



Research Article

# The healthy, yet unhealthy choice: stereotypes about vegetarians and vegans in a meat-eating culture

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## ABSTRACT

Stereotypes about vegetarians and vegans influence behaviour toward these groups and the consumption of animal products. This affects the health and well-being of humans, other animals, and the environment. We studied these stereotypes in a meat-eating culture based on content analysis of open-ended responses in contrast to the more frequently used ad-hoc scales. We also compared the positivity and contents of stereotypes between men and women and between vegetarians/vegans and meat-eaters. We found that stereotypes about vegetarians are ambivalent, while stereotypes about vegans are more clearly negative, both to a greater extent among meat-eaters and among men. The open-ended responses were most frequently related to health, then to moral values, empathy, commitment, and unfavourable social traits. References to masculinity/femininity were not prominent in the spontaneous responses, and neither was the domain of competence. While meat-eaters mainly relate vegetarianism and veganism to health, vegetarians/vegans relate these choices to empathy and moral values. We discuss the implications of the findings for cross-cultural research and shaping public communications.

*Keywords:* vegetarians, vegans, stereotypes, health, content analysis

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## Introduction

Meat consumption habits are notoriously resistant to change (Macdiarmid et al., 2016), especially when people think that plenty of meat is necessary and normal (Piazza et al. 2015). Critical insights have been made into the issue of animal production and meat consumption in contemporary society, both ethically (Singer, 1975/2009) and for its negative environmental (Hedenus et al., 2014) and health-related impacts (Tilman & Clark, 2014). Researchers suggest that the protection of the environment is dependent upon not only technological innovation but also on changes in human beliefs and patterns of behavior related to support for animal production and meat consumption (Hedenus et al., 2014). To promote more sustainable and healthier consumption habits it is essential to better understand their psychosocial determinants. Psychological research suggests that negative views of activists can be related to a reduced willingness to adopt the behaviors promoted by activists in different domains of activism (Bashir et al., 2013). Specifically, in the domain of prospective vegetarianism and the willingness to reduce one's meat intake, one of the perceived barriers could be a negative social image of vegetarians and vegans (Lea & Worsley, 2003; Rosenfeld, 2018). For instance, Lea and Worsley (2003) established that 10% of the participants associated a negative social image with the vegetarian diet which they recognized as a barrier to choosing this diet, and this percentage was higher (25%) among men. Furthermore, research suggests that both vegetarians and vegans can be evaluated more negatively than several common prejudiced target groups and several other nutritional outgroups (MacInnis & Hodson, 2015). Vegetarians and vegans report having experienced discrimination (Torti, 2017; Twine, 2014), and a few studies suggest that their well-being can be affected (Forestell & Nezelek, 2018; Nezelek et al., 2018).

### Contents of stereotypes about vegetarians and vegans

An overarching framework for studying stereotypes is offered by the stereotype content model (Fiske et al., 2002). According to this model, stereotypes about most groups include various characteristics that fall into two

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underlying dimensions: warmth (social and moral characteristics) and competence (ability). These are considered two fundamental and universal dimensions defining the perception of social groups. Warmth/communion is predicted by perceived competition while competence/ability is predicted by perceived status. The specific combination of these dimensions generates specific emotions (e.g., admiration, envy, pity) and behaviors (e.g. facilitating or harmful) toward the group (Cuddy et al., 2008).

Psychological studies revealed that several characteristics are stereotypically related to one being vegetarian or vegan. Ruby and Heine (2011) revealed that profiles including information about an individual's vegetarian diet are rated as more virtuous and less masculine compared to those with omnivore diets. The lowered perception of masculinity related to vegetarian-vegan diets is a typical finding, and it could be explained by the association between meat and healthiness and strength (Lowe & Sulikowski, 2018; Rothgerber, 2013). A recent study found that hosts offering vegetarian rather than meat-based meals were rated as more health-conscious, caring about animal welfare, but also trend-conscious (as opposed to old-fashioned) and alternative (vs. bourgeois) (Funk et al., 2020). From omnivores' perspective, vegetarians are also viewed as more disciplined, moral, introverted, educated, skinnier, and more athletic, compared to omnivores, and also as less tolerant (Hartmann et al., 2018). Judge and Wilson (2015) asked their participants to envision a future in which the whole of society will be plant-based, vegetarian, or vegan. Participants expected that people would be more conscious of the environment and animal welfare, but also more communal, that is, more caring and empathetic, socially connected, and socially conscious. Some participants also perceived a higher level of moral judgment in such future societies; however, this was not recorded as one of the dominant expectations.

