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Mostly Vegetarian, But Flexible About It: Investigating How Meat-Reducers Express Social Identity Around Their Diets

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Abstract

Beyond indicating that one does not eat meat, the decision to identify as vegetarian signals social identity. Yet many people limit their meat intake without giving up meat entirely: These people are called *flexitarians* (a term combining the words, "flexible" and "vegetarian"). Some flexitarians, despite eating meat, consider themselves to be vegetarian. Through a preregistered study ($N = 837$), we investigated how flexitarians express social identity around their diets—namely, how they self-identify on a continuous scale ranging from meat-eater (i.e., omnivorous) to vegetarian. Over and above actual eating behavior, two psychosocial variables emerged as significant predictors of flexitarians' levels of vegetarian identification: the centrality of meat-reduced dieting to their identity and their beliefs about carnism (the ideology of eating animals). These results suggest that greater consideration of meat-reduced eating behaviors offers promise for elucidating the intersections of social identity and moral judgment.

Keywords

vegetarian, flexitarian, social identity, morality, food choice

For the well-being of animals, environmental sustainability, and personal health, among other reasons, many people limit their meat intake (De Backer & Hudders, 2014; Ruby, 2012; The Vegetarian Resource Group, 2016; Vegetarian Times Editors, 2008). Often, the distinction between being an omnivore (i.e., meat-eater) and being a vegetarian is characterized as a dichotomous divide—either people eat meat or they do not. Yet few people who curtail the amount of meat they eat go fully vegetarian (The Vegetarian Resource Group, 2016; Vegetarian Times Editors, 2008); rather, the majority can be called *flexitarians*: people who limit their meat intake but still include meat in their diets (Corrin & Papadopoulos, 2017; De Backer & Hudders, 2014; Derbyshire, 2016; Rosenfeld, 2018). In contrast to the relatively well-developed psychological literature on vegetarianism, far less is known about the psychology of flexitarianism (Rosenfeld, 2018). What research has been done on flexitarianism, moreover, has centered almost exclusively on dietary motivation and attitudes toward meat and animals (Cliceria, Spinellia, Dinnella, Prescotta, & Monteleone, 2018; Corrin & Papadopoulos, 2017; De Backer & Hudders, 2014, 2015), without consideration of identity phenomena.

Beyond indicating that one likely does not eat meat, the decision to *label* oneself as a vegetarian signals information about one's social identity (Rosenfeld & Burrow, 2017a; Rothgerber, 2017). Yet people's dietary *identities* do not always correspond to their dietary *behaviors*. Notably, some people who curtail their meat intake only partially nonetheless label themselves as vegetarian (Barr & Chapman, 2002; Kwan & Roth, 2004; National Institute of Nutrition, 1997; Rothgerber, 2014a). This not only highlights meat consumption as a continuum but also presents a theoretically intriguing question: How do flexitarians construct and express social identity related to their eating behaviors?

When reflecting on their meat avoidance, flexitarians engage with dietarian identity—a specific social identity domain that captures how people think, feel, and behave with respect to consuming or eschewing animal products (Rosenfeld & Burrow, 2018). Dietarian identity allows for discrepancies between dietary pattern versus label, such that following a meatless diet and self-identifying as vegetarian can readily diverge (Rosenfeld & Burrow, 2018; Rothgerber, 2017). Such divergence is evident in people who self-identify as vegetarian yet concurrently report that they sometimes eat meat. Importantly, whereas people who follow meatless diets typically label themselves as vegetarian, people who follow flexitarian

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diets do not necessarily label themselves flexitarian, as *flexitarian* is a less familiar term to most.

At its core, flexitarian dieting constitutes a flexible behavioral inclination (i.e., an intention to avoid meat), whereas seeing oneself as a vegetarian reflects a distinct, typically rigidly defined, social identification. This conceptualization of behavioral inclination versus social identity labeling parallels those in other social identity domains. A practically distal, yet theoretically neighboring, example is sexuality—namely, the distinction between sexual orientation and sexual identity. Whereas sexual orientation characterizes a continuum of sexual desires and behaviors, sexual identity reflects social identifications with more discrete categories (Ellis & Mitchell, 2000; Mohr, 2002; Savin-Williams, 2008). Along this sexual orientation continuum, a subgroup of those considering themselves "mostly heterosexual"—that is, seeing themselves as in-between homosexual and heterosexual—differ from one another in how they self-categorize and adopt a sexual identity label (Morgan Thompson & Morgan, 2008): Some may self-identify as gay, others as bisexual, and others as straight. Just as mostly heterosexual individuals with similar sexual orientations vary in where they see themselves from heterosexual to homosexual, so too may flexitarians with similar eating behaviors vary in where they see themselves from vegetarian to omnivorous.

