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The Influence of a Collective Action Frame and Identification With Diet on the
Willingness for Normative and Non-normative Collective Action Against
Factory Farming

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Master Thesis - Applied Social Psychology

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January 2022

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Abstract

In this study, we investigated the relationship between a *collective action frame (IV1)* and *identification with one's diet (IV2)* on the *willingness for either normative or non-normative action against factory farming (DV 1 & 2)*. We also tested the mediating effect of *anger* and *disgust* on the dependent variables and on *evaluation of factory farming*. We distinguished between people identifying as vegans and vegetarians (veg*ns) and people identifying as (conscientious) omnivores ((C)O's). Veg*ns were expected to show more willingness for non-normative action, whereas (C)O's were expected to show more willingness for normative action. Normative action was also expected to be predicted by a normative collective action frame, whereas a non-normative collective action frame was expected to predict willingness for non-normative action. We tested these relationships with an online study ($N = 303$). Contrary to our hypotheses, we found neither the normative collective action frame nor the non-normative collective action frame to predict normative or non-normative action, respectively. We did find veg*ns to significantly show more willingness to protest in a non-normative fashion, so did we find them to be more willing to protest in a non-normative way. Anger and disgust did mediate the relationship between the variables, with identification with diet as the dependent variable. We discuss the importance of core tasks of frames, veg*s overall greater willingness to protest and the significance of values and emotions in collective action.

Keywords: Collective action, veg*ns, (conscientious) omnivores, normative & non-normative action, factory farming, disgust, anger

Introduction

What the US government has once declared as the “number one domestic terrorist threat” comes from radical animal welfare activists who try to fight against the killing of animals by means of sabotage against institutions that gain profit from the killing of animals such as factory farms (Potter, 2006). This movement, which falls under the umbrella term of the so called “economic terrorism”, aims at making a contribution to the fight against factory farming (Lutz & Lutz, 2006). As the vast media coverage in the field of factory farming as well as the long on-going societal debate thereof has demonstrated, it should come as no surprise that factory farming brings multiple moral as well as environmental concerns with it (Anomaly, 2015).

People have been fighting for animal rights for a long time already. Origins of this movement come from England in the early 18th century, in which animal protection as a social movement was arising (Bekoff, 1998). The animal rights movement, as we know it today, is said to have emerged in the beginning of the 1970s, with the publication of ethicist Peter Singer’s book *Animal Liberation* (1973). While the number of people taking collective action against factory farming is constantly increasing, not all forms of protest happen in extreme forms, which are referred to as non-normative actions (Kawakami & Dion, 1995). By definition, non-normative actions are any form of radical collective action, which disobey legal or societal rules, for example by violence or terrorism (Becker & Tausch, 2015). On the contrary, people using less aggressive forms of protest try to make a difference by means of normative collective action, that is by obeying rules of a given social system (Becker & Tausch, 2015). Examples thereof are peaceful protests, political participation and social media protests (Mummery, 2013).

As evident as it might be that there are different forms of protest, the question as to how these differences come about is a more difficult one to answer. In this research, the aim will be to approach the question of what brings people to either protest against factory farming in a normative way as opposed to protesting in a non-normative fashion (Kawakami & Dion, 1995). Therefore, this study will look at three factors that, based on past research, can influence people in their way to protest. The first question we want to elaborate on is whether a collective action frame of either normative or non-normative action against factory farming has an effect on people's tendency for the same form of protest (Clifford, 2019).

Collective Action Frame

Plenty of research has shown that people's opinions, emotions, values and action tendencies can be altered by inducing a frame on people (Johnston & Noakes, 2005). When it comes to factory farming protests, the kind of frame that is of interest here are collective action frames, which are considered to be a critical component of political action to take place (Ryan & Gamson, 2009). Collective action frames work by guiding individuals, groups and organisations into a direction of interpretation of an event and thereby taking the control for interpretation away from the framed individual. In the context of social movement theory (SM), this is the cornerstone for collective action to take place (Gahan & Pekarek, 2012). The process behind this was already in 1982 referred to as 'cognitive liberation' by McAdam, who evaluated this 'cognitive liberation' as one of the main forces influencing people for collective action (McAdam, 2013). 'Cognitive liberation' describes the phenomenon in which individuals from a group in a disadvantaged situation see the solution in collective action (McAdam, 2013). We hypothesize people after having received a collective action frame to show more willingness for normative action than people who received a non-normative collective action frame and in turn, people who received a non-normative collective action

frame to show more willingness for non-normative collective action than people having received a normative action frame (Clifford, 2019).