The existent research on stereotypes about vegetarians and/or vegans relied on more or less elaborate lists of specific traits whereas qualitative studies are quite rare. Burgess and associates (2014) asked their participants to state the characteristics they associated with vegans, vegetarians, and omnivores. They report a range of associations, for instance, vegetarians are perceived as healthy,

lacking protein, hipsters, and animal lovers, while vegans are also perceived as animal rights activists, thin, weak, and strict. However, the authors did not report the specific frequencies of these responses, so they mostly illustrate the width of the associations rather than a precise description of stereotype content. Minson and Monin (2012) elicited and recorded three-word associations to vegetarians and analyzed whether the words were food-related, descriptions of physical characteristics or psychosocial characteristics. They found that 47% or all respondents named at least one negative characteristic, mostly related to psychosocial characteristics, e.g. self-righteous, annoying, and crazy. However, the authors did not analyze the psychosocial characteristics in more detail. They found that the negativity of associations was predicted by anticipated moral reproach attributed to vegetarians, that is, the extent to which participants thought that vegetarians perceived themselves as morally superior compared to omnivores or the individual participant. De Groot and associates (2021) used a similar association task to record stereotype contents. However, they focused on the valence of the traits, while the contents were organized according to the general categories of literal (related to the label), physical, and psychosocial. They highlighted that the majority of the negative psychosocial traits attributed to vegan can be characterized as moralistic, and they further show that these traits predict less social attractiveness.

### Are vegetarians perceived as different from vegans?

Although similar in terms of abstaining from at least some types of animal products, vegetarians and vegans are different groups with specific views and identities (Lund et al., 2016; Rosenfeld, 2019). The existing research suggests that vegans are perceived more negatively in terms of their health and social characteristics, in particular being judgmental (Corrin & Papadopoulos, 2017; Judge & Wilson, 2019, de Groot et al., 2021). These findings are rather unsurprising given that vegan positions are perceived as less similar to one's own, or more distant and extreme than vegetarian positions, vegetarianism being a sort of common ground between meat-eaters and vegans (Bryant, 2019). The negative perceptions of vegans are sometimes interpreted as defensive since they are a way to deal with

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the cognitive dissonance arising from meat consumption (Bastian & Loughnan, 2017), as well as the anticipated moral reproach of vegetarians/vegans (Minson & Monin, 2012). This has also been supported by qualitative research, e.g. omnivores anticipated that they would be engaged in conflict by vegans, even before these adversarial interactions even happened (Guerin, 2014). Most of the omnivore participants readily cited cases of extremist vegans, perceived them as instigators of conflict, and expressed negative feelings toward any conversation about veganism.

### The cross-cultural perspective

Thus far there have been few cross-cultural studies, so the current knowledge about stereotypes is limited to Western countries. Attitudes toward vegetarians were compared in four countries: Argentina, Brazil, France, and the USA (Ruby et al, 2016). Across the countries, participants expressed neutral attitudes to vegetarians, while women expressed more positive attitudes than men. There were also differences between countries, for instance, admiration of vegetarians was highest in the USA and Brazil followed by France and Argentina. On the other hand, Argentinians were least bothered by vegetarians, followed by Brazilians, the French, and Americans.

In Slovenia, Črnič (2003) revealed largely positive attitudes toward vegetarians: 47.7% of participants expressed positive, 31.4% negative attitude, while 20% were undecided. Similarly, 42.5% of the participants expressed a positive, 35.7% had a negative attitude toward vegans, and 20% were undecided. In contrast to the attitude toward the personal choice to abstain from meat or animal products for adults, choosing vegetarianism and veganism for one's children was perceived in very negative terms.

The described studies explored only the general perception of vegetarians/vegans in contrast to the actual contents of stereotypes. However, neutral attitudes could be related to ambivalent rather than neutral stereotypes. Also, some elements of the stereotypes can be hypothesized to be similar regardless of the cultural context, for instance, the perception that vegetarians and vegans care more about animals and the environment. Other negative perceptions

could be more emphasized in the local context due to the meat-based cuisine, the low prevalence of vegetarianism/veganism, and the prevalent traditional worldview (Branković, 2021). This could be the case for the perceptions related to health, that is, the impoverished health of people who abstain from meat. Also, the social awkwardness perceptions could be more pronounced in the local context, since these practices are much less present in everyday consumption compared to some Western countries.

### The present studies

As psychological studies of stereotypes relied mostly on ad-hoc rating scales, we aimed to contribute toward a more systematic mapping of stereotype contents. We aimed to achieve this through a free-response format that allows mapping the domains of traits or characteristics related to being vegetarian/vegan. By applying a more differentiated set of categories to the contents of spontaneous answers, specifically the psychosocial characteristics, we will establish which characteristics are more dominantly associated with being vegetarian or vegan. This approach will allow us to compare and contrast the findings from the open-ended questions to studies that relied on ad-hoc scales.

Specifically, by soliciting traits that participants spontaneously associate with being vegetarian/vegan, we aimed to capture the contents of stereotypes comprehensively, to be able to establish:

- a. which domains of characteristics are most frequently related to being vegetarian or vegan
- b. the prevalence of positive vs. negative characteristics within stereotypes as well as potentially ambivalent views
- c. whether the contents of stereotypes differ depending on whether the individual herself is vegetarian/vegan and depending on their gender.

