

Research Article

MORALIZATION AND BECOMING A VEGETARIAN: The Transformation of Preferences Into Values and the Recruitment of Disgust

Paul Rozin, Maureen Markwith, and Caryn Stoess

University of Pennsylvania

Abstract—We describe a rather common process that we call *moralization*, in which objects or activities that were previously morally neutral acquire a moral component. Moralization converts preferences into values, and in doing so influences cross-generational transmission (because values are passed more effectively in families than are preferences), increases the likelihood of internalization, invokes greater emotional response, and mobilizes the support of governmental and other cultural institutions. In recent decades, we claim, cigarette smoking in America has become moralized. We support our claims about some of the consequences of moralization with an analysis of differences between health and moral vegetarians. Compared with health vegetarians, moral vegetarians find meat more disgusting, offer more reasons in support of their meat avoidance, and avoid a wider range of animal foods. However, contrary to our prediction, liking for meat is about the same in moral and health vegetarians.

In this article, we identify a process that we call moralization. This process works at both the individual and cultural levels, and involves the acquisition of moral qualities by objects or activities that previously were morally neutral. We believe that moralization is common, at both the cultural and the individual levels, and that it has significance for understanding norms, socialization, and, particularly, health-related behaviors and attitudes on health issues. The significance of moralization is that it converts preferences into values. Values are more durable than preferences, more central to the self, and more internalized (McCauley, Rozin, & Schwartz, 1995). We therefore suggest that values are more likely to promote cognitive consistency, and hence the accrual of multiple justifications for the relevant action or avoidance. Two other critical differences between values and preferences are that values, unlike preferences, are subject to institutional and legal support and that values are much more likely than preferences to be transmitted in the family environment, via socialization-internalization (Cavalli-Sforza, Feldman, Chen, & Dornbusch, 1982; Rozin, 1991).

Changes in attitudes to slavery are an example of moralization in American history. The clearest example on the current scene in the United States is the conversion of cigarette smoking from a personal preference into an immoral activity. The passive-smoking/sidestream-smoke debate has made a case that cigarette smoking harms other people, a clearly immoral act. As a consequence of moral aspects, governments and corporations have been enabled to discourage or prohibit smoking. Individuals feel entitled to censure smokers and seem more annoyed by the eye irritation caused by smoke in the air, and perhaps more disgusted by the ash and cigarette butt residues of smoking.

There is, of course, a corresponding process that we can call amor-

alization in which values become preferences. One can see such effects in progress in American society with respect to divorce or smoking of marijuana.

Both preferences and values link into affective systems. However, the linkage of values is of particular interest and potency because values (or their violations) tend to invoke strong moral emotions, such as anger, contempt, disgust, guilt, and shame. We have paid particular attention to the emotion of disgust as a means through which strong aversions and rejections can be established (Rozin & Fallon, 1987; Rozin, Haidt, & McCauley, 1993). We have argued that disgust originated as a specific type of ideational food rejection, but that, through cultural evolution, disgust is "applied" to a wide variety of objects and events, as a means of supporting and internalizing avoidance of these objects and events. Thus, disgust, sometimes in a moral or quasi-moral framework, is invoked in response to body products (via toilet training), contact with death, inappropriate sex, and certain clearly immoral offenses such as gory crimes or familial violence (Rozin et al., 1993; Haidt, McCauley, & Rozin, 1994).

Moral values are often referred to as internalized, that is, as a part of the self; for example, cigarette smoking is a much more significant personal feature now than it was a generation ago. We predict that the moral linkage encourages the occurrence of a hedonic shift: An object or activity that is aligned with one's moral views is more likely to become liked, and one that is in violation of such views is more likely to become disliked (McCauley et al., 1995).

Our aim in this article is to introduce and describe moralization (see also Rozin, in press), and to provide evidence for some of its consequences in the domain of vegetarianism. We do not propose to shed light on the mechanisms of moralization in this first article on moralization. However, our interviews and observations (see also Amato & Partridge, 1989) suggest that strong affective experiences, such as seeing animals slaughtered for purposes of consumption, or losing a relative to lung cancer, can have powerful effects in promoting moralization. More cognitive routes, such as reading a book about animal rights, or examining public-health statistics on smoking, can also promote moralization. An initial effort to identify factors that may promote moralization (Rozin, in press) indicates, for example, that Protestantism may provide a favorable environment for moralization. Also, the likelihood of moralization seems to increase if the offending activity causes harm to children, or is practiced primarily by an already stigmatized minority.