Identification With Diet

For collective action to take place, be it normative or non-normative, the presence of some sort of ingroup identification is crucial (Kiu, 2011). There is an established link between group norms and environmental attitudes and behavior (Rabinovich et al., 2012). Disadvantaged groups member's identification with their group is a predictor for their participation in social protests (Leander et al., 2020). Interesting in this regard is the difference between the ingroup identification of people who eat meat and people who identify as vegans or vegetarians, as the latter show a greater amount of ingroup identification and ingroup favouritism (Bagci, Rosenfeld & Uslu, 2021). On top of that, vegans show stronger moral convictions, have greater collective efficacy, show more anger towards factory farming and show a greater identification as vegans and with the animals (Judge, Fernando & Begeny, 2022). The second main question, thus, will be whether people identifying as vegan or vegetarian will be more prone to protest in a non-normative fashion than people who identify as (conscientious) omnivores, and in turn, if people identifying as (conscientious) omnivores are more likely to protest in a normative fashion than people identifying as veg*ns (Rothgerber, 2015). We hypothesize people identifying as veg*ns to be more willing to protest in a non-normative fashion, whereas we hypothesize people identifying as (conscientious) omnivores to be more willing to protest in a normative fashion (Rothgerber, 2015).

Anger and Disgust

Emotions serve as a predictor not only for action generation, but also for action execution and control (Zhu & Thagard, 2002). Additionally, experiencing strong emotions

towards a social problem, makes it more likely for someone to act against the problem (Włodarczyk, Basabe, Pérez et al., 2017). Therefore, it can be said that emotions guide the way to action and the stronger the emotion, the more likely action follows from it.

Putting it in the context of factory farming, Rothberger has shown in an earlier study how conscientious omnivores feel less guilty eating meat and are less disgusted by it than vegans or vegetarians (2015). While a sense of guilt plays a role in how people elaborate on factory farming, other emotions also play a crucial part in this regard.

The emotions of anger and disgust are the ones showing a great influence on how people view factory farming (Clifford, 2019). Disgust is a highly elaborated factor of influence in the literature of factory farming protest and is correlated with non-normative action (Giner-Sorolla & Chapman, 2017). Interestingly, the emotion of anger more often leads people to engage in normative action than other emotions such as disgust and contempt (Becker & Tausch, 2015). This might seem counter-intuitive, especially when recalling that anger often goes hand in hand with frustration (Berkowitz, 1989). We want to make a point here, stating that the anger we focus on in this study is not of the kind of spontaneous, *in situ* anger, but with long-lasting feelings towards a political direction (Becker & Tausch, 2015). This goes hand in hand with what has been labelled the *Social Identity Model of Collective Action* (Van Zomeren, Postmes & Spears, 2008), in which it is predicted that moral convictions will lead to collective action intentions and collective action by politicized identification, group-based anger and group efficacy (Van Zomeren, Postmes & Spears, 2010).

A moderator variable of emotion to measure how much anger and disgust people feel towards factory farming will be included in the study. We expect people who identify as

vegans and vegetarians to feel more anger whereas we predict omnivores and conscientious omnivores to feel more disgust towards factory farming (Rothgerber, 2015).

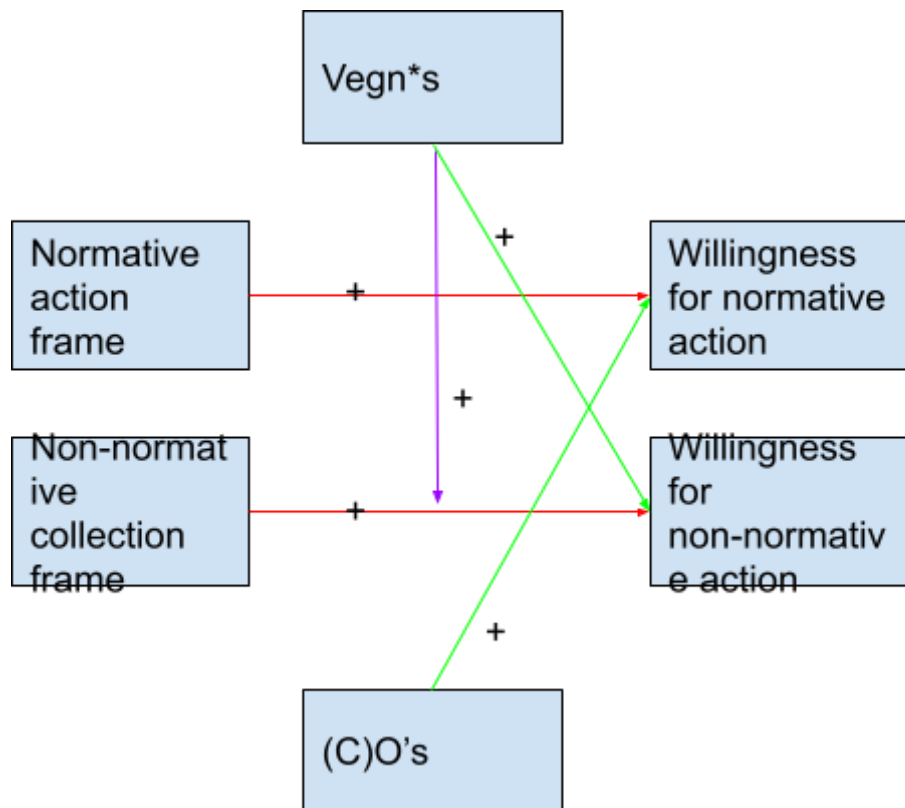


Figure 1: A schematic representation of the relationship of the variables in the present study

This study is high in relevance since it contributes to further understanding of the influences of normative and non-normative action (Kawakami & Dion, 1995).