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## Method

### Participants

We recruited a total of 739 participants from Serbia (age range from 17 to 60 years,  $M = 25.31$ ,  $SD = 8.69$ , 81.2% female). Students from one faculty in Belgrade we recruited in waves 1 and 3 participated for extra course credit, while in the second wave, participants were recruited by applying the passive snowballing method, that is, by distributing the link through social media. We polled the data into an aggregated base to conduct the analyses. The survey was available online.

To assess meat consumption, participants chose what best described their eating habits from the following options: a. "I consume meat regularly", b. "I consume meat, but try to decrease the intake", c. "I consume meat only occasionally", d. "I consume fish, but not other types of meat", e. "I do not consume meat, but consume other animal products (dairy, eggs)", and f. "I never consume meat or any products of animal origin." The item was reverse-coded so that a higher score indicates more frequent meat consumption. We based this measure on the one used in Dhont and Hodson (2014), except that we omitted the labels (e.g., omnivore, vegetarian, vegan), as they can be understood in different ways by respondents (e.g., some people who claim to be vegetarian eat meat, and some people who do not eat meat prefer not to be called vegetarians). Most of our participants were regular meat-eaters (54.5% consume meat regularly, 17.8% consume meat, but try to decrease the intake, 18.1% consume meat occasionally, 2.6% consume fish, but not other types of meat, 5% do not consume meat, but consume other animal products, and 2% never consume meat or any other products of animal origin). Thus, we had 90.4% meat-eaters and 9.6% vegetarians and vegans.

### Procedure

The study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and the Ethical Code of the Serbian Psychological Association. Explicit approval was not required since the institutional ethics committee was not established at the moment of data collection. Participation was voluntary and participants clicked on informed consent before



entering the survey. In the informed consent, participants could read that they would be participating in a survey about current social topics. They were told that it was not possible to give wrong answers, so they should answer honestly. Participants also were told that the findings would be used for scientific purposes only, that their answers were anonymous, and that they could discontinue their participation at any time.

## Measures

Participants were asked to state three traits or characteristics that first came to mind when they thought about vegetarians (“Write down the three characteristics that first came to your mind when you think of vegetarians”). They were provided with three separate boxes for their answers. The following question was identical except that vegans were named as the target group (“Write down the three characteristics that first came to your mind when you think of vegans”). In total, we recorded 1476 and 1431 responses, for vegetarians and vegans respectively, which we used in the content analysis.

## The data coding process

We applied a data-driven procedure in developing the coding scheme (Mason, 1996). To be able to map the contents of stereotypes comprehensively and objectively, we thus opted not to rely on predetermined categories for the analysis but defined the categories based on the empirical material. We defined an initial scheme based on the most common categories of traits and characteristics and then revised and refined the scheme based on the possibility of coding the responses without overlap. We opted to differentiate between positively and negatively evaluated traits, to be able to get a more informative categorization, e.g. we differentiated between good health and poor health, rather than coding all the answers as health-related.

The final scheme is presented in Table 1, illustrated with several examples of responses, that is traits and characteristics coded within the category. The traits that had very low frequency (e.g., lower than 5 in the overall sample) were coded as *Other*. This category is quite broad, reflecting mostly idiosyncratic views of the

participants, including traits such as *religious, intuitive, reflexive, spiritual, sophisticated, naive, stable, rational, or saint*. We also included the following categories: *Don't know, Refusal to answer, and Irrelevant*, which was assigned in cases when participants repeated the characteristics of the category (*doesn't eat meat*) or named persons they associated with vegetarianism/veganism (e.g. *Novak Đoković, a friend of mine, etc.*).

**Table 1**

*The coding scheme used in content analysis*

Category	Examples of participant responses
Good health	Healthy, energetic, slim (physical health); optimistic, relaxed, positive (mental health)
Poor health	Skinny, pale, anaemic, weak (physical health); tense, frustrated, unfulfilled (mental health)
Empathy	Caring, sensitive, gentle, empathetic
Moral values	Conscious, responsible, good, unselfish, humane
Care about animals	Love animals, care for animals
Commitment	Tenacious, consistent, dedicated, committed
Free-mindedness	Progressive, liberal, open to ideas, alternative
High competence	Intelligent, educated, wealthy, intellectual
Favourable social characteristics	Sociable, amicable, darling
Unfavourable social characteristics	Judgmental, pushy, pretentious, intolerant, irritant, egoistic, boring
Extreme views	Extremist, fanatical, narrow-minded
Trend following	Trend followers, hipsters, trendy
Hypocrisy	Hypocrites, false moralists, frauds
Ordinariness	Normal, just as anybody else, just a normal person

## Inter-rater reliability

Two independent raters coded the answers. The inter-rater reliability was high, 89.7% of individual responses were given the same code in the case of vegetarians and 89% in the case of vegans (we note that this is the percentage of responses, which entails that some traits were repeated more

than once). The remaining responses were discussed and final codes were agreed upon. The raters agreed that some of the responses were ambiguous, and these were coded as *Other*: some words could have more than one meaning, which was impossible to discern without more context, e.g. *strict*, which could mean disciplined but also intolerant toward others, or *tough*, which could mean both muscular (physically) or resilient (as a psychological quality). However, most responses were possible to code reliably, as evidenced by the inter-rater agreement.