As the study of flexitarianism is expanding, two questions are critical to answer for theoretical insights and optimal research methodology: First, do flexitarians see themselves as more vegetarian or omnivorous? And second, beyond eating behavior, what psychosocial and demographic factors shape how flexitarians construct and express identity around their eating behaviors?

Conceptualizing Vegetarian Identification as a Continuum

In the current research, we addressed these questions through a social identity approach, which comprises social identity theory and self-categorization theory (Hornsey, 2008). Social identity theory (Tajfel & Turner, 1985) posits that individuals derive a sense of identity from being a member of a social group and desire in-groups to be positively distinct from out-groups. By deviating from social norms, the decision to curtail one's meat intake can spark social identity formation and trigger intergroup phenomena, such as rejecting deviant in-group members and displaying horizontal hostility toward similar out-groups (Rosenfeld & Burrow, 2017a; Rothgerber, 2014b, 2014c, 2017). Self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) posits that individuals categorize themselves into social groups, perceiving their self-attributes and/or actions in terms of shared social identities. Given prior research highlighting that flexitarians vary in whether or not they self-identify as vegetarian (Rosenfeld & Burrow, 2017c), coupled with findings that some people who forgo meat entirely choose not to self-identify as vegetarian (Fox & Ward, 2008b; Jabs, Sobal, & Devine, 2000), we conceptualized the degree to which people self-categorize as vegetarian to be a continuum, rather than a dichotomy. We advance that pinpointing predictors of one's self-perceived position on the vegetarian-to-omnivore continuum—from here on called *vegetarian identification*—can generate useful insights into how people who curtail their meat intake ultimately come to label themselves as vegetarian.

Probable Predictors of Vegetarian Identification Among Flexitarians

We sought to identify variables predicting where flexitarians locate themselves along a continuum from vegetarian to omnivore. Beyond eating behavior itself, we investigated predictors across four domains: social identity, ideology, social context, and gender.

Social Identity Aspects of Flexitarianism

We reason that flexitarians may derive a sense of social identity from being a meat-avoider, seeing themselves as part of a larger meat-avoidant social category. Accordingly, we drew upon Rosenfeld and Burrow's (2017a, 2018) model of dietarian identity to examine social identity aspects of flexitarianism. Four relevant dietarian identity variables include the centrality of meat avoidance to one's overall identity (centrality), one's sense of pride in being a meat-avoider (private regard), one's perceptions of how other people view those who avoid eating meat (public regard), and one's attitudes toward those who eat meat (omnivorous regard)—the first three of which constitute core dimensions of social identification (Luhtanen & Crocker, 1992).

Flexitarians with higher centrality may be more likely to identify as vegetarian for three reasons. First, from a self-categorization theory perspective, flexitarians with higher centrality likely perceive the distinction between being a meat-eater versus meat-forgoer as more accessible—and thus more readily a basis for social categorization—which would prompt them to self-categorize as meat-avoiders more frequently (Hornsey, 2008). If avoiding meat is central to who they are, then high-centrality flexitarians can affirm their identity, goals, and values by frequently reminding themselves that they are meat-avoiders. Chronic self-categorization as a meat-avoider may increase flexitarians' identifications with vegetarians, a group who shares their value of avoiding meat. Second, as people are motivated to maintain self-consistency (Lecky, 1945), flexitarians who identify strongly as meat-avoiders are likely motivated to align themselves more closely with vegetarians than with omnivores. Third, as meat consumption is morally troublesome for many individuals, high-centrality flexitarians may identify as vegetarian to increase their moral self-image and affirm valued attributes about the self.

Identity regards may also influence self-categorization. A tenet of social identity theory is that people derive self-esteem from how they, and how they believe others,

evaluate their social groups (Luhtanen & Crocker, 1992; Tajfel & Turner, 1985). Flexitarians with high private regard—who take great pride in avoiding meat—may enhance their self-esteem by associating themselves with vegetarians, as doing so would bolster a more positive sense of group identity and promote favorable self-evaluations (Luhtanen & Crocker, 1992; Plante, Rosenfeld, Plante, & Reysen, 2019; Tajfel & Turner, 1985). Public regard may associate similarly in direction with vegetarian identification. Omnivores hold many unfavorable biases toward vegetarians (MacInnis & Hodson, 2017; Minson & Monin, 2012). Flexitarians with low public regard may seek to avoid being grouped with vegetarians, as doing so may promote negative self-evaluations via stigmatization. Similarly, flexitarians' attitudes toward omnivores may affect self-categorization. Flexitarians who exhibit low omnivorous regard—who judge people negatively for eating meat—may be motivated to distance themselves from omnivores and instead group themselves with vegetarians, as their contempt, and perhaps moral outrage (Batson et al., 2007), toward omnivores would otherwise threaten their own self-image.