Present study

The aim of the present study will (1) be to investigate on the effect on a collective action frame on protest against factory farming (Clifford, 2019) and (2) to detect possible group differences between people who identify as veg*ns and people identifying as (conscientious) omnivores (Bagci, Rosenfeld & Uslu, 2021). Additionally, a mediation analysis will reveal any possible mediation effect of anger or disgust on the willingness to protest and on evaluation of factory farming in general (Becker & Tausch, 2015).

More specifically, this study will test the following hypotheses, as visualized in Figure 1.

H1: A normative action frame will lead to more willingness to normative action (Clifford, 2019)

H2: A non-normative action frame will lead to more willingness for non-normative action (Clifford, 2019)

H3: People who identify as vegan & vegetarian will more likely show a willingness for non-normative action than Co and Os (Rothgerber, 2015)

*H4: People who identify as Co and O will more likely show a willingness for normative action than veg*ns (Rothgerber, 2015)*

H5: Interaction: Identification with diet and action frame show an interaction effect on willingness to engage in action. (Rothgerber, 2015)

Method

Participants and design

303 participants took part in the present study, all of which were recruited through the platform *Prolific*. Participants were compensated with a small monetary amount.

Participation was voluntary as stated in the informed consent and participants were made aware that they can exit the study at any time. One participant data had to be excluded, because they did not agree to the informed consent. The average age of the participants was $M=30.78$ ($SD = 10.53$) ranging from 18 to 67. 25.8% were male, 72.8% female, 1% non-binary and 0.3% preferred not to state their gender. 88.41% of participants were British ($n = 267$), the remaining participants were from different parts of Europe such as Poland,

Italy and Spain. 13 participants were from non-European countries such as India, Australia and Malaysia.

9.9% of participants identified with a semi-vegetarian diet (“flexitarian”), 28.8% as vegetarian, 12.6% as vegan, 25.3% did not identify with a specific diet, but reduced their meat consumption and 25.2 did not identify with a diet.

This study was completed fully online and took around five minutes to complete. First, participants were given information about the study, in which they were informed about their possibility to exit the study at any time and in which they were given contact details in case they would need to reach out to the researchers. After giving informed consent, participants were asked about their demographics (age, nationality and gender). Following, participants indicated which diet they identify with. Participants then filled in a four item-scale measuring *disgust towards factory farming*. After, *anger towards factory farming* was assessed. After assessing the emotions of disgust and anger towards factory farming, participants were randomly assigned to one of two manipulation groups. The manipulation consisted of a fictional newspaper article writing about a recent protest against factory farming that was happening in London. One half of the participants were in the normative protest condition, reading a text about a rather peaceful protest, whereas participants in the non-normative protest condition were reading a text about a more radical demonstration happening in London. After having read the newspaper-article, participants were asked in a 16 item scale how likely it is that they will participate in different kinds of protests in the future (normative as well as non-normative). In the end, participants were asked on a 6-item-scale how they evaluate factory farms in general. After the debriefing, participants indicated that they agreed to the processing of their personal data. In the end, participants were thanked for taking part in the study.

Measures

Identification with diet.

For the analysis of this study, we created two identification with one's diet groups based on these data. The group *veg*ns* contained all participants identifying with a vegan or vegetarian diet and contributed to 41.4% of the participants. The group (*conscientious*) *omnivores* ((C)O's) contained all participants identifying as flexitarian, or without a particular diet identification and contributed to 58.6% of the participants. This grouping of participants based on their identification with a diet was based on a study by Petritz (2017).

Disgust.

Disgust towards factory farming was assessed with 4 items ($\alpha = .879$): "I dislike factory farmed animal products because of what it is or where they come from," "The thought of consuming factory farmed animal products makes me nauseous," "I am afraid of contamination with a trace of factory farmed meat," and "I resist (avoid) eating factory farmed animal products because I find it offensive, repulsive or disgusting". Respondents indicated their agreement with the statements on a 6-point-Likert-scale (1 = *strongly disagree*, 6 = *strongly agree*). These items were taken from a study by Rozin et al. about disgust towards meat and adapted to disgust towards factory farms (1997).