The index of negativity was coded by counting the number of negative characteristics mentioned by an individual participant and ranged from 0 to 3. Here we coded the negatively valenced characteristics recognized by the previous coding system, namely, poor health, unfavourable social characteristics, extremeness and hypocrisy, as well as trend following.

The index of incongruence was also coded at the individual level, 0 for congruent responses and 1 for incongruent responses. As incongruent, we coded participants who stated two opposite characteristics in their open-ended responses, more specifically, either: a. characteristics related to good and poor health, b. favourable and unfavourable social characteristics, or c. stated that vegetarians/vegans are both free-minded and extreme. We calculated two indices, one for vegetarians and one for vegans.

## Results

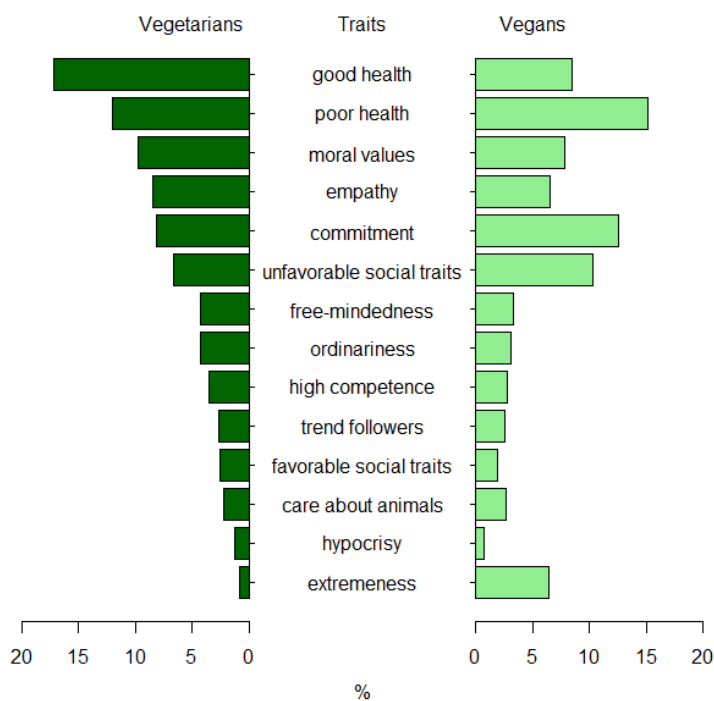
### Contents of stereotypes

The percentages of responses per category of contents are presented in Figure 1. Stereotypes about vegetarians were loaded primarily with health-relevant characteristics: vegetarians were perceived both as characterized by good and poor health. Second, vegetarians are seen as conscious and good, empathetic, and sensitive, as well as committed, persistent, and dedicated. To a smaller degree, vegetarians are also perceived as free-minded, progressive, highly educated, and intellectual. On the other hand, they are sometimes perceived as exerting unfavourable social traits, such as being pretentious,

pushy, even preachy, and intolerant of those who do not share their beliefs. Also, a small number of responses reflected the perception of vegetarians as trend followers and hipsters, or hypocrites and extremists. We also recorded 0.9% of Don't know responses, 3.5% of irrelevant responses, 3.9% of refusals, and 8.1% of responses were coded as *other*.

**Figure 1**

*Contents of stereotypes about vegetarians and vegans*



As can be seen from Figure 1, the perception of poor health is somewhat more pronounced in the perceptions of vegans, while good health is ascribed to them less frequently. Unfavourable social traits emerge more frequently in association with vegans, as well as the perceptions of being extreme. Also, 2.8% of responses were irrelevant, 1.6% coded as don't know and 8% as *other*.

## Additional measures: negativity and ambivalence of stereotypes

The previous description reveals that stereotypes include both positive and negative characteristics, sometimes with almost identical prevalence, as is the case with ascribing both good and poor health to vegetarians. We examined whether this entails that the same person can hold ambivalent perceptions of vegetarians and vegans. Analyses of the index of incongruence showed that 8.5% of participants stated incongruent traits when asked about vegetarians, whereas 2.4% of participants were incongruent as regards vegans. For instance, some participants stated that vegetarians or vegans are *educated but narrow*, or mentioned two quite opposite traits in their two responses about the same target group, e.g. *judgemental and nice*, *extremist and normal*, or *hypocrite and moral*.

The index of negativity measure showed that overall 38.6% of participants mentioned at least one negative trait when describing vegetarians, more specifically, 18.5% mentioned one, 8.2% mentioned two, and 11.9% mentioned three negative traits. On the other hand, 55.9% of participants mentioned at least one negative trait for vegans: 23.2% mentioned one, 14.8% mentioned two, and 17.9% mentioned three negative traits as characteristic of vegans. To summarize, our analysis suggests that stereotypes about vegetarians are mostly ambivalent, while vegans are perceived with more clearly negative stereotypes. In both cases, spontaneously mentioned traits are related mostly to health, moral values, empathy and, commitment (in a positive sense), as well as unfavourable social traits.