Food-Choice Ideology

In a second domain, we examined food-choice ideology, including three motivations (prosocial, personal, and moral) for avoiding meat and one's moral beliefs about the appropriateness of eating animals (carnism). Although prosocial (aims to benefit a cause beyond oneself), personal (aims to benefit oneself), and moral (aims to abide by one's principles of right and wrong) motivations to eschew meat vary in their symbolic meanings, they resemble one another in characterizing an intrinsic, goal-oriented ambition that spurs people to go against omnivorous social norms (Rosenfeld & Burrow, 2017a, 2017b, 2018). Flexitarians with stronger dietary motivations of any kind, thus, may perceive themselves more strongly as vegetarian in order to maintain a coherent self-perception. To be strongly motivated to avoid meat and yet to see oneself chiefly as an omnivorous dieter would be incongruent.

In addition, beliefs about carnism—the prevailing belief system that condones the consumption of certain animals as food (Joy, 2009)—may set apart vegetarian-identifying and omnivore-identifying flexitarians. Carnism starkly contrasts vegetarianism; it constitutes an ideology underlying omnivorous dieting. Given that sharing moral beliefs is a stimulus for social identification (Ellemers, Pagliaro, & Barreto, 2013), we posited that flexitarians who reject carnism would be motivated to identify strongly as vegetarian to achieve a greater sense of belongingness among other vegetarians and to strengthen self-consistency. In this sense, flexitarians may identify more as vegetarian in order to group themselves with people who not only eat similarly to them but also exhibit similar moral judgments.

Social Context

In a third domain, we examined social contexts surrounding eating, including the prevalence of vegetarians within one's social network and local community. As identity emerges within social contexts (Brewer, 1991; Hogg & Terry, 2000), localized social comparison may shape how flexitarians internalize their diets and self-categorize. Eating meat is ubiquitous in most pockets of Western culture. However, for flexitarians who have a social network or live in an area wherein vegetarians are prevalent, local norms are shifted away from meat-eating and toward vegetarianism (Prentice & Miller, 1993). On the one hand, flexitarians with many vegetarians in their social network or local community may feel motivated to likewise identify as vegetarian to conform to social norms. On the other hand, if identity formation provides one with more coherence regarding who one is and what attributes compile to make one a unique individual, then flexitarians may actually feel less like vegetarians when they interact more often with vegetarians. Here, what distinguishes one from the norm is not one's decision to avoid meat but the fact that one *does* eat meat. Based on this latter line of reasoning, we hypothesized that lower prevalence of vegetarianism within one's social network and local community would predict stronger vegetarian identification.

Gender

Lastly, we examined whether gender predicts vegetarian identification. Not only are the majority of vegetarians women (Rosenfeld, 2018; Ruby, 2012), but perceptions exist that meat is masculine (Rosenfeld, 2018; Rothgerber, 2013; Ruby & Heine, 2011; Sobal, 2005). In self-identifying as vegetarian, people situate themselves within a social category perceived as feminine. To avoid gender identity threats, flexitarian men may resist identifying with vegetarianism more than flexitarian women do, similar to pescatarian dieters (Rosenfeld & Tomiyama, in press). Thus, we hypothesized that status as a woman would predict stronger vegetarian identification.

Aims and Hypotheses

In this study, we investigated whether psychosocial factors predict the extent to which flexitarians see themselves as vegetarian versus omnivorous, over and above actual eating behavior. First, we compared level of vegetarian identification between participants who indicated that they follow a meatless, flexitarian, and omnivorous diet—as classified, respectively, based on whether they reported eating no meat, a meat-limited diet, or a meat-unlimited diet. We hypothesized that flexitarians' identifications would lie in between those of meat-excluders and omnivores but set no directional hypothesis as to whether flexitarians' identifications would more closely resemble meat-excluders' or omnivores'. Second, we tested whether flexitarians would see themselves as more vegetarian or omnivorous (compared to a vegetarian-to-omnivore identification

scale midpoint), setting no directional hypothesis. Third, we tested bivariate correlations between our predictors and vegetarian identification among flexitarians and, fourth, identified which variables uniquely predict flexitarians' levels of vegetarian identification. We hypothesized that lower meat consumption frequency, higher dietary restrictiveness, higher meat-avoider identity centrality, higher meat-avoider identity private regard, higher meat-avoider identity public regard, lower omnivorous regard, higher prosocial motivation, higher personal motivation, higher moral motivation, lower endorsement of carnism, lower prevalence of vegetarians in social network, lower prevalence of vegetarians in local community, and status as a woman would predict that flexitarians identify more strongly as vegetarian than omnivorous.