Anger.

Anger towards factory farming was assessed with a two item-scale. Participants indicated how much they agree with the statements "I'm furious about animal products produced in factory farms" and "Factory farms anger me" (1 = *strongly disagree*, 7 = *strongly agree*; $r = .892, p < .001$). These items were taken from a study by Tausch et al. about anger towards tuition fees and adapted to anger towards factory farms (2011).

Willingness for normative action.

Willingness for normative action was assessed by a six item-scale. Participants were asked how likely they will engage in six different normative actions against factory farming respectively: Participating in discussion meetings, participating in plenary meetings, writing flyers, signing a petition, going to a street theatre and going to demonstrations ($\alpha = .920$).

These actions were taken from a study about normative versus non-normative action tendencies by Tausch et al. (2011). Willingness for action was assessed with a 7-point-Likert scale (1 = *very unlikely*, 7 = *very likely*).

Willingness for non-normative action.

Willingness for non-normative action was assessed by a six-item scale. Participants were asked how likely they will engage in six different non-normative actions against factory farms respectively: throwing stones or bottles, performing arson attacks on factory farms, performing arson attacks on the private property of responsible persons, attacking the police, attacking responsible persons and disturbing events in which meat is eaten ($\alpha = .853$). These actions were taken from the same study by Tausch et al., for which the normative actions were taken from too (2011). Willingness for non-normative action was assessed by a 7-point-Likert-scale (1 = *very unlikely*, 7 = *very likely*).

Evaluation.

Evaluation of factory farming was assessed with a six-item scale. The items were the following: “Animals in factory farms do not have enough space,” “Factory farms are bad for animal welfare,” “Through factory farming, the appreciation for each individual animal gets lost,” “Keeping 40000 chickens in one barn, can never be animal-friendly,” “Often animals in factory farms have never seen a green meadow” and “Without factory farms, there would be less scandals around food” ($\alpha = .870$). These statements were taken from a study about the

evaluation of factory farmed animal products by Busch, Kayser and Spiller (2013).

Participants were asked how much they agree with the statements on a 5-point-Likert-scale (1 = *strongly disagree*, 5 = *strongly agree*).

Manipulation: Collective action frame.

This study entailed a manipulation, in which participants were randomly assigned to either a normative collective action frame or a non-normative collection frame.

The collection frame of both conditions involved a fictional newspaper article about a protest against factory farming recently being held in London. Both of the texts were of approximately equal length (normative: 358 words; non-normative: 379 words) and both contained five pictures. In the normative condition, the following normative actions were described: a speech was given to an audience, a band was playing, a march was held including banners, flags and signing, and a die-in was held, in which people lie on the floor motionless to raise awareness. The five pictures of the normative condition showed protestants standing or walking holding signs such as “wake up” and “go vegan”. One picture showed a speech being given and one showed the die-in.

In the non-normative condition, the following non-normative actions were described: a march with banners and flags and shouting protestants, screaming paroles such as “meat is murder” and “the government has blood on their hands”, vandalizing meat-selling shops, burning cars and water cannons being used against the protestants. Pictures showed a graffiti vandalized shop, protestants screaming at armed policemen, a burning car and a person being attacked by a water cannon.

For more information on the manipulation, find both of the collective action frames in the appendix.

Results

This 2*2 Design study incorporated the following variables: The dependent variables were *willingness for normative action*, *willingness for non-normative action* and *evaluation of factory farming*. These three dependent variables were quantitative in nature, and were built on a sum score of the 6-item questionnaires, to which the participants gave answers on a Likert scale, as described earlier (*Range: 1-42*). The between-factor variables of this study were *identification with diet* and *condition*. Both of these variables were binary, identification with diet either coding as veg*ns or (conscientious) omnivores, and condition either coded as normative collective action frame condition or non-normative collective action frame. For the explorative analysis, we included the variables *anger* and *disgust*, which were quantitative and based on Likert-scaled questionnaires.

Testing Hypothesis 1 and 2: The Relation Between a Collective Frame and Willingness to Collective Action

For hypothesis 1, we tested with an ANOVA whether people being confronted with a normative action frame will show a significantly higher tendency to show a willingness for normative action against factory farming themselves. For hypothesis 2, we tested with an ANOVA whether people being confronted with a non-normative action frame will show a significantly higher willingness for non-normative action. Participants were randomly assigned to one of the two collective action frame conditions.

Concerning the first hypothesis, no significant effect of condition on willingness for normative action was found $F(1, 296) = .003, p = .953, R^2 < .001$. People receiving the normative action frame showed a willingness for normative action with a mean of $M = 3.75$ ($SD = 1.51$), whereas participants having received the non normative collective action frame showed a willingness for normative action with a mean of $M = 3.74$ ($SD = 1.43$). In contrast

to our assumption that a normative collection frame would have an effect on the willingness to engage on normative action oneself, the results indicated no effect of the collective action frame. This gives room for the assumption that the normative collection frame did not guide people into more willingness for a more normative form of protest.

