Who Speaks Up? Moral Conviction as Motivator to Advocate for Meatless Diets

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Abstract

The temperature of the earth is rising and environmental issues are becoming more prevalent. A big contributor to global warming is meat production. Individual greenhouse gas emissions would be reduced by half if people were to switch to a meatless diet. Despite awareness of environmental consequences of meat production, eating meat is still the norm. To drive change, vegans and vegetarians must start speaking up. They might not do this, and conform to majority in public, due to the fear of social judgment and exclusion. Although majority does not speak up, some do. This study investigates what distinguishes those that do speak up from those that do not, focusing on the strength of moral conviction. It is argued that individuals higher in moral conviction are more likely to speak up than those lower in moral conviction. It was also expected that moral conviction would be higher within vegans since they have a more extreme diet, and that they therefore would be more likely stand up for themselves. A study was conducted in which participants (N = 84) were put in a position to either conform to a meat-eating majority or stand up for what they believe in. Prior to this, different constructs, including moral conviction, were measured. Although a positive effect was found between moral conviction and speaking up, this effect was nonsignificant. As for the difference between vegans an vegetarians, a significant difference in moral conviction scores was found. However, this had no influence on speaking up behaviour.

Who Speaks Up? Moral Conviction as Motivator to Advocate for Meatless Diets

Global warming is one of the most urgent problems this planet has to face. The temperature of the earth is rising and negative effects are becoming more prevalent (IPCC, 2022). Meat production is a big contributor to this problem, accounting for 12 to 18 percent of total greenhouse gas emissions (Allen & Hof, 2019; Gomez-Zavaglia et al., 2020; González et al., 2020). Switching to a vegetarian diet could reduce individual emissions by almost 50 percent (González et al., 2020). Despite awareness of the consequences of meat consumption, a meat eating diet is still the norm (Bryant et al., 2022). Vegans and vegetarians, hereafter referred to as veg*ans, need to start speaking up about their dietary choices to drive change.

The reason that speaking up is of importance is that it creates a normative message, which in turn can influence dietary patterns. According to the focus theory of normative conduct (Cialdini et al., 1990), two types of norms are distinguished. These are injunctive norms and descriptive norms. Injunctive norms refer to what one thinks others deem appropriate behaviour and descriptive norms show what behaviour others participate in (Cialdini, 2007). Research suggest especially descriptive norms seem to have an impact on dietary patterns (Bertoldo & Castro, 2016), since they are directly evident in behaviour. This behaviour informs others on how to act, which consequently shapes behaviour. Therefore, when veg*ans speak up about their diet the descriptive norm that others adhere to a meatless diet increases, possibly directing individuals towards adopting a veg*an diet themselves.

Regardless of the consequences of meat eating, many veg*ans remain silent. An explanation for this is that they might want to avoid do-gooder derogation. That is the negative evaluation of people who 'do good'. People feel threatened by those who hold a moral stance, because they fear they are being looked down upon by those do-gooders (Rothgerber, 2020), and their self-concept is challenged (Minson & Monin, 2012). To eliminate this threat, people evaluate veg*ans more negatively than they do non-veg*ans

(Minson & Monin, 2012), which results in social costs like exclusion. The fear of falling victim to these social costs, might make veg*ans more likely to remain silent about their dietary preferences.

So what is it that makes veg*ans speak up? Bolderdijk and Cornelissen (2022) investigated this by creating a conformity paradigm in which a veg*an minority was positioned against a meat-eating majority. They wanted to see if veg*ans were more likely to sign a petition in favour of the increase of veg*an alternatives in supermarkets, when the meat-eating majority would not sign the petition. They tested this under two conditions; a condition where one ally was present who signed the petition, and one condition where no ally was present and no one signed the petition. They found that participants in the ally condition were more likely to sign the petition. However about half of the participants in the no-ally condition signed the petition as well. This suggests that the presence of an ally may not be the sole motivator for individuals to express their beliefs. It is important to further examine other potential factors contributing to individuals' willingness to speak up.

A driving force that might make people speak up could be the strength of their moral conviction. Moral conviction is related to various forms of resistance to social pressure. A higher moral conviction leads to activism (Van Zomeren et al., 2011), and more resistance to peer pressure (Skitka & Morgan, 2014) and majority influence (Aramovich et al., 2012; Hornsey et al., 2003, 2007; Skitka & Morgan, 2014), which suggest that moral convictions can empower people to engage in behaviours that resist conformity. People mostly conform or give in to social pressure for different reasons. They either have a need for accuracy, they want to be accepted by others and fear social costs, or they want to maintain a positive self-concept (Kundu & Cummins, 2013). However, a high level of moral conviction may exceed these needs. Hornsey and colleagues (2007) found that intentions of speaking up were higher in individuals with stronger moral convictions than in individuals with weaker moral

convictions. This effect was even stronger when they were made aware about their minority position. However, they failed to find evidence that the intention to speak out actually led to speaking out behaviour. In contrast Aramovich et al., (2012) found that moral convictions did have an effect on speaking out behaviour, suggesting people high in moral conviction were more likely to resist majority opinion and speak out than people low in moral conviction. Thus, strong moral beliefs can be a strong motivator to resist social influence and make individuals stand by their moral principles, which provides an insight into why moral convictions might play a role in whether or not veg*ans decide to speak up about their diet and their beliefs.