Method

This study's sample size, materials, hypotheses, and analyses were preregistered via the Open Science Framework (OSF; see https://osf.io/4rmut/?view_only=7de9c46f711b43b3926a2d486a97539b for preregistration).

Participants

Power analyses. Since this study's analyses centered on comparing meat-excluders (i.e., vegetarian dieters), flexitarians, and omnivores, we set a priori minimum samples sizes for each of these groups, rather than setting a total sample size.

Our main analysis was multiple regression predicting vegetarian identification among flexitarians. A power analysis conducted using WebPower (https://webpower.psychstat.org/wiki/models/index) indicated 330 participants would provide 90% power to detect a small-medium effect of $f^2 = .08$ in a model with 18 predictors—as we planned the hierarchical regression model's final stage to have—at $p = .05$. To further maximize power, we set to recruit at least 600 flexitarian participants.

We also conducted more conservative power analyses for independent samples t tests for comparing vegetarian identification between meat-excluders, flexitarians, and omnivores, through pairwise comparisons within a one-way analysis of variance (ANOVA). With 600 flexitarians, at least 86 meat-excluders and 86 omnivores would provide 90% power to detect medium effects ($d = 0.50$). Accordingly, we set to recruit at least 100 meat-excluders and 100 omnivores.

A sample of 600 flexitarians, 100 meat-excluders, and 100 omnivores provided sufficient power for all other tests, including more than 99% power to detect a small effect ($d = 0.20$) for comparing flexitarians' vegetarian identifications to the scale midpoint, more than 99% power to detect small-medium effects ($r = .20$) for bivariate correlations among flexitarians, and 99% power to detect a small-medium effect ($d = 0.35$) for the gender difference in vegetarian identification among flexitarians assuming equal numbers of men and women.

Participant characteristics. We recruited 924 adult participants from the United States via Amazon Mechanical Turk (MTurk) in exchange for US$0.50, strategically recruiting sufficient meat-excluder, flexitarian, and omnivorous subgroups by advertising our survey in three ways: "Cutting Back on Meat? Survey for people who limit their meat intakes," "Survey on Meat Avoidance—for people who refrain from eating meat," and "Survey on Food Preferences." Of the total 924 participants, 889 followed a meat-excluding ($n = 163$), flexitarian ($n = 600$), or omnivorous diet ($n = 126$) and were retained. After excluding six participants who indicated a nonbinary gender status, one who reported an impossible age, and 45 who failed an attention check, 837 participants (56% female) aged 19–83 ($M_{age} = 40.08$, $SD = 12.65$) were analyzed. Of these participants, 154 were meat-excluders, 564 flexitarians, and 119 omnivores (see below for dietary operationalizations).

Materials

Dietary group membership. Dietary group membership was assessed by asking, "Which of the following describes your diet most accurately when it comes to eating or not eating meat?" with responses including "I do not eat meat," "I limit my meat intake but I still include meat in my diet," "I do not limit my meat intake," and "None of the above describe my diet accurately." Participants who selected the first response were classified as meat-excluders, the second as flexitarians, and the third as omnivores. Participants who selected the fourth response were excluded.

Vegetarian identification. Vegetarian identification was assessed using a prompt reading:

> Think about how you typically eat—specifically, how much meat you eat. When it comes to eating or not eating meat, some people see themselves as being either a vegetarian or a meat-eater. But other people see themselves as somewhere in between.

Following this was the question, "Do you feel more like a vegetarian, a meat-eater, or somewhere in between? Please indicate your response on a scale of 0 (vegetarian) to 10 (meat-eater) below." This was reverse-scored such that 0 corresponded to identifying fully as a meat-eater whereas 10 corresponded to identifying fully as a vegetarian.

Meat consumption frequency. Meat consumption frequency was assessed by asking, "How often do you eat meat (i.e., red meat, poultry, fish/seafood)?" with 10 responses ranging from "never" to "3 or more meals per day," scored respectively from 1 to 10.

Dietary restrictiveness. Dietary restrictiveness (i.e., number of meats avoided) was assessed by asking, "Which of the following types of meat do you avoid eating?" with eight responses including "pork," "veal," "lamb," "beef," "chicken," "turkey," "fish," and "shellfish," adapted from a list of meats in

Rothgerber (2014a). The number of responses participants selected was coded as their score for dietary restrictiveness from 1 to 8.