In the second hypothesis, we assumed a non-normative collective action frame to have an effect on the willingness to engage in non-normative action against factory farming. Again, the manipulation did not show to have an effect on the willingness to protest in a non-normative fashion $F(1, 294) = .896, p = .352, R^2 < .004$. People having received the non-normative action frame showed a willingness for non normative action of $M = 1.14$ ($SD = .40$), whereas people having received the normative action frame showed a willingness for non-normative action of $M = 1.19$ ($SD = .526$). This means that the non-normative collective action frame did not seem to have had an effect on the willingness for non-normative action.

Testing Hypothesis 3 und 4: Identification With Diet And Willingness For Action Against Factory Farming

For hypothesis 3, we tested with an ANOVA whether people identifying as vegans or vegetarians show a significantly greater willingness for non-normative action than people identifying as (conscientious) omnivores. Identification with diet was grouped together into a bivariate sting-variable based on the five answer possibilities that were described in an earlier section. For testing this assumption, we ran a univariate general model with *identification with diet* as the independent variable and *willingness for non-normative action* as the dependent variable. As expected, identification with diet had a significant effect on the willingness to engage in non-normative action $F(1, 294) = 6.81, p = .010, R^2 < .023$. The results revealed, that people identifying as veg*ns showed a greater willingness for non-normative action than (conscientious) omnivores with means being $M = 1.25$ ($SD = .512$)

and $M = 1.11$ ($SD = .43$), respectively. This suggests that in this study, willingness for non-normative action was predicted by one's identification with diet.

For hypothesis 4, we tested whether (conscientious) omnivores show a significantly greater tendency to engage in normative action against factory farming than veg*ns. For testing this assumption, we ran an ANOVA with *identification with diet* as the independent variable and *willingness for normative action* as the dependent variable. Here too, we found a significant effect of identification with diet on willingness for normative action $F(1, 296) = 61.51, p < .001, R^2 < .173$. However the significant result, when looking at the means for willingness to engage in normative action, (conscientious) omnivores show a mean of $M = 3.23$ ($SD = 1.34$), whereas veg*ns show a mean of $M = 4.46$ ($SD = 1.33$). This reveals that the observed significant effect was not into the direction as expected.

Combining the results for hypothesis 3 and 4, we see that veg*ns showed a greater willingness not only for non-normative action, as expected, but also a greater willingness for normative action.

Testing Hypothesis 5: Interaction

We expected an interaction effect of the variables *identification with diet* and *condition* on *willingness for collective action*. We tested with an ANOVA an interaction effect on the dependent variable *willingness for normative action* as well as the dependent variable of *willingness for non-normative action*. Contrary to our expectations, we did not find evidence for an interaction effect on either of the dependent variables. For *willingness for normative action*, the effect sizes were the following: $F(1, 288), p = .838, R^2 < .001$. The effect sizes for the dependent variable of *willingness for non-normative action* were: $F(1, 288), p = .908, R^2 .032$. People having received the non-normative action frame and identified as veg*ns showed a willingness for non normative action of $M = 1.21$ ($SD = .43$), whereas

people identifying as veg*ns and received the normative action frame showed a willingness for non-normative action with mean $M = 1.22$ ($SD = .58$). Therefore, this study showed no interaction effect.

Explorative Analysis: Emotions Towards Factory Farming

Next to the independent variables of *condition* and *identification with diet* and the dependent variables of *willingness for normative* and *willingness for non-normative action*, we included a measure of *anger* towards factory farming and *disgust* towards factory farming as an explorative analysis. We used Hayes' PROCESS v 4.0 analysis to test any mediation effects of *anger* and *disgust* on the dependent variables of *willingness for normative action*, *willingness for non-normative action* and *evaluation of factory farming*. What we found is that both the variable *anger* as well as *disgust* had significant mediator effects on *willingness for normative action*, *willingness for non-normative action* and *evaluation* but only for the independent variable of *identification with diet*. No moderation effect was found when the independent variable was *condition*.

Consult **Table 1** for effect size details on the moderation effects of *anger* and *disgust* on the independent variable of *identification with diet* on the three dependent variables *evaluation of factory farming*, *willingness for normative action* and *willingness for non-normative action*.

Table 1: Moderation effects of *anger* and *disgust* on *willingness for normative and non-normative action* and *evaluation of factory farming with identification with diet* as the independent variable.

