
Diet						
Beef consumption	6.85	2.72	4.12	2.46	23.48****	1.05
Chicken consumption	7.23	2.65	5.35	1.87	14.33****	.82
Pork consumption	4.55	2.55	2.87	1.79	12.27****	.76
Fish consumption	3.07	2.25	2.85	2.22	0.21	.10
Vegetarian consumption	3.16	3.48	6.18	3.64	15.24****	.85

\*  $p < .10$ . \*\*  $p < .05$ . \*\*\*  $p < .01$ . \*\*\*\*  $p < .001$ .

denial, hierarchical justification, religious justification, health justification (marginal significance), and human destiny/fate as ways to justify eating meat. Females were more likely than males to dissociate animals from the meat they consume and to avoid thinking about where meat comes from and how it is processed. Once again, there were no significant differences between females and males in how much they dichotomized animals that people eat into one group and other animals, such as pets, into another group.

**Diet.**

**Overall consumption.** Males ( $M = 4.97, SD = 1.30$ ) reported consuming the listed types of food more frequently than did females ( $M = 4.27, SD = .93$ ),  $F(1, 88) = 8.09, p < .01, d' = .62$ .

**Consumption by food type.** Further tests examined gender differences in eating specific types of food. Means, standard deviations,  $F$ , and  $d'$  values for each food by gender are presented in Table 5.

Males reported consuming more beef, chicken, and pork than females. Females were more likely than males to report eating meals that were completely vegetarian.

Correlations between diet and MEJ strategies are presented in Table 6. The reported amount of beef eaten was positively correlated with pro-meat attitudes, denial, hierarchical, religious, health, and human destiny/fate justifications. The reported amount of chicken consumed was positively correlated with pro-meat attitudes, denial, hierarchical, health, and human destiny/fate justifications. The reported amount of pork eaten was positively correlated with pro-meat attitudes, denial, hierarchical, and health justifications. The reported amount of vegetarian meals consumed was negatively correlated with pro-meat attitudes, denial, hierarchical, religious, health, and human destiny/fate justifications. The reported amount of fish eaten was uncorrelated with MEJ strategies. The direction of these relationships was similar for males and females, although dissimilar to Study 1, correlations for males tended to be stronger.

**Masculinity.**

**MEJ and masculinity.** Masculinity was significantly related to all the “male-oriented” MEJ strategies: for pro-meat,  $r(80) =$

.75,  $p < .001$ ; for denial,  $r(80) = .61, p < .001$ ; for hierarchical justification,  $r(80) = .67, p < .001$ ; for religious justification,  $r(80) = .59, p < .001$ ; for health justification,  $r(80) = .65, p < .001$ ; and for human destiny/fate justification,  $r(80) = .69, p < .001$ . The female oriented strategies were negatively related (although not at the .001 level) to masculinity: dissociation,  $r(80) = -.31, p < .01$ , and avoidance,  $r(80) = -.26, p < .05$ .

**Diet and masculinity.** Masculinity was positively correlated with beef consumption, chicken consumption, and pork consumption, and negatively correlated with the amount of vegetarian meals consumed. The last row in Table 6 provides these correlations.

**MEJ, gender, and masculinity.** To examine the role that masculinity played in the relationship between MEJ and gender, partial correlations that controlled for masculinity were computed (see Smiler, 2008, for a similar approach). Partial correlations were chosen over regression primarily because it was hoped that a more inclusive statistical approach would help stimulate future research in this exploratory area and because sample size restrictions may have made regression unreliable.

Analysis revealed that gender was mostly unrelated to MEJ, controlling for masculinity. Table 7 presents these correlations. Pro-meat attitudes, hierarchical, religious, health, and human destiny/fate justifications were not significantly related to gender controlling for masculinity. Correlations between denial, dissociation, and avoidance strategies and gender were still significant, but weaker, controlling for masculinity.