Meat-avoider (i.e., flexitarian) identity centrality and regard. Meat-avoider identity centrality, private regard, public regard, and omnivorous regard were assessed using adapted versions of Rosenfeld and Burrow's (2018) Dietarian Identity Questionnaire (DIQ) Centrality, Private Regard, Public Regard, and Out-Group Regard subscales. The items were phrased in terms of "avoiding meat," rather than "my dietary pattern," as to capture dietarian identity specific to flexitarianism, which is defined by meat avoidance. For example, an item for the 5-item Centrality Scale ($\alpha = .95$)[1] read, "Avoiding meat defines a significant aspect of who I am," as adapted from the original DIQ centrality item, "My dietary pattern defines a significant aspect of who I am." An example for the 3-item Private Regard Scale ($\alpha = .79$) included "People who avoid meat should take pride in their food choices." An example for the 3-item Public Regard Scale ($\alpha = .93$) included "Avoiding meat is associated with negative stereotypes" (reverse-scored). An example for the 7-item Omnivorous Regard Scale ($\alpha = .95$) included "I judge people negatively for eating meat" (reverse-scored). Responses to all items ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

Dietary motivations. Prosocial, personal, and moral motivations were assessed using similarly adapted versions of Rosenfeld and Burrow's (2018) DIQ prosocial, personal, and moral motivations subscales. An example item for the 6-item prosocial motivation scale ($\alpha = .96$) included "Concerns about social issues motivate me to avoid meat." An example item for the 3-item personal motivation scale ($\alpha = .91$) included "I avoid meat because I am concerned about the effects of my food choices on my own well-being." An example item for the 3-item moral motivation scale ($\alpha = .91$) included "I avoid meat because eating this way is the morally right thing to do." Responses to all items ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

Carnism. Endorsement of carnism was assessed using Monteiro, Pfeiler, Patterson, and Milburn's (2017) 8-item Carnism Inventory ($\alpha = .85$). An example item included "Humans should continue to eat meat because we've been doing it for thousands of years." Responses to all items ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

Prevalence of vegetarians in social network. The prevalence of vegetarians in each participant's social network was assessed by the question, "How many of your friends and family members are vegetarian?" with responses ranging from 1 (*none*) to 5 (*all of them*).

Prevalence of vegetarians in local community. The prevalence of vegetarians in each participant's local community was assessed by the question, "How common is it to be vegetarian in your local community?" with responses ranging from 1 (*not at all common*) to 5 (*very common*).

Procedure

After providing informed consent, participants completed survey materials. To control for potential order effects, the vegetarian identification measure and all other measures were counterbalanced. Within the other measures section of the survey, participants also reported the duration of time for which they have been avoiding meat. Lastly, participants completed demographic questions.

Results

Data and analysis scripts are available at https://osf.io/mu9fp/?view_only=d6eba475bef749d28f4f557a82bbdb15.

To What Extent Do Flexitarians See Themselves as Vegetarian?

A one-way ANOVA revealed that vegetarian identification differed between meat-excluders ($M = 9.43$, $SD = 1.45$), flexitarians ($M = 5.06$, $SD = 1.91$), and omnivores, $M = 1.66$, $SD = 1.73$, $F(2, 833) = 648.00$, $p < .001$, $\eta_p^2 = .61$. Supporting our first hypothesis, flexitarians' level of vegetarian identification was higher than omnivores', $t(833) = 18.62$, $p < .001$, $d = 1.87$, 95% confidence interval [CI; 3.04, 3.75], and lower than meat-excluders', $t(833) = 26.62$, $p < .001$, $d = 2.58$, 95% CI [4.05, 4.69]. Meat-excluders' level of vegetarian identification was higher than omnivores', $t(833) = 35.23$, $p < .001$, $d = 4.87$, 95% CI [7.33, 8.20].

A Welch-adjusted independent samples t test—correcting for heterogeneity of variances between groups (Levene's test $p < .001$)—on the difference score in vegetarian identifications between flexitarians and meat-excluders' ($M = 4.47$, $SD = 1.11$) and the difference score in vegetarian identifications between flexitarians and omnivores ($M = 3.41$, $SD = 1.70$) revealed that flexitarians' identifications more closely resembled omnivores' than meat-excluders' identifications, $t(192.84) = 5.90$, $p < .001$, $d = 0.74$, 95% CI [0.70, 1.41].

A one-sample t test on flexitarians, comparing their level of vegetarian identification ($M = 5.06$, $SD = 1.91$) to the scale's midpoint of 5, revealed that flexitarians see themselves equally as much vegetarian as omnivorous, $t(562) = 0.71$, $p = .480$, $d = 0.03$, 95% CI [4.90, 5.21].