## Stereotypes among meat-eaters and vegetarians/vegans

Perceptions of vegetarians/vegans presumably depend on whether the observer is an ingrouper or an outgrouter (Tajfel & Turner, 1979). We, therefore, contrasted stereotype contents between meat-eaters and non-meat-eaters (since we only managed to recruit a small number of vegans in our sample, we presented the aggregated responses of vegetarians and vegans). The significance of differences in the ratings was tested using a permutation test with 10 000 permutations, programmed in R (R Core Team, 2019). The test was

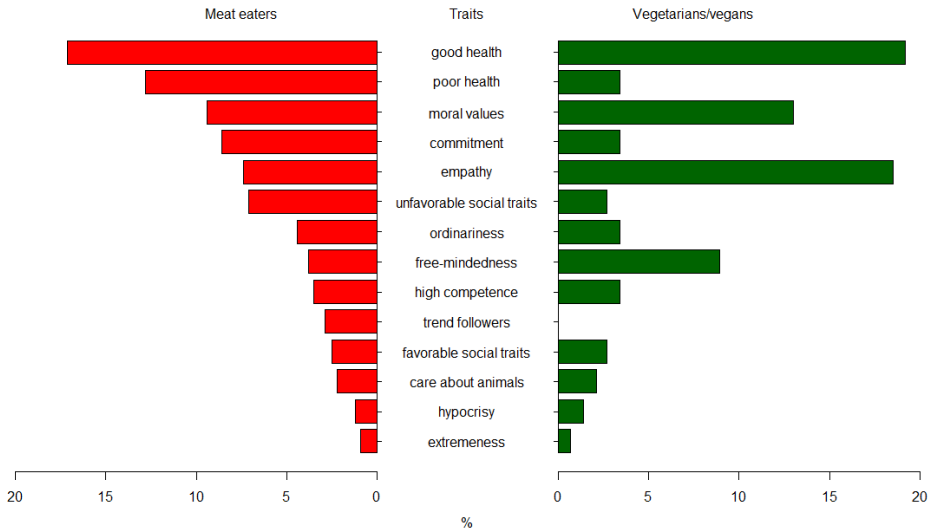
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devised since observations were not independent, that is, since participants could mention trait from several of the categories. The permutation test randomly assigned group membership to participants while keeping the groups' sizes identical to the empirical groups. In this way, we generated a distribution of differences which corresponded to the null assumption of no differences between the groups (since membership is randomized). Empirical differences were then tested against this distribution and we determined critical values that corresponded to significant differences at the p level of .05.

As can be seen from Figure 2, the perceptions of vegetarians do differ between these groups in some respects. First, while both meat-eaters and vegetarians/vegans ascribe good health to vegetarians, meat-eaters also have a more prominent association of poor health with this group (diff = -.09, 95%CI [-.06, .07]). Vegetarians/vegans ascribe empathy to vegetarians to a larger extent than meat-eaters (diff = .11, 95%CI [-.04, .04]), as well as free-mindedness (diff = -.05, 95%CI [-.03, .03]). Also, meat-eaters expressed more negative associations, in that they more frequently ascribed unfavourable social traits to vegetarians (diff = -.04, 95%CI [-.04, .05]).

Figure 2

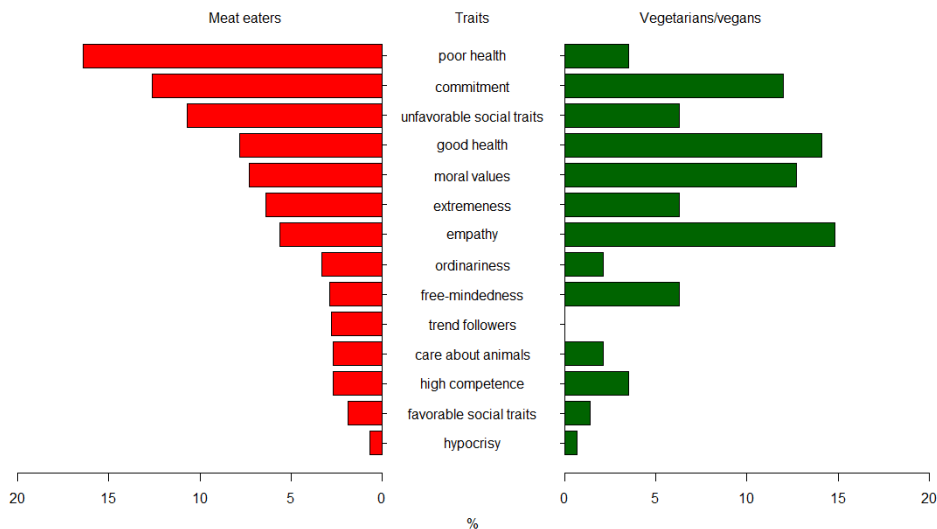
*Stereotypes about vegetarians among meat-eaters and vegetarians/vegans*