Understanding what moral convictions are is an important first step in explaining how they can influence speaking up behaviour. Moral convictions, defined as "attitudes that are grounded in core beliefs about fundamental right and wrong" (Skitka et al., 2005), are particularly strong and personal attitudes, not to be confused with moral norms. A moral norm states what type of behaviour is right or wrong in general terms, but a moral conviction is more personal and considered essential to someone's beliefs (Sabucedo et al., 2018; Skitka & Morgan, 2014). It is important to distinguish between the two because even though something might be morally wrong, some people do not necessarily have a strong attitude towards the given issue. The opposite is also true, an attitude can be strongly held, without being morally substantiated. Evidently, it seems to be the moral convictions that predict speaking up behaviour and not non-moral strong attitudes (Aramovich et al., 2012). Understanding this difference sheds a light on why individuals may or may not act upon moral issues. As for veg*ans, it might be that specifically those veg*ans high in moral conviction are more likely to speak up about their dietary preference, in contrast with veg*ans who adhere to their diet because of other strong, non-moral reasons, such as health concerns.

There are several factors that might explain why strong moral convictions drive people to stand up for their minority beliefs. Firstly, people high in moral conviction tend to perceive their point of view as objectively true facts (Skitka et al., 2005, 2021; Skitka & Morgan, 2014; Van Bavel et al., 2012). This is not the case for strongly held attitudes that are not morally motivated. As stated above, people conform because they want to be accurate and have the right answer. Typically, they obtain this by looking at others, but for those high in moral conviction, obtaining this through others is unnecessary as they are certain of their own opinion. As a result, with respect to veg*ans who are morally motivated, this firm belief in their own perspective, might make them more likely to speak up about their diet.

Secondly, strong moral convictions are related to low tolerability of people who do not hold the same moral attitude (Skitka et al., 2005, 2021; Skitka & Morgan, 2014). Individuals high in moral conviction experience their view as an objective truth, and therefore think others are fundamentally wrong when they do not hold those same convictions. Consequently, they rather dissociate from them, instead of wanting to be liked by them (Wright et al., 2008; Skitka et al., 2005, 2021). The fear of social costs like exclusion or judgement therefore do not apply. With regards to veg*ans and their diets, it could be that they view meat-eating individuals as wrong and do not want to be associated with that them. Instead, they want to strengthen the difference between them, which can make them more likely to speak up.

The final explanation as to why moral conviction can drive people to stand up for their minority view is the possibility that moral convictions increase people's positive self-concept. Meaning that they like to think of themselves as moral and good. They may be able to maintain this positive self-concept, not by conforming to others, but by staying true to their beliefs. When their actions contradict their convictions, a tension occurs, known as cognitive dissonance (Festinger & Carlsmith, 1959), which leaves them with an uncomfortable feeling. To alleviate this uncomfortable feeling they either change their behaviour or their beliefs.

Since moral convictions are so deeply held and central to who people are, it is likely that people adjust their behaviour to act in line with their beliefs. In short, when veg*ans' self-concept of being a good veg*an is being challenged, strong moral conviction can make them more inclined to align their actions with their beliefs, making them more likely to defend their dietary views.

This short overview of possible explanations as to why strong moral conviction could lead to people speaking up, helps clarify the reasoning behind the present study. Building on the work by Bolderdijk and Cornelissen (2022), the current research will focus on the potential role of moral conviction in distinguishing between veg*ans who speak up about their diet and veg*ans who remain silent. The paradigm that Bolderdijk and Cornelissen (2022) introduced, will be recreated. Similar to their study, the current study will not discriminate between vegans and vegetarians, hence the veg*an reference. The question central to this research is whether or not the strength of moral conviction influences the likelihood that veg*ans will speak up about their diet.

A group discussion will be set up between one veg*an participant and three meat-eater confederates, posing as participants, to create an environment in which conformity to a group norm would be likely. The minority position of the veg*an participants will first be made salient to ensure their minority position. Prior to the discussion, after the minority position is made salient, an option to sign a petition in favour of the increase of vegan products will be provided. The confederates will decline to sign, after which the real participants receive the option to sign or decline the petition. Participants now face a difficulty where they must decide to either sign the petition and stand up for what they believe in, or conform to the meat-eating majority to avoid possible negative judgement. Based on the literature, three hypotheses are formed.