Predictors of Vegetarian Identification Among Flexitarians

First, bivariate correlations indicated that flexitarians who see themselves more strongly as vegetarian reported lower meat consumption frequency, higher dietary restrictiveness, higher meat-avoider identity centrality, higher meat-avoider identity private regard, higher prosocial motivation, higher personal motivation, higher moral motivation, lower endorsement of carnism, and longer duration of flexitarian dieting, all in

Table 1. Bivariate Correlations Between Main Continuous Predictor Variables of Interest and Vegetarian Identification Among Flexitarians.

Predictor	Mean (*SD*)	Correlation (*r*) With Vegetarian Identification	*p*
Meat consumption frequency	5.54 (1.47)	−.37	<.001
Dietary restrictiveness	3.32 (1.54)	.23	<.001
Duration	3.71 (1.58)	.30	<.001
Centrality	3.80 (1.50)	.29	<.001
Private regard	5.02 (1.01)	.22	<.001
Public regard	3.89 (1.49)	−.03	.436
Omnivorous regard	5.65 (1.21)	−.07	.079
Prosocial motivation	4.00 (1.65)	.19	<.001
Personal motivation	5.59 (1.22)	.17	<.001
Moral motivation	3.50 (1.61)	.18	<.001
Carnism	2.59 (0.98)	−.38	<.001
Prevalence of vegetarians in social network	1.95 (0.88)	.01	.803
Prevalence of vegetarians in local community	2.49 (1.00)	−.06	.150

directions consistent with our hypotheses (see Table 1). Variables that did not correlate significantly with vegetarian identification were meat-avoider identity public regard, omnivorous regard, and prevalence of vegetarians in one's social network and local community. Furthermore, a Welch-adjusted independent samples *t* test revealed no difference in the extents to which flexitarian women ($M = 5.18$, $SD = 1.78$) and flexitarian men ($M = 4.91$, $SD = 2.05$) see themselves as vegetarian, $t(507.09) = 1.65$, $p = .101$, $d = 0.14$, 95% CI [−0.59, 0.05]. Hierarchical multiple regression analysis revealed that, when controlling for all other variables in the full model (Step 5), lower meat consumption frequency, longer duration of following a flexitarian diet, higher meat-avoider identity centrality, and lower endorsement of carnism significantly predicted that flexitarians would see themselves more strongly as vegetarian (see Table 2). Variance inflation factors for all predictors in the full model were less than 3, thus indicating that multicollinearity was not problematic (Akinwande, Dikko, & Samson, 2015). Intercorrelations between continuous predictors are presented in Table 3.

Exploratory Analyses: How Often Do Flexitarians Eat Meat?

A point central to this article is that flexitarians comprise a dietary group that falls in between meat-excluders (i.e., vegetarian dieters) and omnivores.[2] As discussed above, when it comes to self-categorizing as vegetarian versus meat-eater, flexitarians' self-categorizations fall in between those of meat-excluders and omnivores, though closer to those of omnivores. An additional question we tested post hoc was, how often do flexitarians eat meat, and how do they compare to meat-excluders and omnivores in this regard? Self-reported flexitarian status reflects a subjective characterization of one's diet—operationalized as consciously limiting one's meat intake rather than as an objective frequency of meat consumption.

A Welch-adjusted independent samples *t* test on the difference score in meat consumption frequency between flexitarians and meat-excluders and between flexitarians and omnivores revealed that flexitarians' meat consumption frequency ($M = 5.54$, $SD = 1.47$) more closely resembled that of omnivores ($M = 7.86$, $SD = 1.39$) than that of meat-excluders ($M = 1.33$, $SD = 1.11$), $t(172.77) = 15.01$, $p < .001$, $d = 1.89$, 95% CI [1.65, 2.16]. These figures indicate that meat-excluders consumed meat, on average, between never and a few times per year; flexitarians between once per week and 2–3 days per week; and omnivores approximately one meal per day. The distribution of flexitarians' meat consumption frequencies is reported in Table 4.

Discussion

The current findings provide several insights into how flexitarians—those who curtail their meat intake partially, but not fully—express social identity around eating. Overall, our data suggest that flexitarians exhibit a great deal of variance in the extent to which they see themselves as vegetarian and, most importantly, that this variance cannot be explained by dietary behaviors alone.

Most variables of interest associated significantly with level of vegetarian identification in bivariate tests in the directions we hypothesized. When adjusting for all other factors in multivariate analyses, higher meat-avoider identity centrality and lower endorsement of carnism, along with lower meat consumption frequency and longer duration of following a flexitarian diet, were significant predictors of flexitarians seeing themselves more strongly as vegetarian than omnivorous.