Perception of vegans can be said to be even more polarized between meat-eaters and vegetarians and vegans (Figure 3). There is a discrepancy both in perceptions of good and poor health, the more unfavourable perceptions being consistently expressed by meat-eaters, that is, fewer associations about good health (diff = .06, 95%CI[-.05, .05]) and more with poor health (diff = -.13, 95%CI[-.07, .07]). On the other hand, the predominant characteristic that vegetarians/vegans ascribed to vegans was empathy, more so than meat-eaters (diff = .09, 95%CI[-.04, .04]). Moral values were also more frequently mentioned by vegetarians/vegans (diff = .05, 95%CI[-.04, .04]), as well as free-mindedness as a characteristic of vegans (diff = .03, 95%CI[-.03, .03]). Interestingly, vegetarians/vegans also ascribed some negative characteristics to vegans – frequency of extremeness did not differ in comparison with meat-eaters. This is obviously because this group mostly consisted of vegetarians and not vegans. It appears that even if vegans are perceived predominantly as empathetic, in some respects, vegans can be seen as an outgroup and evaluated negatively.

Figure 3

*Stereotypes about vegans among meat-eaters and vegetarians/vegans*



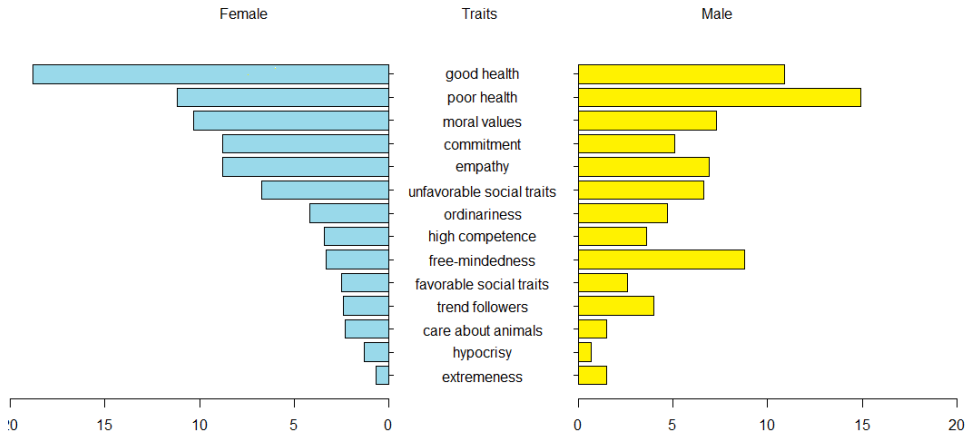
### Stereotype contents among men and women

As studies suggest that men and women differ in their perceptions of vegetarians and vegans (e.g. Ruby & Heine, 2011), we compared their differences between these two groups (they are presented in Figure 4 and 5).



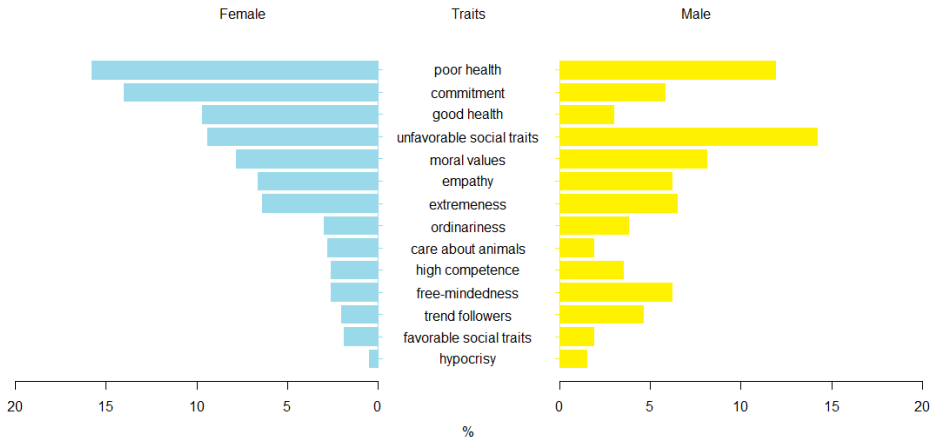
**Figure 4**

*Stereotypes about vegetarians among women and men*



**Figure 5**

*Stereotypes about vegans among women and men*



Women ascribed good health to vegetarians to a larger extent than males (diff = .08, 95%CI [-.05, .05]); also, women associated commitment more with vegetarians (diff = .04, 95%CI [-.03, .03]). On the other hand, men ascribed free-mindedness to vegetarians to a larger extent (diff = -.05, 95%CI [-.02, .02]). Other categories were quite similarly distributed, without statistically significant differences. Notably, negative perceptions of social characteristics did not differ among men and women and neither did the perceptions of vegetarians as hypocritical or extreme, in addition to the fact that these were quite rare in both groups.