Denial of rights or opportunities is the central focus of the American (and other Western) moral system. Hence, the portrayal of cigarette smoking as harming people other than the smoker (belief in harmful effects of sidestream smoke) or belief that animals have rights provides an intellectual basis for considering cigarette smoking or meat eating immoral. In other cultures, such as Hindu India, the domain of morality is broader and different (Shweder, Much, Mahapatra, & Park, in press), and hence the domain of moralization is

Address correspondence to Paul Rozin, Department of Psychology, University of Pennsylvania, 3815 Walnut St., Philadelphia, PA 19104-6196.

Moralization

greater. In particular, we believe that the emotion of disgust is linked to purity violations, which are distinctly more moral in quality in Hindu India than in the United States (Shweder et al., in press; Rozin, Lowery, Imada, & Haidt, 1996).

Once moralization has begun, it often moves ahead with the force that a moral justification can motivate. Avoidance of red meat often proceeds to avoidance of other foods of animal origin, and the degree of moral commitment tends to increase (Amato & Partridge, 1989). In accord with the well-established human motive of cognitive consistency, people try to resolve apparent contradictions in their attitudes and behaviors. Furthermore, when people take a strong and irrevocable position, they tend to selectively seek and process information in such a way as to reinforce this position (Frey, 1986). Although a liking for A (e.g., eggplant) and not B (e.g., olives) is unlikely to stimulate cognitive work or selectivity, a moral position is quite likely to. For these reasons, long-standing moral vegetarians may be expected to offer more reasons for their meat avoidance than health vegetarians, or moral vegetarians of more recent origin.

In this article, we examine moralization and the involvement of disgust in the emergence of vegetarianism in Americans. Vegetarianism is a substantial movement in the United States, including about 9 million Americans according to a Gallup Poll in 1985 (Amato & Partridge, 1989). Some vegetarians invoke only moral reasons for becoming vegetarian, or for currently avoiding meat, and others invoke only health reasons (Amato & Partridge, 1989, and unpublished data from the present study). Our principal aim in the remainder of this article is to explore the differences between moral and health vegetarians in order to shed light on the course and consequences of moralization. Moral vegetarians attach an "ought" to avoiding meat, show some concern that other people eat meat, and perhaps are less tempted by (attracted to) meat. Health vegetarians are less inclined to use the word "ought," are less disturbed that others consume meat, and perhaps are more often tempted to consume meat.

Compliant vegetarians (i.e., people who avoid meat for health reasons) believe they derive health benefits from meat avoidance, but are tempted by the aroma of meat, and are fighting the tendency to eat it. Under stress (strong hunger or problems in their lives), they are likely to succumb, and they may be looking for information that will absolve meat of its supposed health-damaging properties. Moral vegetarians, in contrast, have the strong force of morality behind them.

One of the most interesting aspects of the process of becoming a vegetarian involves the hedonic shift that often accompanies it; meat changes from a liked to a disliked or even disgusting entity. This shift may be considered an example of internalization of preference, in that the avoidance of meat becomes motivated by a dislike for the sensory or other inherent properties of the entity itself. Amato and Partridge (1989) reported that only 12% of their subjects offered dislike or repulsiveness of meat as a cause for becoming a vegetarian. Rather, affective responses and affective change seem to be more frequently a consequence of becoming a vegetarian. Amato and Partridge (1989) reported that 48% of their vegetarian subjects experienced cravings for meat, and that this was as likely for health as for moral vegetarians. They also reported that these cravings typically fade over time:

After a period of time, even former meat lovers come to find the sight, and particularly the smell, of meat to be nauseating. (p. 92)

82% of vegetarians say there is no way they would consider eating flesh again. Feelings of disgust at the very thought of eating meat are prominent in most people's response. To many, the idea is simply unthinkable. (p. 92)

Our aim is to explore the conditions that bring about this change. Although Amato and Partridge suggested that moral motivations are not a factor, we have a principled reason for believing that they are, and test some related propositions in this article. Better understanding of the conditions under which meat becomes disgusting or the hedonic quality of its sensory attributes changes might provide insight into the general process of hedonic shift.