**Discussion**

As in the previous study, males and females differed in the way they justified eating meat. Once again, females were more likely to use the indirect and apologetic strategies of dissociation and avoidance. Males were again more likely to opt for direct and unapologetic strategies. What this study uniquely demonstrates is that masculinity plays a vital role in these relationships. Controlling for masculinity, many of the gender differences in “male-style” MEJ



Table 6  
Correlations Between MEJ Strategies and Diet, Overall, and by Females and Males, Study 2

	Beef	Chicken	Pork	Fish	Vegetarian
Overall ( $n = 86$ )					
Pro-meat	.62*	.49*	.47*	.21	-.68*
Denial	.43*	.35*	.45*	.28	-.36*
Hierarchical justification	.47*	.37*	.48*	.21	-.44*
Dichotomization	.19	.25	.14	.02	-.33
Dissociation	-.24	-.11	-.29	-.21	.20
Religious justification	.36*	.27	.22	.18	-.36*
Avoidance	-.27	-.15	-.30	-.26	.16
Health justification	.50*	.43*	.39*	.20	-.55*
Fate justification	.46*	.40*	.33	.22	-.55*
Masculinity	.56*	.43*	.43*	.15	-.62*
Females ( $n = 43$ )					
Pro-meat	.63*	.28	.46*	.12	-.67*
Denial	.04	.06	.30	.02	-.08
Hierarchical justification	.19	-.02	.26	.02	-.17
Dichotomization	.27	.18	.21	.08	-.40
Dissociation	.21	.00	-.04	.08	.04
Religious justification	.16	-.08	.06	-.08	-.18
Avoidance	-.31	-.14	.06	-.05	-.11
Health justification	.59*	.23	.32	-.03	-.57*
Fate justification	.49*	.26	.34	.11	-.54*
Masculinity	.42	.20	.46*	.07	-.59*
Males ( $n = 43$ )					
Pro-meat	.43*	.50*	.33	.30	-.59*
Denial	.45*	.33	.41	.44*	-.33
Hierarchical justification	.48*	.43	.49*	.32	-.46*
Dichotomization	.22	.36	.14	-.03	-.39
Dissociation	-.26	.07	-.26	-.41	.02
Religious justification	.37	.35	.21	.36	-.38
Avoidance	-.42	.07	-.35	-.43	.07
Health justification	.38	.51*	.40	.38	-.47*
Human destiny/fate justification	.36	.39	.24	.28	-.51*
Masculinity	.50*	.41	.21	.26	-.51*

Note. Correlations significant at  $p$  values other than .001 not reported.

\*  $p < .001$ .

strategies disappeared (masculinity had less impact on the female dissonance-reducing strategies). Masculine norms of stoicism, toughness, emotional restriction, strength, athleticism, and dominance would seem to facilitate greater MEJ scores, especially on pro-meat attitudes, denial of animal suffering, hierarchical, religious, and human destiny/fate justifications. This study also dem-

onstrates that meat eating is linked to masculinity: Participants reporting greater meat consumption scored higher on masculinity. Differences in diet were again related to MEJ.<sup>2</sup>

### General Discussion

Across two studies, men and women demonstrated different ways of justifying meat consumption: Men used more direct, unapologetic strategies that embraced meat eating and offered more justifications, whereas women used more indirect, apologetic strategies that relied on dissociation and avoidance. These differences were directly related to masculinity.

Consistent with prior research (Beerman et al., 1990; Goldberg & Stycker, 2002; Kubberød, Ueland, Tronstad, et al., 2002; Santos

<sup>2</sup> There were minor differences in these correlations across the two studies. In Study 1, but not Study 2, chicken consumption was positively correlated with religious justification and negatively with avoidance. In Study 2, but not Study 1, beef and pork consumption were positively correlated with denial, and vegetarian consumption was negatively correlated with denial and human destiny/fate, and positively correlated with avoidance. Overall, though, the pattern of correlations between the two studies shared more commonalities than differences, that is, even though some effects did not meet the strict threshold for statistical significance, the direction of the relationships was similar across studies.