Perceptions of vegans were less concordant among men and women. Women ascribed good health to vegans, to a larger extent than men (diff = .07, 95%CI [-.04, .04]). Besides health, women perceived vegans mostly as committed, more frequently compared to men (diff = .08, 95%CI [-.05, .04]), while men perceived them as more free-minded to a larger extent than women (diff = -.03, 95%CI [-.02, .02]). On the other hand, men ascribed more negative social characteristics to vegans (diff = -.05, 95%CI [-.04, .04]). Men also related vegans more with trend following (diff = -.03, 95%CI [-.02, .02]) and hypocrisy (diff = -.01, 95%CI [-.01, .01]) compared to women. In terms of similarities, men and women perceived vegans as equally moral, and empathetic but also as equally extreme.

## Discussion

In the present study, we explored the contents of stereotypes about vegetarians and vegans in a meat-eating culture. We add to the existing literature by exploring the contents based on spontaneous open-ended responses, by comparing the contents among men and women, as well as among meat-eaters and vegetarians/vegans. Since stereotypes are self-perpetuating cognitive schemes (Snyder, 1981), they are an important element of social perception and consequently, can impact how these minority groups are treated. What is more, shared perceptions of the characteristics of vegetarians and vegans can impact an individual's willingness to reduce meat

consumption, which has been shown to entail both health- and environment-related benefits (Hedenus et al., 2014; Tilman & Clark, 2014).

Our analysis revealed that both being vegetarian and being vegan is associated with a wide range of characteristics, well beyond one's caring about animals or being health-conscious (Hartmann et al., 2018). The contents were quite heavily loaded with health-related characteristics, thereafter, associated with the domain of morality, values, and ideology, also partly leaning towards personality characteristics, and thirdly, related to social characteristics. When asked about the typical characteristics of both vegetarians and vegans, participants most readily answered about what they thought were their health-related characteristics, mostly physical but to an extent also mental health. Interestingly, these associations were quite ambivalent; in the case of vegetarians, roughly equally positive and negative, whereas in the case of vegans they were slightly leaning towards perceptions of poor health, in particular among those who themselves are meat-eaters.

What concerns the domain of morality, values, and ideology, most participants did not mention caring about animals in specific but rather mentioned more generalized traits of being caring, empathetic, conscious, humane, good and committed. This latter category could also be interpreted as the one most related to personality traits, most closely conscientiousness (Costa & McCrae, 2008). In terms of valence, this broad domain includes predominantly positive or favorable traits. These traits are also consistent with a communal orientation, as suggested in the Judge and Wilson (2015) study on vegetarian future societies. Vegetarians and vegans were also ascribed high competence, however, these characteristics made a much smaller percentage of the responses.

Thirdly, the stereotypes included the domain of social characteristics. Even though both negative and positive characteristics were mentioned, the negative ones were clearly predominant, in particular in the perception of vegans (10.3% of all the traits mentioned). Vegans and vegetarians were thus described as overly moralistic, judgmental, and preachy, in short, overly concerned with their own nutritive choices and forcing other people to care

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about the issues they care about. This perception also entailed that they were viewed as “difficult people”, “complicated”, or “irritant”, as well as vain and entitled, viewed as ascribing oneself the higher moral ground. This perception was more present among meat-eaters and men.

Vegetarians and vegans were also perceived as free-minded, open, curious, and liberal in terms of political orientation. These characteristics are somewhat difficult to interpret in terms of positivity – apparently, their interpretation would depend on the orientation of the observer. However, a smaller category that we termed “trend following” has a more unfavorable air, as evidenced by more elaborate responses, for instance, “filthy hipster”, or “blind trend followers”. Therefore, this category could connote that this is not an overly reflexive decision, but rather striving for a superficial social image or uncritically accepting beliefs to achieve a social image deemed favorably.

The one notable domain that did not emerge from our analysis was the perception of masculinity or femininity. Only a few of all the responses cited these characteristics explicitly. Since previous research reveals that being vegetarian or vegan is related to a lack of masculinity (Rothgerber, 2013; Ruby & Heine, 2011) we can speculate that this is an indirect perception based on the fact that other traits typically ascribed to vegetarians and vegans are more closely relatable to a feminine stereotype (for instance, in being empathetic and communal rather than competence oriented).

While vegans attract more negative perceptions, as the more extreme group (Corrin & Papadopoulos, 2017; Guerin, 2014; Judge & Wilson, 2019), stereotypes about both groups are to some extent ambivalent, including inconsistent or even opposite characteristics (e.g. both good and poor health, being free-minded and being extreme, etc.). Interestingly, the domain of health, which is most frequently mentioned, is also the one containing the most ambivalence, in that both good and poor health is attributed to vegetarians and vegans.