In the subsequent empirical part of this study, we explore the following issues:

- Is there a greater accretion of motives with time for moral as opposed to health vegetarians? Similarly, is the range of animal foods rejected greater in moral vegetarians?
- Is there a tendency for disgust toward meat to be associated with moral as opposed to health motivations to vegetarianism?
- Is the increased dislike of meat (negative reactions to the taste, smell, texture, or appearance) more likely to occur in moral than in health vegetarians?

METHOD

Subjects

Data in the form of a completed questionnaire were collected from 119 subjects in 1987. All 119 subjects identified themselves as at least reluctant to eat meat. The 15 kosher Jews in this sample were eliminated from the analysis on the grounds that they were the only group of subjects with religious reasons for meat avoidance. The analyses reported here were done on the remaining 104 subjects, of which 34 were male and 69 were female (sex of 1 subject was unreported). The mean age was 26.6 ($SD = 8.95$); principal races represented were white ($n = 85$) and Asian ($n = 9$). Responses to a question on religious affiliation indicated that 41 subjects were agnostic, 19 Jewish, 11 Catholic, 11 Protestant, and 20 "other."

Questionnaires were mailed to subjects who responded to advertisements posted on the University of Pennsylvania campus. The advertisements solicited interest in a survey from "meat avoiders, vegetarians, and people reluctant to eat meat." Included with each questionnaire was a stamped envelope addressed to the experimenters, along with one dollar. In addition, a sign advertising the study was posted in a natural-food store in the university community, and interested customers were given a copy of the questionnaire (with a stamped envelope and one dollar) by the cashier.

Questionnaire

The questionnaire was designed in accordance with the guidelines offered by Dillman (1978). The cover page of the questionnaire began as follows: "ATTITUDES TO MEAT: Why are many people reluctant to eat animal products? A questionnaire for people who avoid or are reluctant to eat some kinds of meat."

This introduction was followed by a paragraph explaining our interest in this area. The questionnaire itself had five parts.

1. An open-ended set of questions directed at how, when, and why the subject came to avoid meat.
2. Ratings of current attitudes ("readily eat," "reluctantly eat,"

“refuse to eat”) for a variety of animal products (pork, veal, lamb, beef, chicken, fish, shellfish, eggs, milk).

3. A list of 20 possible reasons for avoiding meat (gathered from pilot interviews and the literature). Subjects indicated both current agreement (5-point scale ranging from *disagree strongly* to *agree strongly*) with each reason and, if relevant, the time of onset of the reason (“this was your first reason for avoiding meat,” “this was one of the earliest reasons for avoiding meat,” “this was not one of the earliest reasons for avoiding meat,” or “this was never a reason for avoiding meat”). The 20 reasons are listed in conceptual categories in Table 1, but the order of items on the actual survey was random. Subjects were instructed to interpret the term “meat” as beef, unless (as was very rarely the case) they did not avoid eating beef. In that case, subjects were asked to select another

animal product that they were reluctant to eat to stand for the word “meat” in the reasons.

4. A set of questions on reactions to sensory qualities of meat, rated on a standard 9-point hedonic scale (ranging from 1, *dislike extremely*, to 9, *like extremely*), and another set of disgust items rated true or false.

5. Demographic data.

RESULTS

The percentage of subjects indicating strong agreement or agreement with each of the 20 reasons for avoiding meat is presented in Table 1. The average subject checked “agree” or “agree strongly”