Hypothesis 1

Veg*ans higher in moral conviction will be more likely to speak up about their diet compared to veg*ans lower in moral conviction.

Hypothesis 2

Vegans experience a stronger moral conviction about their diet than vegetarians. This is expected since a vegan diet is more extreme than a vegetarian one. Vegetarianism is the exclusion of meat from ones diet, whereas veganism refers to the exclusion of all animal derived products from ones diet, making it more extreme. Therefore, if individuals diets are based on moral elements, these moral elements should be stronger when following a more extreme diet.

Hypothesis 3

Vegans are more likely to sign the petition than vegetarians. As a consequence of Hypothesis 2, it is expected that vegans would feel more inclined to sign the petition.

Study 1

Methods

A lab experiment was conducted as opposed to an online experiment. The research was approved by the Ethics Committee of the Faculty of Behavioural and Social Sciences of the University of Groningen (Study Code: PSY-2425-S-0081). Participants were invited to a lab to participate in a study about conformity. The paradigm created by Bolderdijk and Cornelissen (2022) was recreated in this research.

Participants

Participants were recruited by third-year students from the Psychology bachelor's program at the University of Groningen as part of their bachelor theses. Prospective participants were made aware of the study via flyers in relevant locations such as organic

supermarkets, vegan restaurants and university buildings (see Appendix A). These locations were relevant due to the anticipated presence of vegans or vegetarians in those places, which provided the most chances of recruiting them. Additionally, people were informed about this study via WhatsApp group chats. All participants had to be older than 18 and either vegan or vegetarian for a period of time before the experiment took place, since the study specifically focused on people with a vegan or vegetarian diet. Initially, the aimed sample size was N = 90, which was based on the study by Bolderdijk and Cornelissen (2022), who had 93 participants. The final sample size was N = 4 (50% male, 25% female, 25% non-binary). Of the participants, 50% were between the ages 18 and 25 years old, and 50% between 26 and 35 years old. Students accounted for 75% of the sample and 75% of participants followed a vegetarian diet. Participation was completely voluntary and participants did not receive any compensation for their time.

Materials

An online platform was used for participants to fill in their demographic information and the scales.

Moral Conviction Scale. To measure the strength of participants' moral conviction, the Moral Conviction Scale (Skitka & Morgan, 2014) was used. It measured the strength of participants' moral convictions related to their vegan or vegetarian diet on a 5-point Likert scale (1 = not at all, 5 = very much). Two sample items are "Following a vegetarian or vegan diet is a reflection of my core moral beliefs and convictions" and "Following a vegetarian or vegan diet is connected to my beliefs about fundamental right and wrong". The mean of this sample was 4.75, with a standard deviation of 0.50. This suggests that the strength of participants' moral conviction was very high. This construct had a perfect internal consistency, $\alpha = 1$, indicating that all items in within the scale are perfectly correlated.

Petition. The petition that was used, showed a picture of pigs crammed together in a pigsty. Underneath the picture was a text explaining what the petition was about; the increase of vegan and vegetarian alternatives in supermarkets. The petition focused on the environmental benefits of meatless diets and animal welfare. This was done to emphasize societal reasons for less meat consumption. Under the text were six blank spaces for the group members to sign. The spaces were left blank to create the illusion that no one had signed the petition (see Appendix B).

Procedure

Data collection commenced between the 16th and 20th of December, in Groningen.

Vegan and vegetarian participants were invited based on their availability and willingness to engage in a discussion about veg*an products in local supermarkets. It was framed this way to conceal the true purpose of the experiment.

Individuals could sign up for the study by accessing a link or scanning a QR code. When they did, they were first directed to the study information. After that they had to answer if they followed a vegan or vegetarian diet. If they answered no, they were immediately redirected to the end of the questionnaire and thanked for their time, since this study focused solely on people with a meatless diet. If they answered yes, a follow-up screen popped up where they had to choose a date and time to come into the lab. Once in the lab, participants were asked to fill in some demographic information to assess the generalizability of the sample. This included information about their gender, age, student status, and if they followed a vegan or vegetarian diet. The second verification of whether or not they followed a vegan or vegetarian diet was done to correct any potential errors that may have occurred during the sign-up process. Following that, they also completed a questionnaire, measuring family cohesion (Olson et al., 2013), moral conviction (Skitka & Morgan, 2014), moral identity (Black & Reynolds, 2016), self-esteem (Monteiro et al., 2022), and self-identity (Van Der

Werff et al., 2013) using Likert scales. The scales were presented in a randomized order, to minimise potential order effects, and to control for fatigue. The only relevant scale for this thesis is the moral conviction scale, but due to a shared research topic other scales were included.