	<i>Moderator</i>	
	<i>Anger</i>	<i>Disgust</i>
Willingness for normative action	$F(1, 296) = 150.01,$ $p < .001, R^2 = .34$	$F(1, 294) = 177.07,$ $p < .001, R^2 = .38$
Willingness for non-normative action	$F(1, 294) = 7.19,$ $p = .008, R^2 = .022$	$F(1, 292) = 9.29,$ $p = .0025, R^2 = .03$
Evaluation	$F(1, 297) = 192.53,$ $p < .001, R^2 = .39$	$F(1, 295) = 169.57,$ $p < .001, R^2 = .37$

Discussion

The aim of the present study was (1) to investigate on the effect on a collective action frame on protest against factory farming (Clifford, 2019) and (2) to detect possible group differences between people who identify as veg*ns and people identifying as (conscientious) omnivores (Bagci, Rosenfeld & Uslu, 2021). Additionally, was a mediation analysis

conducted to reveal any possible mediation effects of anger or disgust on the willingness to protest and on evaluation of factory farming in general (Becker & Tausch, 2015).

We hypothesized that people receiving a normative collective action frame will show a significantly greater willingness to protest in a normative fashion compared to people having received a non-normative collection frame (Clifford, 2019) (H1). Correspondingly, we hypothesized that people having received a non-normative collective action frame will show a greater willingness for non-normative protest themselves compared to people having received the normative collective action frame (Clifford, 2019) (H2).

Further, we expected for people identifying as vegans or vegetarians to show a greater willingness for non-normative action as opposed to people identifying as (conscientious) omnivores (Rothgerber, 2015) (H3). Hand in hand it goes that we hypothesized (conscientious) omnivores to show a greater willingness to protest in a normative fashion compared to veg*ns (Rothgerber, 2015) (H4). Lastly, we hypothesized an interaction effect of collective action frame and identification with diet on willingness to engage in collective action (Rothgerber, 2015) (H5). Next to these five hypotheses, we ran an explorative mediation analysis, to explore any possible mediation effects of the variables of anger and disgust on the dependent variables.

Concerning the first hypothesis, no significant differences were obtained, the normative action frame did not result in more willingness for normative action in the participants of our study. For the second hypothesis, the results were also not in line with our hypothesis. Our results suggest that the non-normative collective action frame was not able to elicit more likelihood for non-normative collective action.

The third hypothesis was confirmed: that is, veg*ns showed a significantly greater willingness for non-normative action than (conscientious) omnivores. Concerning hypothesis

4, a significant difference was found, however, not in line with what we hypothesized. We hypothesized (conscientious) omnivores to show a greater willingness for normative action compared to veg*ns, however, we found veg*ns to show a significantly greater willingness for normative action. Therefore, this result contradicts our hypothesized outcome. For the interaction hypothesis, we found no significant effect, therefore our results do not match our expected outcome. Looking at the results of the explorative analysis, we found anger and disgust to mediate the relationship between the predictor of identification with diet and the outcome variable of willingness for action and evaluation of factory farming.

Possible explanations for unexpected findings

Looking at the overall results of our analysis, we see that only one of our hypotheses was confirmed (H3). For the remaining four hypotheses, this section is aimed at looking at possible reasons why our results did not match our hypotheses.

The collective action frame

Concerning the first two hypotheses, our collective action frame of either normative or non-normative collective action did not have an effect on participant's willingness to protest. When looking at possible reasons for this failure of the collective frame, it makes sense to consult Noake's and Johnston's book *Frames of Protest*, in which they list six requisites for collective frames to affect frame resonance. These six factors are: frame consistency, empirical credibility, credibility of the frame's promoters, experimental commensurability, centrality and narrative fidelity (Noake & Johnston, 2005). Applying these requisites to the collective action frame used in his study, which consisted of a fictional newspaper article portraying an animal rights protest in London, one can say that frame consistency, empirical credibility as well as credibility of the frame's promoters was well included into the frame. However, one could argue that the aspects of experimental

commensurability, centrality and narrative fidelity fall short in the collection frames we created. The participants were confronted with the newspaper articles in a very artificial setting, namely in an online study on their computer. Therefore, they might have intrinsically assumed that the collective action frame is fictional and made to manipulate, even if not stated beforehand. On top of that, the collection action frame lacked centrality, since we did not measure what the values and beliefs of the participants were before they received the manipulation. Therefore, the collective action frame might have been incongruent with the values and beliefs of the participants. Concerning narrative fidelity, we cannot be sure if the collective action frame truly represented a match of the culture of the participants and the culture portrayed in the frame. We tried to fit the culture of participants and the culture of the frame by having them read about a protest in London with the participants being from Great Britain, but with Britain being a highly multicultural nation, this might not have been successful (Yousuf, 2007).

Another possible reason why we did not find the expected results regarding the effect of the collective frame on willingness for collective action is related to Snow and Benford's elaborate research on collective frames. They distinguish three possible core tasks that frames can have, which they labelled "diagnostic framing", "prognostic framing" and "motivational framing" (Snow & Benford, 1988). When looking at the frame we used in this study, although we clearly wanted to motivate people to show more willingness to engage in either normative or non-normative protest, suggesting a frame of "motivational framing", we might have went more into the direction of "diagnostic framing", in which the problem is identified and attributed.