Table 1. Current and initial reasons for avoiding meat (percentages of subjects)

| Reason (“I resist [avoid] eating ‘meat’ because. . .”) | Current reason | | Initial reason |
|---|----------------|-------|----------------|
| | Agree strongly | Agree | |
| Moral | | | |
| 1. it increases pain and suffering in animals. | 35.0 | 24.3 | 27.9 |
| 2. it requires the killing of animals. | 35.0 | 29.1 | 30.8 |
| 3. it violates the animal’s rights. | 31.1 | 25.2 | 25.0 |
| 4. eating “meat” is against my religious beliefs and/or I am a member of a group or movement that rejects “meat” as food. | 15.7 | 6.9 | 9.6 |
| 5. we demean ourselves by raising animals for food, and killing them. | 19.4 | 30.1 | 9.6 |
| Ecology | | | |
| 6. it is wasteful of resources to eat animal rather than vegetable products, especially in a world where people are starving. | 38.2 | 22.5 | 5.8 |
| 7. it is not natural for people to eat “meat”; we are not carnivores. | 11.8 | 14.7 | 1.9 |
| Health | | | |
| 8. a diet containing “meat” is not as healthy as a vegetarian diet. | 43.7 | 33.0 | 29.8 |
| 9. a diet with at least moderate amounts of “meat” is unhealthy. | 16.5 | 46.6 | 20.2 |
| 10. eating “meat” is bad for my physical appearance. | 4.8 | 26.0 | 5.8 |
| 11. even a diet that contains small amounts of “meat” is unhealthy. | 9.6 | 28.8 | 8.6 |
| Appeal | | | |
| 12. I like the idea of being a “vegetarian.” | 17.5 | 37.9 | 10.6 |
| 13. of the appeal (in terms of purification or discipline) of a vegetarian diet. | 19.2 | 31.7 | 14.4 |
| Personal | | | |
| 14. it makes me behave more like an animal. | 3.9 | 10.7 | 0.0 |
| 15. killing and eating animals makes it easier for us to be aggressive and violent. | 9.7 | 32.0 | 4.8 |
| 16. eating “meat” causes undesirable changes in people’s personalities. | 5.8 | 8.7 | 2.9 |
| Economic | | | |
| 17. “meat” is too expensive. | 7.7 | 26.0 | 4.8 |
| Taste | | | |
| 18. I don’t like the taste of “meat.” | 15.4 | 24.0 | 5.8 |
| Disgust | | | |
| 19. eating “meat” is offensive, repulsive, or disgusting. | 20.6 | 32.4 | 14.4 |
| 20. emotionally, I just can’t chew and swallow “meat.” | 21.6 | 27.5 | 9.6 |

Note. Subjects were instructed to interpret “meat” as beef, unless they were not reluctant to eat beef, in which case they were to substitute another animal product that they rejected or were reluctant to eat.

Moralization

on 8.8 of 20 reasons ($SD = 4.5$). Eighteen subjects did not agree strongly with any item. Twenty-four percent of subjects agreed strongly with at least one of the health reasons without agreeing strongly with any of the moral-ecological reasons, and 25% agreed strongly with at least one of the moral-ecological reasons without agreeing strongly with any of the health reasons. (One could argue that moral and ecological reasons be treated separately, and for that reason we list them separately in Table 1. However, we feel that the ecological reasons have a distinct moral character, with a focus on harm to the earth rather than on harm to animals.)

The reasons for avoiding meat that most frequently elicited responses of strong agreement are quite diverse: The most common concerns the healthiness of nonmeat diets (43.7% strong agreement); next is the ecological argument of wastefulness of meat as food (38.2%), followed by two strictly moral items relating to killing or causing suffering to animals (each 35%). With the exception of the wastefulness reason, these reasons are also the most common initial reasons for avoiding meat (Table 1, final column).

We followed two strategies to compare moral and health vegetarians. One was to compare people who gave one of the moral reasons and no health reason as a first reason for being vegetarian (moral-origin vegetarians, $n = 36$) with people who gave a health reason and no moral reason as a first reason for being vegetarian (health-origin vegetarians, $n = 26$). For this analysis, the remaining subjects ($n = 42$), who had either mixed moral and health origins or neither, were not included. (We found that division of subjects by whether current predominant reasons were moral or health reasons yielded smaller groups, and produced very similar results.)

A second set of analyses employed the full sample of 104 subjects. For each subject, we created a summed moral-ecological score (MORECSUM), which is the summed responses to the seven moral and ecological reasons, and a corresponding health score (HEALTHSUM) for the summed responses to the four health reasons (see Table 1). We correlated these two current-motivation scores with various measures of possible consequences of moralization.