After completing the questionnaire, the participants were led to a room by the moderator, where three 'participants' were already present. In reality, these participants were confederates, but the real participants did not know that. Before the discussion was initiated, the moderator asked the participants to raise their hand if they were meat-eaters so only the real participants would not raise their hands. This was done to make the veg*ans aware of their minority position. Next, the moderator asked the participants to sign a petition for more vegan and vegetarian products in supermarkets, which was the real experiment. The participants were told by the moderator that they should not feel obliged to sign the petition, since she herself also did not sign. These adaptations were made to avoid possible authority effects. Individuals are generally more susceptible to influence from authority figures and are more likely to follow instructions without critical evaluation. In this case, when the moderator, who is the authority figure, asked the participants to sign a petition without clarifying she herself had not signed, participants could be more prone to sign simply because the request came from an authority figure. This would have interfered with the study, since authority effect was not one of the measured constructs. The petition was then passed around the group. The actual participant received the petition last, after each confederate declined. This way, the participants had to make a decision to either conform to the group and not sign, or stay true to their beliefs and sign, which is the aim of the experiment.

While measuring whether participants signed the petition or not was the only aim of the laboratory session, the discussion was still embarked on, to counteract any suspicion by the participants. The content of the discussion involved participants' experiences with meat replacements. The script for the discussion can be found in appendix C. As data collection concluded, participants were debriefed via email.

Results

No analysis could be conducted since there were only four participants and they all signed the petition. The overall mean for the moral conviction scale in this sample was 4.75, which is above the midpoint. This indicates that the strength of moral conviction in this sample was relatively high, which might explain the 100% signing rate. No further analysis was done.

Study 2

Methods

Due to lack of responses on the real life experiment, an online survey was conducted to virtually imitate the experiment. Since this was a last minute adaptation, it was submitted to the fast-track procedure, which is based on several questions developed by the ethics board, to assess that the study is low-risk. Key research documents, such as the research plan, data management plan, participant information form and consent form were registered prior to the start of the study, but were not reviewed. The principal investigator confirmed that the study adhered to the general guidelines for conducting low-risk research and ensured that the study was in compliance with relevant codes and regulations.

Participants

Participants were recruited through flyers in academic buildings in Groningen and through a link send in university group chats (see Appendix C). All participants had to be older than 18 and either vegan or vegetarian for a period of time before the experiment took place. This was a necessity, since the study specifically focused on people with a vegan or vegetarian diet. Initially, the aimed sample size was N = 90, based on the study by Bolderdijk and Cornelissen (2022), who had a total of 93 participants. The recruited sample size was N = 90, based on the study by Bolderdijk

104. Six participants stated that they did not adhere to a veg*an diet, therefore their data was removed. Additionally, data of 14 participants was removed due to incomplete data, leaving a sample size of N = 84 (17% male, 81% female, and 3% other). This sample consists of 74% vegans and 26% vegetarians. The majority was student (80% student vs. 20% non-student), and the ages in this sample varied (83% between 18 and 25, 13% between 26 and 38, and 4% above the age of 46).

Materials

The flyer that was used to recruit participants consisted of a text asking vegans and vegetarians to share their opinion and a QR code to sign up. The flyer is found in Appendix D. Additionally, an online platform was used for participants to fill in their demographic information and scales.

Moral Conviction Scale. To measure the strength of participants moral conviction, the Moral Conviction Scale created by Skitka & Morgan (2014) was used. It measured the strength of participants moral convictions related to their diet on a 5-point Likert scale (1 = not at all, 5 = very much). The scale consists of four items. The subject of the items are adjusted to fit the research. Two sample items are "Following a vegetarian or vegan diet is a reflection of my core moral beliefs an convictions" and "Following a vegetarian or vegan diet is connected to my beliefs about fundamental right and wrong". The overall mean in this sample was 3.78, with a standard deviation of 1.06. This means that the strength of participants' moral conviction was above the midpoint in this sample, indicating that moral conviction scores were high. The internal consistency of the model was good, α = .95. This indicates that the items of the scale likely capture the same underlying construct.

Evaluation scale. An evaluation scale (Eriksson et al., 2008) was added to the online study. This addition was made to examine whether or not people who experienced a strong moral conviction also evaluated the petition more positively than people with a weak moral

conviction, knowing that the petition is unpopular. Additionally, the difference between vegans and vegetarians regarding evaluating the petition was examined, expecting that vegans would evaluate the petition more positively than vegetarians, since their diet is more extreme. This is another measure in which participants could express their minority position. Two example items of the scale are "The petition would be effective at reducing the amount of meat consumed in the Netherlands" and "The petition would be fair to me". The participants could answer through a 7-point Likert scale with 1 being "completely disagree", 4 being "neither agree nor disagree" and 7 being "completely agree". The overall mean of this scale indicated a moderately positive to positive evaluation of the petition (M = 4.96, SD = 1). Internal consistency of this measure was good ($\alpha = .71$), which suggests that items within the scale likely capture the same underlying construct.