Further, our analysis showed that these inconsistencies can partly be explained by the differences stemming from different observer groups. Importantly, this is more the case for vegans than vegetarians, since our analysis

showed that individuals can hold quite opposite views of vegetarians. Meat-eaters hold more unfavourable perceptions of vegetarians and vegans, compared with participants who themselves are vegetarian or vegan. Also, men hold more negative perceptions compared to women. While outgroupers mostly relate vegetarianism and veganism to health, those who themselves are vegetarian or vegan most readily relate these choices to empathy and moral values, as well as free-mindedness.

Perhaps the most important insight is that the domain of health emerges as the predominant content, whereas it was typically overlooked both by the stereotype content model and in the previous studies with pre-determined rating scales (Funk et al., 2020; Hartmann et al., 2018). The emergence of this domain is not surprising since the issues of nutrition easily relate to the issues of health. Also, one of the crucial legitimizations of meat consumption is precisely the idea that meat is healthy and necessary for the survival of humans (Piazza et al., 2015). Thus, the health-related associations or stereotypes connected to vegetarianism and veganism are of special importance for prospective vegetarianism and meat reduction efforts and should therefore be better studied and understood. The particular importance of this domain for stereotype content could be a cultural specificity, however, it is unlikely that health-related perceptions are not of importance in other cultural contexts. This issue merits future study.

Future research could take into account the categories of perception that emerged from the qualitative analysis, and, for instance, include the following dimensions when assessing the positivity of stereotypes: good health, poor health, moral values, commitment, empathy, and unfavourable social traits. Using a more standard list of traits would enhance the comparability of research findings since existent studies varied in how they determined the list of traits they used in the measurement. This approach would also allow a higher level of cross-cultural comparability. Based on available data, it is quite difficult to give any conclusions regarding how stereotypes are similar or different in the context of Western Balkans. It appears that the overall representations are similar, possibly more loaded with health-related characteristics in the local

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context than in the West (Burgess et al., 2014; Hartmann et al., 2018; Minson & Monin, 2012). However, since these previous studies did not include specific data on the prevalence of traits or categories, in the same way as we did in this study, it is not possible to compare the contents directly.

The conducted study contributes by comparing the stereotype contents between male and female participants, as well as between meat-eaters and non-meat eaters. With the present studies, we also contribute to the growing literature on vegetarianism (Amiot & Bastian, 2015; Rosenfeld, 2018; Ruby, 2012; Serpell, 2009) introducing a cross-cultural perspective, since the studies were conducted in a less well-studied context, that is, Serbia and the Western Balkans. Serbia is a region typically described as in-between the individualist West and the collectivist East, thus a context culturally different from both typically Western and Eastern countries (Hofstede, 2001; Muthukrishna et al., 2020).

Our findings have implications for public communications advocating for reduced meat consumption. First, since health-related concerns are predominant in the stereotype contents, public communications would benefit from both strengthening the argument about their health benefits and relieving concerns about the perceived risks. If people are generally concerned about becoming pale, weak, and non-energetic if they do not consume meat, it is not sufficient to emphasize why reducing meat consumption is good, it should also be addressed that this would not have negative impacts on one's health. Second, the pro-communal qualities of vegetarians and vegans should be emphasized, to counter the possible negative social image, especially among men (Lea & Worsley, 2003; Rosenfeld, 2018). Their commitment to moral values they share with others, as their commitment to the wellbeing of the larger community, should be emphasized instead of more narrow concerns that the majority does not necessarily recognize.

The present research has important limitations. First, our participants were predominantly recruited from the more educated and more liberal segments of society, which is frequently the case in similar studies. Although we did not have access to a nationally representative sample, we did manage to

recruit a relatively large and diverse sample of participants. We believe that these sample characteristics are adequate for providing insight into the current research problem, as stereotypes are characterized by a wide social consensus. In addition, we included relevant comparisons of stereotype contents, based on participant gender and their frequency of meat consumption.

Future research could also look at how perceived social norms in attitudes toward vegetarianism and veganism, and the respective groups, could shape individual attitudes (Tropp et al., 2016). Social norms developed around these issues provide particularly potent psychological defences, so therefore a wide endorsement of vegetarianism/veganism could be undesirable in most meat-eating cultures (Bastian & Loughnan, 2017). Also, we did not include any questions related to potential contact with vegetarians or vegans, for instance, whether participants have friends or close relatives from these groups. An interesting avenue of future research is also where the common ground in terms of values, interests, or identities could be found between the meat-eating majority and vegetarians and vegans (e.g. see Budžak & Branković, 2022).

In sum, our findings highlight the need for a more structured and cross-cultural approach to the study of the contents of stereotypes, relying on empirically extracted and validated dimensions relevant to the perception of these groups, in particular the domain of health, moral commitment and unfavourable social traits. Also, vegetarians and vegans are perceived differently depending on whether these are in- or outgroups and depending on the gender of the perceiver, so we suggest retaining these distinctions in future studies of stereotypes and attitudes. With the present studies, we hope to have contributed to understanding how vegetarians and vegans are perceived as well as of some of the important determinants of these perceptions.

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### *Conflict of Interest*

We have no conflicts of interest to disclose.

### *Data availability statement*

Data used in this paper are available upon a reasonable request.

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