Is There a Greater Accretion of Motives With Time, and a Greater Range of Animal Foods Rejected, for Moral as Opposed to Health Vegetarians?

Insofar as moral reasons provide particular impetus for recruitment of additional motivations or justifications for vegetarianism, we predicted that subjects who began as moral vegetarians would have more current reasons for being a vegetarian than those who did not. As shown in Table 2, this prediction was supported; the 36 moral-origin subjects have a significantly higher total-reasons score than the 26 health-origin subjects. Because there are seven moral-ecological reasons—more than any other category—these data are biased to reveal the predicted relationship. We compensated for this bias by predicting that moral-origin vegetarians would have more reasons that are neither moral nor health reasons than would health-origin vegetarians. As shown in Table 2, this prediction is weakly supported ($p < .05$) by the data.

We also predicted that moral-origin vegetarians would reject a wider range of animal products, and they do, scoring 23.8 (out of a

Table 2. Reasons for vegetarianism and range of animal products rejected as a function of moral versus health reasons for becoming a vegetarian

| Measure | Type of vegetarian ^a | | Significance (<i>t</i> test) ^b |
|--|----------------------------------|-----------------------------------|---|
| | Moral origin (<i>n</i> = 36) | Health origin (<i>n</i> = 26) | |
| Total current reasons ^c | 67.7 (11.6) | 57.7 (13.5) | <i>t</i> (61) = 3.13, $p < .01$ |
| Nonmoral, nonhealth current reasons ^d | 28.5 (5.7) | 24.9 (6.3) | <i>t</i> (61) = 2.35, $p < .05$ |
| Range of animal products rejected ^e | 23.8 (9.6) | 19.9 (3.2) | <i>t</i> (61) = 4.51, $p < .001$ |
| Overall disgust (DISGSUM) ^f | 9.9 ^g (3.4) | 6.9 (3.1) | <i>t</i> (57) = 3.45, $p < .01$ |
| Personality reasons (PERSONSUM) ^h | 3.0 ^g (0.8) | 2.2 (1.0) | <i>t</i> (58) = 3.41, $p < .01$ |
| Overall sensory score (SENSOSUM) ⁱ | 13.4 ^g (7.8) | 15.5 (7.6) | <i>t</i> (58) = 1.03, n.s. |

^aMoral-origin vegetarians are those who listed moral-ecological reasons among the first reasons for becoming vegetarians, and did not list health reasons as first reasons. Health-origin vegetarians are those who listed health reasons among the first reasons for becoming vegetarians, and did not list moral-ecological reasons as first reasons. The numbers in these columns are mean scores, with standard deviations in parentheses.

^bAll tests are two-tailed.

^cTotal current reasons is the sum of the agreement scores for all 20 reasons.

^dNonmoral, nonhealth reasons is the sum of agreement scores for the 9 reasons that are classified as other than health, moral, and ecological.

^eRange of animal products rejected is the sum of the scores for each of nine animal foods (acceptance = 1, reluctance to eat = 2, rejection = 3). The maximum score (reject all) is 27.

^fOverall disgust is the composite of three disgust measures listed in Table 3: the items on nausea, contamination, and elicitation of disgust. To make the contributions of the items to the total score comparable (a maximum of 4 to 5 points for a maximum score on each question), the items were summed as follows: the disgust rating (on a scale from 1 to 5) plus the nausea rating (4 points if true, 0 if false) plus the contamination rating ($(10 - \text{actual rating})/2$). The first disgust item, dislike of meat because of its nature or origin, was not used in this measure because it could also be considered directly related to moral attitudes to meat.

^g $n = 33$.

^hPersonality reasons is the summed agreement scores on the three personal items (14–16) from Table 1.

ⁱOverall sensory score is the summed agreement scores on the four sensory measures listed in Table 3.

total possible of 27), as opposed to 19.9 for health-origin vegetarians ($p < .001$) (Table 2).

Is There a Tendency for Disgust Toward Meat to Be Associated With Moral as Opposed to Health Motivations to Vegetarianism?