Petition. The petition differed from the petition in the first study, since there was no physical petition. Instead, the following texts appeared on screen; "We want to send the Association of the Supermarket Sector in the Netherlands (CBL) a strong signal that many consumers would welcome more vegetarian, and thus environmentally friendly, food alternatives. Help us reach 2000 signatures before the 1st of February 2025. So choose for a sustainable environment and animal welfare, and sign this petition!", "So far, very few residents in the Netherlands have signed this petition. Will you sign?". The answering options were "Yes, I will sign the petition" and "No, I will not sign the petition". This text was important because is emphasized that signing the petition would be a minority stance.

Procedure

Data collection commenced between the 21st of December and the 10th of January.

When accessing the questionnaire, participants were first directed to a page to fill in some demographic information. This demographic information included gender, age, student status, and if they followed a vegan or vegetarian diet. Afterwards, participants were asked to fill in

the scales presented in a randomized order. The scales were randomized to avoid possible order effects. Following that, a hypothetical petition would appear in favour of the increase of vegan and vegetarian alternatives in supermarkets. It was hereby implied that very few Dutch residents signed the petition, which emphasized that signing the petition would be a minority stance. Then, the participants were asked to evaluate the petition. After answering, participants were directed to the end of the questionnaire and thanked for their time.

Results

Hypothesis 1

The first hypothesis predicted that individuals with a stronger moral conviction were more likely to sign a petition in favour of the increase of vegan alternatives in supermarkets, than individuals with a weaker moral conviction. A logistic regression was performed to examine the relationship between petition signing, the dependent variable with a dichotomous outcome (yes or no), and the strength of moral conviction, the independent variable measured on a continuous scale. To check the assumption of linearity the interaction effect between moral conviction and its logit transformation was examined. The interaction term was nonsignificant (p = .88), indicating no violation of the assumption of linearity. To examine the model fit a Chi-square test was conducted. The model was found the be nonsignificant ($X^2(81) = .17$, p = .68), which means that the model does not provide a good fit to the data. Additionally, no variability in this model was explained by moral conviction, but this was found to be nonsignificant (McFadden $R^2 = .00$, p = .68). On top of that, the data showed an odds-ratio of 1.15 95% CI [-0.52,0.82], which means that for every unit increase in the strength moral conviction, the chance of signing the petition increased with 15 percent. This finding deemed nonsignificant at a .05 alpha level, p = .68.

Hypothesis 2

The second hypothesis predicted that vegans would have a stronger moral conviction about their diet than would vegetarians. A Shapiro-Wilk test showed that the assumption of normality for both groups was violated, W(vegans) = .73, p < .001, W(vegetarians) = .93, p = .002. The assumption of equal variances, tested by Levene's test, was also violated, F(1,82) = 3.39, p = .07. A parametric test, an independent samples t-test test, was conducted to compare moral conviction scores between vegans (n = 22) and vegetarians (n = 62). The data supported the hypothesis, with vegans showing greater moral conviction scores (M = 4.50, SD = 0.74), compared to vegetarians (M = 3.52, SD = 1.05). The results indicated a statistically significant difference between the two groups, t(82) = 4.04, p = < .001, suggesting that vegans had higher moral conviction scores than vegetarians.

Because assumptions were violated, a non-parametric test, a Mann-Whitney u test, was additionally performed. This analyses also supported the hypothesis, with vegans showing greater moral conviction scores (Mdn = 4.88, IQR = 4.25 - 5) than vegetarians (Mdn = 3.75, IQR = 2.75 - 4). The results, again, yielded a statistically significant difference between the two groups, U = 1074, p < .001, suggesting that vegans had higher moral conviction scores than vegetarians.

Hypothesis 3

A logistic regression was performed to test the hypothesis that vegans would be more likely to sign the petition than vegetarians. First, a contingency table was created to compare the difference in signing the petition between vegans and vegetarians. The results showed a higher proportion of vegans signing the petition (96%), compared to vegetarians (89%). Due to the expected cell count of less than 5, a Fisher's exact test was conducted to examine the relationship between diet type (vegan or vegetarian) and petition signing (yes or no). The model turned out to be nonsignificant, p = .68, which means that there is no evidence for a

different likelihood of singing the petition between the two groups. The odds ratio (OR = 0.37, 95% CI [0.01,3.18]) suggested that vegans were 37 percent more likely to sign the petition than vegetarians.

Evaluation Scale

It was hypothesized that people higher in moral conviction would evaluate the petition more positively compared to people lower in moral conviction. A Pearson correlation analysis showed a nonsignificant relationship between evaluating the petition and moral conviction, r(79) = .18, n = 81, p = .11, 95% CI [-0.04,0.38], indicating no significant relationship between moral conviction and evaluating the petition.