Table 7  
Correlations Between MEJ Strategies and Gender With and Without Masculinity Controlled, Study 2

	Gender, without masculinity control	Gender, with masculinity control
Pro-meat	.43****	.22*
Denial	.37****	.26**
Hierarchical justification	.36****	.17
Dissociation	-.38****	-.33***
Religious justification	.23*	.02
Avoidance	-.37****	-.32***
Health justification	.19*	.12
Human destiny/fate justification	.24**	.05

\*  $p < .10$ . \*\*  $p < .05$ . \*\*\*  $p < .01$ . \*\*\*\*  $p < .001$ .

& Booth, 1996), males reported eating more meat, especially red meat, than females. Because participants were asked how frequently they consumed different types of animals, and not how much they consumed per serving, these differences do not seem to simply reflect greater male caloric intake. Women reported eating completely vegetarian meals more often than did males. This reinforces prior research (Allen et al., 2000; Gossard & York, 2003; Perry et al., 2001) and suggests that perhaps one way females reduce negative feelings they may experience over eating meat is to reduce their intake of it. The effect sizes were quite large for diet, indicating that gender and, as Study 2 demonstrates, masculinity play a critical role in what individuals consume.

The present research extends prior findings on diet by demonstrating that reported vegetarian consumption is related to the endorsement of “female-style” approaches to handling dissonance, and reported meat consumption is related to the endorsement of “male-style” meat eating justification. The more respondents endorsed avoidance and dissociation, the less meat and more vegetarian meals they reported consuming. The more that respondents embraced the direct male justification strategies (especially pro-meat attitudes, hierarchical, religious, and health justifications), the more meat and fewer vegetarian meals they consumed (these effects were not found with fish consumption, suggesting that fish and meat are not thought of in the same manner). It may be that males who are high in meat justification eat more meat because such attitudes make heavy meat consumption psychologically tolerable.

This is the first empirical verification the author is aware of for the theory by Adams (1990) that links meat eating with masculinity. The present results are also relevant to prior research examining characteristics of meat eaters. In addition to being less concerned with environmental issues (Worsley & Skrzypiec, 1995), more likely to endorse social hierarchies (Allen et al., 2000), and having less activation of empathy-related brain regions when viewing scenes of human and animal suffering (Filippi et al., 2010), those who eat more meat can be characterized as being more masculine.

Accordingly, it seems reasonable to assume that following a vegetarian diet or deliberately reducing meat intake violates the spirit of Western hegemonic masculinity, with its socially prescribed norms of stoicism, practicality, seeking dominance, and being powerful, strong, tough, robust, and invulnerable (Courtenay, 2000; Lee & Owens, 2002). Male vegetarians seemingly violate a masculine food norm, noted by Levi, Chan, and Pence (2006), of eating what one wants when one wants it, and they implicitly question the typical masculine assessment of food based simply on its volume and price. Such individuals have basically cast aside a relatively hidden male privilege—the freedom and ability to eat without criticism and scrutiny, something studies have shown women lack (Bock & Kanarek, 1995; Chaiken & Pliner, 1987). In this sense, male vegetarians likely experience *discrepancy strain* (Pleck, 1981) from not conforming to the dominant cultural expectations pertaining to ideal manhood.

The present results can also be viewed as evidence of *dysfunction strain* (Pleck, 1981). Adhering to a meat-dominant diet may produce negative personal health consequences, such as increased body fat and cholesterol. This study, then, adds to a growing literature showing that masculinity, in many cases, can be harmful to one’s health, in part by leading to various risky health-related

behaviors (Levant, Wimer, Williams, Smalley, & Noronha, 2009), such as greater substance abuse (Mahalik, Lagan, & Morrison, 2006), tobacco use (Mahalik, Walker, & Levi, 2007), and avoiding help for mental health (Levant et al., 2009). This study suggests that the construction of masculinity is linked not only to unhealthy personal behavior but also to behavior unhealthy to others, the environment, and to animals.