Disgust, as we have defined it (Rozin & Fallon, 1987), includes as critical features a mental state (revulsion-offense-disgust, represented by Item 19 in Table 1, which is also the fourth item in Table 3), contamination potency of the source of disgust (represented by the third item in Table 3), and a feeling of nausea (the second item in Table 3). We created a composite disgust score from these three items, DISGSUM, as described in Table 2). We (Rozin & Fallon, 1987) have identified two other critical features of disgust that are not included in our disgust score in this analysis. One is an ideational (as opposed to

pure sensory) rejection of the source of disgust (see Item 1, Table 1). The second feature is the characteristic facial expression for disgust (e.g., Rozin, Lowery, & Ebert, 1994); we could not easily craft a question to capture this aspect of disgust.

Moral-origin vegetarians show significantly higher disgust scores than do health-origin vegetarians (Table 2). For all subjects, we also compared the correlations between total current moral (MORECSUM) or health (HEALTHSUM) reasons and each of the items that contribute to the total disgust score (Table 3). The correlational data support this conclusion: For two of the three scores (nausea being the exception), the correlation is stronger for MORECSUM than for HEALTHSUM. Because of the recruitment of reasons for vegetarianism with time, there is a correlation between moral-ecological and health reasons ($r = .41$). Hence, in order to interpret the correlations of moral-ecological reasons with disgust items, it is necessary to partial out effects of health reasons. We have done so (Table 3, last column), and note that there remain significant correlations of moral-ecological reasons with two of the three measures (excepting nausea),

Table 3. Relations between disgust, sensory response to meat, and other attitudes to animal products and type of vegetarianism (moral vs. health)

| Measure | Correlation (r) | | |
|--|----------------------------|-----------------------------|---|
| | With MORECSUM ^a | With HEALTHSUM ^b | With MORECSUM after HEALTHSUM correlation is partialled out |
| Disgust measures | | | |
| I dislike "meat" because of what it is or where it comes from. (% TRUE) | .60*** | .30** | .55*** |
| The thought of eating "meat" makes me nauseous. (% TRUE) | .30** | .36*** | .18 |
| Contamination with a trace of meat ^c | -.55*** | -.25* | -.51*** |
| I resist (avoid) eating "meat" because eating "meat" is offensive, repulsive, or disgusting ^d | .64*** | .51*** | .55*** |
| Overall disgust (DISGSUM) ^e | .61*** | .48*** | .52*** |
| Sensory measures^f | | | |
| Taste of "meat" | -.10 | -.30** | -.02 |
| Smell of "meat" | -.42*** | -.33*** | -.33*** |
| Texture of "meat" | -.08 | -.16 | -.02 |
| Appearance of "meat" | -.30** | -.40*** | -.16 |
| Other measures | | | |
| I resist (avoid) eating "meat" because emotionally, I just can't chew and swallow "meat." ^d | .81*** | .30** | .79*** |
| Personality reasons (PERSONSUM): Summed score on three personal reasons from Table 1 | .77*** | .43*** | .72*** |

Note. Sample size for these analyses ranged from 95 to 104. Subjects were instructed to interpret "meat" as beef, unless they were not reluctant to eat beef, in which case they were to substitute another animal product that they rejected or were reluctant to eat.

^aMORECSUM is the mean agreement score on the seven moral and ecological items from Table 1.

^bHEALTHSUM is the mean agreement score on the four health items from Table 1.

^cThe full question was, "Consider a soup that you like (would rate 8 or 9). Rate your liking for this soup if a tiny, unpalatable drop of 'meat' broth accidentally fell into it." This item was rated on the standard hedonic scale ranging from 1 (dislike extremely) to 9 (like extremely).

^dThis item was rated on the standard agree-disagree scale ranging from 1 (disagree strongly) to 5 (agree strongly).

^eThis measure is explained in footnote f of Table 2.

^fThese items were rated on the standard hedonic scale ranging from 1 (dislike extremely) to 9 (like extremely). Subjects could also respond "0" to indicate they had never tried "meat."