As for the difference between vegans and vegetarians, a t-test was performed to assess if the data was in line with the expectation that vegans would evaluate the petition more positively than vegetarians. A Shapiro-Wilk test showed that the assumption of normality was not violated for the vegan group, W(vegans) = .96, p = .48, but was violated for the vegetarian group, W(vegetarians) = .95, p = .01. Levene's test showed that the assumption of equal variances was also violated, F(1, 79) = .42, p = .52. An independent samples t-test, a parametric test, was first conducted to compare evaluation scores between vegans (n = 22) and vegetarians (n = 59). The analysis showed that vegans evaluated the petition more positively (M = 5.91, SD = 0.81), compared to vegetarians (M = 4.87, SD = 1.05). However, these results deemed statistically nonsignificant, t(79) = 1.29, p = .20, indicating no significant relationship between diet and evaluating the petition.

Since the assumptions were violated, a non-parametric test was additionally conducted. A Mann-Whitney u test showed no difference in evaluation scores between vegans (Mdn = 5, IQR = 3.75 - 6.75) and vegetarians (Mdn = 5, IQR = 1.25 - 7). No statistically significant results were found, U = 740.50, p = .33, suggesting vegans did not differ in regard to evaluating the petition, compared to vegetarians.

Discussion

The purpose of this study was to investigate the relationship between speaking up for one's beliefs and the strength of moral conviction, in relation to a meatless diet. This study is of importance, since meat consumption is a big contributor to global warming (Allen & Hof, 2019; Gomez-Zavaglia et al., 2020; González et al., 2020). Speaking up about one's meatless dietary preferences is needed to drive change. A factor that may contribute to whether or not individuals speak up about their diet, is moral conviction. To examine this, a social dilemma was created, in which veg*ans had to decide to either stand up for their beliefs and sign a petition, or conform to the majority and not sign (Bolderdijk & Cornelissen, 2022), risking social judgment.

It was hypothesized that people with a higher moral conviction are more likely to speak up about their veg*an diet, compared to people with a lower moral conviction.

Additionally, it was expected that vegans experience a stronger moral conviction than vegetarians, making them more likely to speak up for themselves. Due to a low number of participants for the lab-study, an online version of the experiment was also conducted. The findings discussed in this section will be based on the online experiment, as the data of the lab experiment could not be analysed, due to lack of participation.

Firstly, the findings were not in line with Hypothesis 1. It was expected that participants with stronger moral convictions were more likely to speak up for themselves compared to those with weaker moral convictions, because typically, stronger moral convictions lead to more speaking-up behaviour (Skitka & Morgan, 2014). However, no significant effect was found, meaning that strength of moral conviction alone does not explain why some people stand up and some remain silent. This indicates that there are other factors contributing to whether or not individuals speak up. Literature suggest that people who experience more self-doubt are more likely to conform than individuals who experience more

self-confidence (Tesser et al., 1983). Individuals high in moral conviction are commonly confident in their perspective, as argued by existing literature (Skitka et al., 2005, 2021; Skitka & Morgan, 2014), even disliking those who disagree with them (Cole Wright et al., 2008). This confidence could act as a mediator in the relationship between moral conviction and speaking up.

The current findings contradict previous research in which it was found that moral conviction did predict resistance to majority influence, independent of the presence of social support (Aramovich et al., 2012; Hornsey et al., 2003). A difference between the present study and the previous studies, is how speaking up is defined. In the current study, the focus was on whether or not individuals spoke up, measured as a dichotomous outcome, while in the previous studies, the focus was on conformity in public versus in private, measuring conformity at multiple timepoints during the experiment. Measuring conformity scores in relation with each other, could provide different results than measuring conformity at a fixed time, since conformity can be viewed as a dynamic process (Bascle, 2016). Also, the current study did not control for other factors, such as attitude certainty (Aramovich et al., 2012), which could be an explanation to the difference in results. Moral conviction still is an important factor to examine further, when controlling for other variables.

Secondly, the findings were in line with Hypothesis 2, showing higher moral conviction scores among vegans compared to vegetarians. This outcome was expected, since a vegan diet is generally considered to be more extreme than a vegetarian diet. While a vegetarian diet consist of no meat intake, a vegan diet excludes all animal derived products, making it more restrictive. Literature suggest that vegans often have morally motivated reasons, such as the welfare of animals, to adopt their diet (Janssen et al., 2016). Moreover, they tend to evaluate vegetarians who adhere to their diet because of non-moral reasons, such as health concerns, less positively (MacInnis & Hodson, 2021), indicating the moral aspect of

restraining from animal derived products being of high value. This provides a feasible explanation for the higher moral conviction scores within vegans as opposed to vegetarians.