The current study is limited by the sample being young, mostly middle class, and predominately European American. In line with the postmodern notion that there are masculine ideologies, rather than a unitary or monolithic ideology, Levant and colleagues have demonstrated differences in masculine ideology by ethnicity, age, gender, and marital status, among numerous variables (Levant & Fischer, 1998; Levant & Majors, 1997; Levant, Majors, & Kelley, 1998; Levant et al., 2003; Levant, Wu, & Fischer, 1996). In general, how men display masculinity depends on their social power (Courtenay, 2000). Low-status men reaffirm their masculinity through risk-taking behaviors (Courtenay, 2000), and African American and Latino cultures emphasize the most traditional views of masculinity (Levant et al., 2003), with stronger sanctions against deviancy from in-group norms. The current results, then, may not generalize to lower status, non-European samples—for such groups, pressures linking eating meat to manhood may be even stronger.

This study did not focus on individual differences, but it seems likely that some men may be less vulnerable to the masculine pressures associated with eating meat. De Visser and Smith (2007) note, for example, that masculine men can confidently endorse feminine activities because their masculinity is well established, a phenomenon they refer to as “trading masculine competence.” This claim is supported by the finding that binge drinking is inversely related to the number of other currencies of masculinity that young men possess (de Visser & Smith, 2006). Future research may examine whether men with compromised masculinities—be it from individuating characteristics, such as being poor athletes, or social status, such as being gay—may be more vulnerable to pressures to consume animals. It may also be informative to interview male vegetarians to learn more about how they manage the threat to masculinity brought on by engaging in a visible, nonmasculine practice.

Given the correlational nature of the current data, the direction of causality is also unclear. In line with recent reviews urging more experimentation in the psychology of men and masculinity (see Levant, 2011), future research could, for example, threaten masculinity and measure changes in reported or desired meat consumption; could prime meat consumption (e.g., through images of meat dishes vs. vegetarian dishes) and measure masculinity; or could ask participants to evaluate fictitious vegetarian targets who vary along sex and other dimensions. The present study assessed masculinity with the MRNS, its chief limitation being that it only measures three dimensions of masculinity, even though many experts believe masculinity to be more multidimensional (Levant, 2011). Predicting MEJ and diet by a wider range of masculinity dimensions may allow for a more complex understanding of these relationships. Levant, Wimer, and Williams (2011), for example, found that some facets of masculinity may serve as health protective behaviors, whereas others may serve as health risk factors (and, furthermore, that it depended upon which dimension of health behavior was examined). A related issue is whether all MEJ

strategies are equivalent in how much they influence dietary behavior. For instance, men have been found to evaluate food in terms of taste and satiety rather than health properties (Gough & Conner, 2006; Roos et al., 2001). Accordingly, although men may endorse health reasons for eating meat, in practice, this factor may not contribute much to their actual behavior. Additionally, the importance of MEJ strategies on diet may be moderated by ethnicity, sexual orientation, social class, and a host of other factors. For athletes and weightlifters, perceptions that meat is needed for positive health and strength may trump other justifications.

A more basic measurement issue that needs resolving concerns the poor performance of dichotomization. Its alpha was relatively low across both studies, and it correlated less strongly with the other MEJ scales, particularly in Study 1 (although it did significantly relate to the female strategies here). Future research may attempt to measure this construct differently. It should also be mentioned that the measurement of diet in the present study might be susceptible to error, as self-reports of one's eating habits may be prone to cognitive or motivational biases. Future studies may consider ways of reducing these potential distortions.