* $p < .05$. ** $p < .01$. *** $p < .001$. All tests are two-tailed Bartlett chi-square tests for significance of Pearson correlations.

as well as with the overall disgust score. We conclude that there is a substantial link between moral-ecological motivations for vegetarianism and the recruitment of disgust.

We would expect moral vegetarians, partly through the mediation of disgust, to have more emotional reactions to the eating of meat, and this prediction is strongly supported by the results on the question probing emotional reactions (Table 3). Finally, moral concerns might be expected to extend to effects of meat eating on the personality of the meat eater. The relation between meat eating and personality changes is of central interest in the understanding of disgust, because disgust relates to the "you are what you eat" principle (Nemeroff & Rozin, 1989; Rozin & Fallon, 1987) and to the conception of humans as animals as opposed to qualitatively different from animals (Rozin & Fallon, 1987; Rozin et al., 1993). We probed this issue with three questions (under the heading of "Personal" reasons for rejecting meat, Questions 14–16 in Table 1) asking about undesirable personality changes, increased violence and aggression, and more animallike behavior consequent upon eating meat. We constructed a personality score (PERSONSUM), the sum of the agreement scores of these three items, and predicted that high scores on these personality items would be more associated with moral than health vegetarianism. As indicated in Tables 2 and 3, this is strongly supported by both the group differences and correlational measures. The correlation of .77 between the personality score and moral-ecological reasons is one of the highest we report in this article.

Is the Increased Dislike of Meat (Negative Reactions to the Taste, Smell, Texture, or Appearance) More Likely to Occur in Moral Than in Health Vegetarians?

Our data relevant to this question run contrary to our prediction, and support the findings of Amato and Partridge (1989) described in the introduction. As indicated in Table 2, there are no significant differences between the moral- and health-origin vegetarian groups in scores on four modalities of hedonic response (taste, smell, texture, and appearance), nor is the direction of the difference between the groups consistent across the four measures. Furthermore, the correlations between MORECSUM and HEALTHSUM and the hedonic measures are not substantially different. There is a tendency, sometimes significant (Table 3), for both MORECSUM and HEALTHSUM to be associated with negative hedonic characteristics, but no reliable difference between hedonic reactions and the two types of reasons.

DISCUSSION

Our exploration of vegetarianism suggests that this is a fertile ground for the study of attitudes, values, and preferences. Vegetarian practices are publicly acknowledged and gladly discussed by vegetarians. Vegetarianism is associated with specific eating practices that can be both observed and recorded by self-report. And vegetarianism is supported by a rather large set of reasons of qualitatively different types. In particular, our analysis, along with that of Amato and Partridge (1989), suggests a predominance of moral and health reasons, and the possibility of separating out subsets of moral and health vegetarians. Our data suggest clearly that the emotion of disgust is selectively associated with moral vegetarianism. Surprisingly, however,

dislike of the sensory properties of meat, which we predicted to be linked to both moral vegetarianism and disgust, is not higher in moral vegetarians than in health vegetarians. We also report some evidence for greater reason recruitment and wider range of animal foods avoided in moral as opposed to health vegetarians.

Our sample of vegetarians is neither random nor large, so one step for further research is extension of our findings to a larger and more representative sample. Because it has been shown (Cavalli-Sforza et al., 1982; Rozin, 1991) that values are much more effectively transmitted in families than are preferences, we would predict that moral vegetarianism shows a stronger parent-child correlation than does health vegetarianism. At this time, we know of no relevant data.

Further research is also necessary to explicate the conditions under which hedonic shifts occur. Such a shift occurred in many of our subjects, and in many of Amato and Partridge's subjects, but we do not know why. Our survey did not explore membership in vegetarian groups. Although this is unlikely to be directly involved in the origin of vegetarianism, it has been shown to be positively related to the extremity of vegetarian practices (Dwyer, Kandel, Mayer, & Mayer, 1974).

Our results support the position that rejection of animal products as food is, in a significant number of cases, an example of moralization. What remains to be understood is why only some people become vegetarians, and why, among vegetarians, the consumption of meat becomes moralized in only some cases. We expect that abandonment of vegetarian habits is more common in nonmoral vegetarians, and that the predicted resistance of moral vegetarians to "relapse" is related, in part, to the recruitment of disgust and the stability of values.