Lastly, it was expected that vegans would be more likely to sign the petition than vegetarians (Hypothesis 3). However, the data showed no difference between vegans and vegetarians with regard to signing the petition. The higher signing rates among vegans were expected, because an overall effect of moral conviction was also expected. Since there is no evidence of an effect of moral conviction on petition signing, it makes sense that there is no evidence of differences in petition signing between vegans and vegetarians, despite differences in moral conviction scores.

Limitations and Future Directions

A limitation of the online study, is the private setting of the experiment. This private setting could have reduced the social pressure to conform. Previous research show that people are more likely to conform when social pressure is high compared to when social pressure is low (Tesser et al., 1983). When social pressure is low, attention shifts to the stimulus, making participants more thoughtful of the contents of the stimulus, in this case the content of the petition. However, when social pressure is high, people shift their attention to what others are doing, making them more likely to conform. Despite an attempt of increasing social pressure by creating a message indicating signing would be a minority position, this might not have been enough. No interaction was necessary when deciding to sign the petition, eliminating potential risk factors that usually prevent individuals from speaking up (Minson & Monin, 2012). Therefore, social pressure for participants was presumably low. This could have affected participants' likelihood of signing, overshadowing effects of moral conviction. Future research could examine the role moral convictions play when differentiating between low social pressure situations and high social pressure situations.

A limitation of the lab-study is the lack of sign-ups. This could be due to the lack of time to recruit enough participants, or due to the fact that no compensation was provided for participating. In general individuals make a cost versus benefits analyses before making a decision to do something (Becker, 1976), in this case signing up for a study which required partaking in a discussion. When the costs of participating outweigh the benefits, individuals are likely to decide not to partake. The effort of engaging in a discussion could have exceeded any potential benefits of participating. Therefore, a financial reward could have acted like an incentive for individuals to sign up. Additionally, social benefits of participating in the study, could have been more emphasized on the sign-up flyers. By highlighting these advantages more clear, overlooked benefits of participating could be made salient to potential participants, possibly making the benefits of participating more appealing than the costs. Which could have resulted in more people signing up.

Another limitation of the lab-study is that all participants signed the petition. An explanation to this could be the way in which participants' dietary preferences were made salient. Prior to the 'discussion', participants were explicitly asked to raise their hand if they were meat-eaters, instead of using a more implicit way of making their minority status known (Bolderdijk & Cornelissen, 2022). As a consequence, this overt signalling of dietary preference could have emphasized their veg*an identity, making them more likely to act in line with it (Wiley, 1991). Additionally, being aware of one's minority position can increase the desire to oppose to the majority, because it emphasizes the need to speak out to make a difference (Hornsey et al., 2007). Future research could experiment with speaking up in relation to making certain identities salient. For example, there could be differentiated between moral identities, or group identities and how these influence speaking up in a certain context.

Theoretical and Practical Implications

The present study, gives insight into how moral convictions are related to speaking-up behaviour. In contrast with previous studies (Aramovich et al., 2012; Hornsey et al., 2003, 2007), it suggests moral conviction not to be the sole motivator for individuals to speak up about their beliefs. Instead, a combination of other factors could contribute to this. However, high moral conviction scores were found among veg*ans, which is in line with other research (Janssen et al., 2016), suggesting a relationship between a veg*an diet and moral convictions is not impossible. Knowing the extent to which moral convictions play a role in speaking up behaviour, is an important beginning of understanding motives for people to speak up about their beliefs. This way, interventions could be developed that help people speak up when faced with an majority opposition, enhancing important minority views.

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Appendix A Sign-Up Flyer In-Person Experiment

We would like to hear your opinion!

Vegetarian and vegan products

We are interested in your thoughts regarding vegetarian and vegan food alternatives. If you are interested in participating in this study, please sign up through this QR code. The study will take place in December 2024 and possibly January 2025.



Appendix B

Petition





Do the morally right thing. Sign this petition!



There should be more vegetarian and vegan alternatives in the assortment of supermarkets.

Recent studies found that vegetarians have a much lower environmental impact than meateaters. Plant-based diets require less energy, land and water in their production process, and therefore offer a more sustainable alternative. A plant-based diet is animal-friendly. According to various studies, vegetarian alternatives help to reduce a number of societal problems, including:

- Animal suffering
- Air and water pollution
- · Erosion of soil
- Waste of energy

The aim of this petition is to give the Association of the Supermarket Sector in the Netherlands (CBL) a strong signal that many consumers would welcome more vegetarian, and thus environmentally friendly, food alternatives. Help us reach 2000 signatures before the 1° of February 2025.

So choose for a sustainable environment and animal welfare, and sign this petition!

| First name | Surname | Signature | |
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Appendix C

Scrip for Moderator and Confederates

The moderator gets one participant from the waiting area and brings him/her to the survey room, and tells the participant:

"Welcome to my study on vegetarian and vegan products! In this study you are going to join a short group discussion together with other participants. Before the discussion starts, I need you to fill in some preliminary background questions at the computer. Once you have finished answering the questionnaire, you will see a message asking for a p-number. I will fill that in so let me know.