Above the straightforward finding that eating behavior (including meat consumption frequency and dietary duration) predicts vegetarian identification, we view the predictive value of meat-avoider identity centrality and endorsement of carnism as transformative insights into the psychosocial nature of eating-behavior identity formation. Seeing meat avoidance as more central to their self-concept predicted that flexitarians would identify more strongly as vegetarian. Specific mechanisms involved here remain open to further testing. We speculate that more recurrent self-categorization as a meat-avoider may play a role, as may desires to maintain self-consistency or enhance one's moral self-image.

Over and above seeing avoiding meat as central to their identity, rejecting carnism—the ideology of eating animals—predicted stronger vegetarian identification among flexitarians. Interesting to note in light of this finding is that none of the dietary motivations we assessed—not prosocial, personal, nor moral motivation—predicted vegetarian identification. Considering these findings in tandem, we observed a divergence in the predictive value of what *motivations* people have for avoiding meat and what *moral ideology* they possess with regard to eating animals. Extending prior research on the group-serving function of morality (e.g., Ellemers et al.,

Table 2. Hierarchical Multiple Regression Predicting Vegetarian Identification Among Flexitarians.

Predictor	*b*	*SE b*	β	R^2	*p*
Step 1 (dietary factors)				.23	
Meat consumption frequency	**−.44*****	**.05**	**−.34**		**<.001**
Dietary restrictiveness	**.17*****	**.05**	**.13**		**<.001**
Duration	**.31*****	**.05**	**.26**		**<.001**
Step 2 (+ Social identity factors)				.27	
Meat consumption frequency	**−.39*****	**.05**	**−.29**		**<.001**
Dietary restrictiveness	**.13****	**.05**	**.10**		**.009**
Duration	**.30*****	**.05**	**.25**		**<.001**
Centrality	**.24*****	**.06**	**.19**		**<.001**
Private regard	.12	.08	.06		.133
Public regard	−.01	.05	−.01		.765
Omnivorous regard	.11	.07	.07		.095
Step 3 (+ Ideology factors)				.33	
Meat consumption frequency	**−.38*****	**.05**	**−.29**		**<.001**
Dietary restrictiveness	.07	.05	.05		.157
Duration	**.24*****	**.04**	**.20**		**<.001**
Centrality	**.21*****	**.06**	**.16**		**<.001**
Private regard	−.07	.08	−.03		.419
Public regard	−.03	.05	−.02		.517
Omnivorous regard	.04	.08	.03		.586
Prosocial motivation	.01	.06	.01		.886
Personal motivation	.05	.06	.03		.400
Moral motivation	.03	.07	.02		.714
Carnism	**−.52*****	**.08**	**−.27**		**<.001**
Step 4 (+ social context factors)				.33	
Meat consumption frequency	**−.39*****	**.05**	**−.29**		**<.001**
Dietary restrictiveness	.06	.05	.05		.208
Duration	**.25*****	**.05**	**.20**		**<.001**
Centrality	**.20*****	**.06**	**.16**		**<.001**
Private regard	−.05	.08	−.03		.509
Public regard	−.03	.05	−.02		.588
Omnivorous regard	.04	.08	.02		.630
Prosocial motivation	.01	.06	.00		.935
Personal motivation	.05	.06	.03		.382
Moral motivation	.02	.07	.02		.762
Carnism	**−.51*****	**.09**	**−.26**		**<.001**
Prevalence of vegetarians in social network	.09	.09	.04		.310
Prevalence of vegetarians in local community	−.13	.08	−.07		.090
Step 5 (+ demographic factors)				.34	
Meat consumption frequency	**−.38*****	**.05**	**−.29**		**<.001**
Dietary restrictiveness	.06	.05	.05		.185
Duration	**.24*****	**.05**	**.20**		**<.001**
Centrality	**.20*****	**.06**	**.16**		**<.001**
Private regard	−.06	.08	−.04		.416
Public regard	−.02	.05	−.02		.611
Omnivorous regard	.03	.08	.02		.657
Prosocial motivation	.00	.06	.00		.958
Personal motivation	.05	.06	.03		.394
Moral motivation	.02	.07	.02		.749
Carnism	**−.51*****	**.09**	**−.26**		**<.001**
Prevalence of vegetarians in social network	.09	.09	.04		.347
Prevalence of vegetarians in local community	−.12	.08	−.06		.132
Gender	−.06	.14	−.02		.661
Race	−.08	.06	−.05		.168
Income	.00	.06	.00		.995
Education	.02	.06	.01		.794
Age	.00	.01	.00		.933

Note. Significant predictors are displayed in bold font.

Table 3. Intercorrelations Between Main Continuous Predictor Variables of Interest Among Flexitarians.