Our observations and results indicate that meat avoidance is in an early stage of moralization, in which a small minority of the population has moralized the eating of meat. Consequently, meat avoidance has not been endorsed by major public institutions, although recent dietary guidelines issued by the government suggest limiting meat intake, on health grounds. Cigarette smoking is clearly further advanced in the process of moralization, and we have other (unpublished) data suggesting that cigarette smoking and cigarette smoke are considered by many Americans to be both hedonically negative and disgusting. The extent of moralization of meat avoidance is probably linked to the moralization of consumption of fats, and fast foods, among some groups of Americans. For example, Stein and Nemeroff (1995), using an Asch impressions technique with American college students, found that students described as eating primarily high-fat, "unhealthy" diets are rated as less nice and considerate people than those described as eating primarily fruits and vegetables ("healthy" diets).

We hope the description of moralization in this article encourages further research, and in particular the prospective documentation of this process as it occurs, in American and other societies.

Acknowledgments—Thanks to Clark McCauley for helpful comments on the manuscript. This research was supported by grants from the John D. and Catherine T. MacArthur Foundation (Health-Related Behavior Network) and the Whitehall Foundation.

REFERENCES

- Amato, P.R., & Partridge, S.A. (1989). *The new vegetarians*. New York: Plenum Press.
Cavalli-Sforza, L.L., Feldman, M.W., Chen, K.H., & Dornbusch, S.M. (1982). Theory and observation in cultural transmission. *Science*, 218, 19–27.

- Dillman, D.A. (1978). *Mail and telephone surveys*. New York: John Wiley.
- Dwyer, J.T., Kandel, R.F., Mayer, L.D.V.H., & Mayer, J. (1974). The "new" vegetarians. *Journal of the American Dietetic Association*, *64*, 376-382.
- Frey, D. (1986). Recent research on selective exposure to information. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 19, pp. 41-80). New York: Academic Press.
- Haidt, J., McCauley, C.R., & Rozin, P. (1994). A scale to measure disgust sensitivity. *Personality and Individual Differences*, *16*, 701-713.
- McCauley, C.R., Rozin, P., & Schwartz, B. (1995). *The origin and nature of preferences and values*. Unpublished manuscript, Bryn Mawr College, Bryn Mawr, PA.
- Nemeroff, C.J., & Rozin, P. (1989). "You are what you eat": Applying the demand-free 'impressions' technique to an unacknowledged belief. *Ethos: The Journal of Psychological Anthropology*, *17*, 50-69.
- Rozin, P. (1991). Family resemblance in food and other domains: The family paradox and the role of parental congruence. *Appetite*, *16*, 93-102.
- Rozin, P. (in press). Moralization. In A. Brandt & P. Rozin (Eds.), *Morality and health*. New York: Routledge.
- Rozin, P., & Fallon, A.E. (1987). A perspective on disgust. *Psychological Review*, *94*, 23-41.
- Rozin, P., Haidt, J., & McCauley, C.R. (1993). Disgust. In M. Lewis & J. Haviland (Eds.), *Handbook of emotions* (pp. 575-594). New York: Guilford Press.
- Rozin, P., Lowery, L., & Ebert, R. (1994). Varieties of disgust faces and the structure of disgust. *Journal of Personality and Social Psychology*, *66*, 870-881.
- Rozin, P., Lowery, L., Imada, S., & Haidt, J. (1996). *The moral/emotion triad hypothesis: A mapping between the other-directed moral emotions, disgust, contempt, and anger, and Shweder's three universal moral codes*. Unpublished manuscript, University of Pennsylvania, Philadelphia.
- Shweder, R.A., Much, N.C., Mahapatra, M., & Park, L. (in press). The "big three" of morality (autonomy, community, divinity), and the "big three" explanations of suffering. In A. Brandt & P. Rozin (Eds.), *Morality and health*. New York: Routledge.
- Stein, R.I., & Nemeroff, C.J. (1995). Moral overtones of food: Judgments of others based on what they eat. *Personality & Social Psychology Bulletin*, *21*, 480-490.

(RECEIVED 5/1/95; REVISION ACCEPTED 12/17/95)

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.