The participant starts the survey and then he/she will be asked to join a group for the discussion. The participant finishes and calls for the moderator, who says:

"We have one spot left for a group discussion in another room. Please come with me to fill up the group and join the discussion."

The moderator takes the participant to the discussion room. Here are three other 'participants' (confederates) waiting for the group to be completed in order to get the discussion started. The moderator makes the participant sit down at the end of the row and introduces the next part of the experiment:

"Okay, thank you all for coming, and thank you guys for waiting (towards the confederates).

We had a low number of vegan/vegetarian responses, so can I know who here eats meat,

please?" (Confederates raise their hands)

Before the discussion actually starts, the moderator informs the group of a petition (which is placed on the desk behind the moderator) on getting more veggie alternatives in the assortment of supermarkets:

"Before we start the discussion, I would like to ask you to take a look at this petition. It's a petition of a friend of mine who wants to get more vegetarian and vegan alternatives in the assortment of supermarkets, because he thinks it's the ethically right thing to do regarding

animal rights and environmental issues. I promised to ask you, but don't feel obliged to sign it.

I didn't sign it either. Here, have a look."

The moderator gives the petition to confederate number 1, who will pass it on to number 2, who will subsequently pass it on to number 3, who eventually passes it on to the participant. All confederates look at, but do not sign the petition.

The discussion starts when the participant hands over the petition to the moderator, who places the petition behind them on the table. The moderator starts the discussion by saying:

"Okay, I would like to talk with you about your experiences with vegetarian/vegan alternatives. During the last couple of years, you probably realized that the availability of vegetarian and vegan alternatives increased considerably. One large 'trend' are vegetarian and vegan meat substitutes, like tofu burgers, vegetarian shoarma, whatsoever. Can anyone tell me about personal experiences you had with these kinds of substitutes? Or what do you think of the taste in general?"

Confederate 1 will say:

"Well, last summer I was organizing a barbecue with a friend of mine. We were in the supermarket buying all the stuff for the barbecue, including different kinds of meat. And we came across this new product, a shaslick or however you call it. So we saw this new product and just took it. In the evening we had a nice barbeque and after trying the new product, we looked at each other and my friend asked me whether I thought it tasted funny or not. I told him I was thinking the same, so we went through the garbage to look for the packaging, we found it and it turned out to be some vegetarian meat replacement. But it tasted quite good to be honest."

Confederate 2 will say:

"Ah, in my case, I occasionally eat a veggie burger when I go out to eat, but only for a change, not on like a daily or even regular basis. I did realise that more places do have meat-free options now. It tastes a bit funny indeed, but only at the beginning. I think it's something you get used to with time. Regardless, I would never cook it myself. I would be too scared to cook it wrong."

Then the last confederate and the participant share their experience shortly.

Confederate 3 will say:

"Oh! I actually really like falafel. I eat it with my flatmates and it's always great fun."

After that, the moderator will tell the group she has enough information and thanks the participants.

The moderator ends the experiment for the majority of the group:

"Well that was it already, Before you leave, I wanted to ask you one more thing. For the debrief of this study, I need to collect your email address. Could you please write this down on this piece of paper, together with what you think the study was about?"

Thank you so much. I don't want to keep you guys here longer than necessary. Thank you so much for your input and participation."

The confederates stand up to put on their jackets and wish the moderator good luck on her research.

The moderator writes on the participant's paper their participant number from the screen in the other room.

Appendix D Sign-Up Flyer Online Experiment

Are you a vegan or vegetarian?

Please share your perspective!

We are conducting a study to understand the values, habits and traits of people living a vegan or vegetarian lifestyle If you are interested in participating in this study, please fill in this brief questionnaire through this QR code! The survey is available in the second week of January 2025.



Appendix D

Scrip for Moderator and Confederates

The moderator gets one participant from the waiting area and brings him/her to the survey room, and tells the participant:

"Welcome to my study on vegetarian and vegan products! In this study you are going to join a short group discussion together with other participants. Before the discussion starts, I need you to fill in some preliminary background questions at the computer. Once you have finished answering the questionnaire, you will see a message asking for a p-number. I will fill that in so let me know.

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"Okay, thank you all for coming, and thank you guys for waiting (towards the confederates).

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please?" (Confederates raise their hands)

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"Before we start the discussion, I would like to ask you to take a look at this petition. It's a petition of a friend of mine who wants to get more vegetarian and vegan alternatives in the

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Thank you so much. I don't want to keep you guys here longer than necessary. Thank you so much for your input and participation."

The confederates stand up to put on their jackets and wish the moderator good luck on her research.

The moderator writes on the participant's paper their participant number from the screen in the other room.