These limitations aside, a daunting and challenging question for researchers and practitioners alike is how to persuade masculine men to reduce meat intake. Part of the challenge is that, unlike the targets of some interventions such as smoking and drinking, society as a whole seems to embrace meat eating, thus potentially obscuring the problematic nature of masculinity in this domain. The present results also anticipate difficulty in converting males, especially masculine ones, to a vegetarian diet. Although some vegetarians are motivated by environmental concerns and disgust toward meat, the majority of converts initially do so because of animal welfare and health concerns (Rozin, Markwith, & Stoess, 1997). Previous research, though, has documented that males are less sympathetic to the plight of animals, and the present research would add more likely to deny animal suffering. Relating to health concerns, males in this study were actually more likely to cite personal health as a reason to *eat* meat, not avoid it. To the extent that masculine men are more hostile to animal welfare and perceive a vegetarian diet as unhealthy, masculinity once again appears to be a major barrier to reduced meat consumption. While realizing that, ultimately, the answer involves redefining masculinities or eliminating their importance, what follows are a few recommendations.

### Raise Awareness of Gender Socialization

Gender role socialization constrains an individual's ability to explore different identities and opportunities, often without conscious awareness. Thus, men may be unaware of how much their behavior, in general, is shaped by constructions of masculinity and, in particular, how their attitudes toward meat are shaped by masculinity. Even if men knowingly use meat consumption to enhance masculinity, they may not understand where masculinity arises from. The first step, then, in discouraging men from eating meat is to make them aware of the process and results of gender socialization (see Silverstein, Auerbach, & Levant, 2002, for similar suggestions in the domain of reconstructing fatherhood).

### Enlist Women As Change Agents

Without implying that men are incapable of changing themselves or other men, or that it is women's responsibility to change men, it may be possible for women to positively influence boys and men that play prominent roles in their lives. After all, the present results suggest that women have more ambivalence about eating meat, justify it less successfully, and consume less animal flesh. Transmitting these attitudes and behaviors to males would not be unprecedented. In the domain of health care, there is a long-standing tradition whereby women influence men (Norcross, Ramirez, & Palinkas, 1996). Silverstein et al. (2002) noted that wives play a prominent role in motivating and pressuring men to change their understanding of fatherhood and masculinity in general. As women gain greater financial independence, they may be less vulnerable to the pressure to serve meat to their husband, as described by Adams (1990). Given that women, as a group, reject masculine ideology more than men (Levant & Richmond, 2007), it would be important to target women who lack consciousness about meat consumption.

### Influence Perceptions of Norms

What an individual believes others are doing may provide important information about how the self should act, and this is especially evident in recent research on health. For example, social norms predict condom use (Peterson & Bakeman, 2006), adolescent smoking (Weiss & Garbanati, 2006) and driving (Linkenbach & Perkins, 2006), heart-related health behaviors (Mahalik & Burns, 2011), and general health-affirming behavior in men (Mahalik, Burns, & Syzdek, 2007). Interventions may address how men believe other men think and act regarding meat consumption. As young adults overestimate the frequency of risky behavior in their peers (Suls & Green, 2003), so, too, men may overestimate how much their peers genuinely enjoy meat and feel no discomfort about it. Discussion groups may counter pluralistic ignorance and help men establish more accurate norms by having members discuss their concerns about eating meat. To go further, concerned groups may want to promote and highlight examples of male vegetarians especially fitting the masculine stereotype (e.g., athletes, musicians). Such examples may be powerful because they do not easily allow men to discount the behavior or subtype the male vegetarian and may alter perceptions of how normative male vegetarianism is.

### Give Appeals a Masculine Frame

As meat eating becomes more problematic, an increasing number of informational appeals will likely be made to dissuade individuals from consuming animal flesh. These arguments will likely appeal to meat's negative impact on the environment, public health, and the welfare of factory-farmed animals. The present results suggest that a lack of information may not be the sole cause of resistance to changing to a vegetarian diet: Meat eating is linked to a motivation to conform to gender expectations, that is, a male desire to appear masculine and to feel like a real man.