A last point that can be made regarding the unsupported hypotheses of a collective action frame on willingness for normative or non-normative action, can be traced back to

Goffman, who is a pioneer in the psychology of frames (Goffman, 1974). The point he makes, was later termed “meaning work” by Benford and Snow (2000) and “politics of signification” by Hall (1982). Out of this it can be narrowed down, that what a frame needs to have a successful influence on one or multiple persons, is some sort of meaning given. This might not have been the case in our study, since we did not specifically select participants who give meaning to animal rights protests. However, we tried to cut this possibility short, by including more vegans and vegetarians in the overall sample of the study than there would have been in the average population.

Taken all of this together, the collective action frame might not have produced the effect we expected, because from the six factors identified by Noakes and Johnston to make a collection frame successful, not all of these factors were in place. Additionally, even though we were aiming for a “motivational frame”, we might have created a “diagnostic frame”, which could explain why the frame did not motivate participants for collective action. Lastly, Goffman makes a point in claiming that a frame needs to have meaning to show an effect, which might not have been the case in our frame.

Identification with diet

Concerning the unexpected results of hypothesis 4, there are a few explanations as to why people identifying as (conscientious) omnivores did not show more willingness for non-normative action, but instead veg*ns showed a significantly higher willingness for that type of protest.

One attempt to explain the unexpected results can have to do with different value orientations of veg*ns as opposed to (conscientious) omnivores, which have shown to have a significant influence on motivation of self-determined action types (De Groot & Steg, 2010). More precisely, people who embrace egoistic values show less willingness to act

pro-environmentally, opposed to people with altruistic or biospheric values, who show the greatest willingness for pro-environmental action. As can be expected, veg*ns embrace different values than (conscientious) omnivores, by being more altruistically and biospherically oriented and less egoistic (Dietz, Frisch, Kalof, Stern & Guagnano, 1995). This might explain why veg*ns not only showed more willingness for non-normative action, but also for normative action. Future research would make a contribution to the field by looking at how values add to the relationship between identification with diet and willingness for collective action.

Lastly, we want to find an explanation as to why we did not find an interaction effect of identification with diet and condition on willingness for normative and non-normative action. The most obvious explanation to this is that the collective action frame did not work, which in turn also makes the interaction effect not significant.

Limitations and future research

We tried to create a representative sample so as to make the chances higher that the results of this study can be generalized. However, if we used as many veg*ns as there are in the general population, which is about 5.4% (Paslakis, Richardson, Nöhre, Brähler, Holzapfel, Hilbert & de Zwaan, 2020), we would not have two approximately equally big groups, which would have an effect on all the analyses we did in this research. Therefore, we recruited participants accordingly, so that we had approximately half of the sample identifying as veg*ns and the other half as (conscientious) omnivores. One limitation in this regard could be that we made participants select for themselves which diet they identify with, but we did measure the extent to which they identify with a diet.

As this only was conducted online and participants were recruited online too, there might be a bias in the way that people not being very familiar with technology and not using

the internet much, are not incorporated in this sample. However, when looking at possible age differences between the groups, no significant difference was found. Veg*ns were on average $M = 30.85$, (conscientious) omnivores were on average $M = 30.73$ ($t(293) = .097$, $p = .185$). This makes a technology bias less evident, since young people are more familiar with technology and use thereof (Czaja, Charness, Fisk, Hertzog, Nair, Rogers & Sharit, 2006). Future research can therefore make a contribution by conducting a similar analysis, but this time not recruiting the participants online or not conducting the study online. This might also have an effect on the credibility of the frame, which is connected to the six prerequisites of collective frames as described by Noakes and Johnston (2005). Another contribution that future study could do, would be to do similar study but with a more motivational frame, as for example including personalized elements to persuade people to do collective action (Dijkstra, 2011). Lastly, future research could include a value of meaning to the collective action frame, by for example asking participants about their attitudes on factory farming before they receive the collective action frame. On top of that could future research include an analysis of values, by for example investigating what role values play in the success of a collective action frame.