Predictor	MCF	DR	DUR	CEN	PRIV	PUB	OMNI	PRO	PER	MOR	CAR	PVSN
Meat consumption frequency (MCF)	—	—	—	—	—	—	—	—	—	—	—	—
Dietary restrictiveness (DR)	−.19***	—	—	—	—	—	—	—	—	—	—	—
Duration (DUR)	−.06	.13**	—	—	—	—	—	—	—	—	—	—
Centrality (CEN)	−.25***	.16***	.06	—	—	—	—	—	—	—	—	—
Private regard (PRIV)	−.14***	.14***	.16***	.45***	—	—	—	—	—	—	—	—
Public regard (PUB)	.04	−.12**	.06	−.10*	−.05	—	—	—	—	—	—	—
Omnivorous regard (OMNI)	.16***	.04	−.02	−.42***	−.18***	.18***	—	—	—	—	—	—
Prosocial motivation (PRO)	−.12**	.06	.05	.44***	.42***	−.12**	−.47***	—	—	—	—	—
Personal motivation (PER)	.01	.17***	.10*	.20***	.23***	−.03	.08*	.09*	—	—	—	—
Moral motivation (MOR)	−.14***	.05	.04	.51***	.38***	−.14***	−.63***	.72***	.05	—	—	—
Carnism (CAR)	.10*	−.24***	−.25***	−.14**	−.36***	−.05	−.12**	−.27***	−.30***	−.18***	—	—
Prevalence of vegetarians in social network (PVSN)	−.03	−.07	.01	.18***	.09*	−.06	−.29***	.26***	−.11**	.26***	.13**	—
Prevalence of vegetarians in local community	−.05	−.11*	.05	.08	.08*	.02	−.16***	.08*	−.08	.11*	.13***	.44***

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

Table 4. Distribution of Meat Consumption Frequency Among Flexitarians.

Meat Consumption Frequency	Percentage of Participants (%)
Never	0
A few times per year	2
Once per month	6
A few times per month	19
Once per week	14
2–3 Days per week	41
4–6 Days per week	9
One meal per day	7
Two meals per day	2
Three or more meals per day	0

2013), we advance that sharing beliefs about moral ideologies may be a stimulus for social identification in the realm of eating behavior. Rejecting carnism may also be a way to achieve positive intergroup differentiation, helping flexitarians bolster their vegetarian in-group identity. These results, furthermore, suggest that greater consideration of flexitarianism offers promise for elucidating the intersections of social identity and moral judgment.

One limitation of the current research is that its correlational, cross-sectional nature cannot allow for definitive causal inference. For instance, although we speculate that greater meat-avoider identity centrality and rejection of carnism lead flexitarians to identify as vegetarian, there is potential for reverse causality, as identifying with a social group (e.g., vegetarians) may influence identity centrality and moral ideology. Future use of experimental and longitudinal designs would be beneficial for providing more causal evidence, with longitudinal designs offering particular value in tracking which people select to go vegetarian over time. A second limitation is that no single way of operationalizing *flexitarian* exists. Here, we adopted the definition of a flexitarian as an individual who "limits his or her meat intake yet still includes meat in his or her diet," as put forth by a recent review (Rosenfeld, 2018, p. 133). Investigators may alternatively wish to operationalize flexitarianism by actual frequency of meat consumption. A third limitation is that we did not assess the specific reasons participants had for avoiding meat (e.g., for animals, health, the environment). Rather, drawing upon Rosenfeld and Burrow's (2017b) analysis, we sought to capture the underlying psychology of how people subjectively construe meat avoidance in light of goal pursuit by using the DIQ's prosocial, personal, and moral motivational orientation scales. Future work would benefit from more nuanced examinations of dietary motivation. A fourth limitation, as with all survey research—but particularly so when using targeted recruitment for hard-to-reach populations—is the potential that participants misrepresented themselves, saying they were meat-avoiders simply to receive compensation for our survey. We have provided Supplementary Material to shed light on this concern, in which we display our data as stratified based on our study's participants recruited via targeted versus general recruitment.

Ultimately, our findings highlight that the extent to which people see themselves as vegetarian versus omnivorous is neither dichotomous nor is it merely a reflection of people's eating behaviors. Rather, this dietary self-perception may be uniquely traced to how people internalize social identity (i.e., centrality) and endorse group-defining moral ideology (i.e., rejecting carnism). By integrating perspectives on social identity and morality with the study of vegetarian and omnivorous eating behavior, scholars can cultivate more rigorous accounts of what social psychological forces emerge at the dinner table.

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Supplemental Material

The supplemental material is available in the online version of the article.

Notes

1. Because all analyses involving multi-item measures in this research were used on flexitarian participants only, all internal consistencies (Cronbach's α's) reflect flexitarians' responses.
2. These analyses do not appear in our preregistration because they were suggested by a reviewer.

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