Going beyond mere information, persuasive attempts must be framed so that they appeal to masculinity and make eating meat seem congruent with a masculine ideology. Similar suggestions

have been made to increase testicular self-examinations (Singleton, 2008), preventive health service utilization among African Americans (Hammond, Matthews, Mohottige, Agyemang, & Corbie-Smith, 2010), and general health-promoting behavior (Creighton & Oliffe, 2010; Sloan, Gough, & Conner, 2010). In this case, education campaigns could emphasize male norms such as autonomy and self-reliance—“Be your own man . . . think for yourself . . . be free from constraints of traditional masculinity”; rebellion and resistance—“Resist doing what is expected”; in control—“Seize control of your own health”; rationality—“Evaluate the costs of eating meat”; and activity and status—“Make an active choice that will also provide you greater energy to accomplish more at work.” Future research may wish to examine whether masculine men are more susceptible to certain types of appeals. Millar and Houska (2007) discovered, for example, that highly masculine participants were more affected by a fear-reducing message. In the present case, this might mean presenting messages to men that eating less or no meat will allow them to avoid some of the worry and distress associated with global warming and worsened personal health.

The success of a given frame may be moderated by the individual's social position and the importance of a particular MEJ strategy to that individual. For example, if being a protector is an important aspect of masculinity for a cultural group and an individual in that group is strongly affected by hierarchical justifications for eating meat, then appeals might frame the issue as a man's responsibility to protect animals from harm—that real men protect those that are dependent on them.

In short, as a social construct, there is nothing intrinsic about masculinity that suggests it must be characterized by a love for meat. The current research suggests that, for advocates of vegetarianism, ignoring this connection or simply making informational appeals will not likely work to the extent that such plots ignore motives to link the self with valued outcomes.

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## Appendix

### Meat-Eating Justification (MEJ) Scale

1. I enjoy eating meat too much to ever give it up. (PRO-MEAT)
2. Animals don't really suffer when being raised and killed for meat. (DENY)
3. It's acceptable to eat certain animals because they're bred for that purpose. (HIER. JUST.)
4. To me, there is a real difference between animals we keep as pets and animals we eat as Food. (DICHOT.)
5. When I look at meat, I try hard not to connect it with an animal. (DISSOC.)
6. God intended for us to eat animals. (REL. JUST.)
7. I try not to think about what goes on in slaughterhouses. (AVOID)
8. Meat is essential for strong muscles. (HEALTH JUST.)
9. It wouldn't surprise me to learn that scientists believe the human body (e.g., our teeth) has evolved to eat meat. (HD/FATE JUST.)
10. Meat tastes too good to worry about what all the critics say. (PRO-MEAT)
11. Animals do not feel pain the same way humans do. (DENY)
12. Humans are at the top of the food chain and meant to eat animals. (HIER. JUST.)
13. It seems wrong that people in some cultures eat dogs and cats. (DICHOT.)
14. I do not like to think about where the meat I eat comes from. (DISSOC.)
15. God gave us dominion over animals. (REL. JUST.)
16. I would have problems touring a slaughterhouse. (AVOID)
17. We need the protein we can only get in meat for healthy development. (HEALTH JUST.)
18. It violates human destiny and evolution to give up eating meat. (HD/FATE JUST.)
19. There is no food that satisfies me as much as a delicious piece of meat. (PRO-MEAT)
20. Meat is processed so that animal pain and discomfort is minimized and Avoided. (DENY)
21. Ultimately, animals are here to serve our needs. (HIER. JUST.)
22. I am more sensitive to the suffering of house pets like cats and dogs than other wild animals. (DICHOT.)
23. When I eat meat, I try not to think about the life of the animal I am eating. (DISSOC.)
24. It is God's will that humans eat animals. (REL. JUST.)
25. I try to stay away when people start talking to me in graphic terms about how the animals we eat suffer. (AVOID)
26. We need meat for a healthy diet. (HEALTH JUST.)
27. Our early ancestors ate meat, and we are supposed to also. (HD/FATE JUST.)

Received February 3, 2012

Revision received September 5, 2012

Accepted September 5, 2012 ■