Furthermore, explorative analysis revealed that disgust and anger both mediate the influence the variable of identification with diet has on evaluation of factory farming and willingness for normative and non-normative action. Future research could make a contribution by incorporating a manipulation of anger or disgust into the study, as we found these two emotion variables to mediate the relationship between identification with diet and willingness for collective action and evaluation on factory farming. Future research could also investigate if other emotions mediate this relationship too (Becker & Tausch, 2015). Another possibility is to further explore other emotions besides disgust and anger in regard to

willingness for normative and non-normative action in connection to identification with one's diet. An example here is the emotion of contempt which has shown to be influential in the topic of collective action (Tausch et al., 2011). What future research could additionally look at is if it makes a difference to target the general population or animal activists, since animal activists are less affected by emotion, since it works contrary to their protest motivations (Groves, 2001)

Conclusions

Although four of the five hypotheses we had for this study were not supported, the results of this study still enrich the overall research knowledge we have in the field of collective action frames, identification with diet and willingness for collective action. In the future, it is expected that environmental protests will increase as well as more and more people are expected to identify with a diet different from the diet of an omnivore (Owen, 2007). Therefore, we hope to have made a contribution to the overall understanding of collective action predictors, and what influence identification with one's diet can have in this regard.

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Appendix A - Manipulation

Condition 1: Normative Collective Action Frame

News of London, City News • Monday, September 13, Issue

CITY NEWS

Animal Liberation London launches a new wave of protests

Animal Liberation London kicked-off a new wave of protests on 1st of September with a march to Parliament Square. This marked the start of a 10-day action to demand that the UK government addresses the climate emergency and the role animal agriculture plays in destroying the planet.





Animal Liberation actions in September 2020

The protest began yesterday at Smithfield, the UK's oldest meat market. The action began with an impassioned speech from Jay Northman, an ex-beef and dairy farmer featured in the BAFTA-award-winning short film, 73 Cows. Jay, who has now switched to plant-based farming and retired his remaining cows, spoke about the brutalities of animal agriculture and the urgent need for change.

• Monday, September 13, Issue



"The government has blood on their hands"

Led by a band, over 500 activists (most wearing face masks) marched from Smithfield Market through the streets of London toward the houses of Parliament. Waving flags and banners, chanting and singing, the protest was shadowed by helicopters and police. At Waterloo Bridge, activists unveiled a banner that read: "Unfuck the world - plant based food system."



Pausing at Trafalgar Square, Animal Liberation's founder, Dora Milehouse, gave a speech and led a die-in before we marched on to Parliament Square.

What's the aim of the protests?

Despite declaring a climate emergency in May 2019, the UK government has done nothing to actually tackle the crisis, which is partly driven by animal agriculture. This inaction is especially alarming given the Covid-19 pandemic, which was caused by humans exploiting animals.

If we want to avoid the spread of zoonotic diseases and prevent future pandemics, we have to switch to a plant-based food system. Instead, the UK government continues to subsidise harmful farming industries and promote animal agriculture, profiting in the process. We have just nine years left until the point of no return, until scientists say climate change is irreversible. Animal Rebellion's key message to the government is: "We cannot avoid environmental collapse without reforming the agricultural system and transitioning to a sustainable, plant-based food system."



Condition 2: Non Normative Collective Action Frame

News of London, City News • Monday, September 13, Issue

CITY NEWS

Animal Rebellion London launches a new wave of protests

Animal Rebellion London kicked-off a new wave of protests on 1st of September with a march to Parliament Square. This marked the start of a 10-day action in conjunction with Extinction Rebellion to demand that the UK government addresses the climate emergency and the role animal agriculture plays in destroying the planet. The protest was declared as "brutal" and "out of control" by the BBC, prime minister Johnson called the the riots "a terror threat"





Animal Rebellion actions in September 2020

The protest began yesterday at Smithfield, the UK's oldest meat market and the site of 2019's first Animal Rebellion occupation. This year, the action began as a rather peaceful demonstration, which was also the intention of the organizers. Things escalated, however, when the numbers of protesters rose and with that their willingness for violent activism against factory farming and the meat-based food industry.

• Monday, September 13, Issue



"The government has blood on their hands"

Waving flags and banners, screaming and shouting paroles such as "meat is murder" and "the government has blood on their hands". The situation got out of control with activists burning cars and vandalising meat-profiting shops by paroles such as "Go Vegan" and "Stop killing animals".



Because of the activist's disobedience, water cannons were used by the police and 32 people had to be arrested.

What's the aim of the protests?

Despite declaring a climate emergency in May 2019, the UK government has done nothing to actually tackle the crisis, which is partly driven by animal agriculture. This inaction is especially alarming given the Covid-19 pandemic, which was caused by humans exploiting animals.

If we want to avoid the spread of zoonotic diseases and prevent future pandemics, we have to switch to a plant-based food system. Instead, the UK government continues to subsidise harmful farming industries and promote animal agriculture, profiting in the process. We have just nine years left until the point of no return, until scientists say climate change is irreversible. Animal Rebellion's key message to the government is: "We cannot avoid environmental collapse without reforming the agricultural system and transitioning to a sustainable, plant-based food system."



Appendix B: Questionnaires

Questionnaire 1: Identification with diet

Which of these diets do you identify with?

- flexitarian/ semi-vegetarian
- vegetarian
- vegan
- none of the above
- none of the above, but I have reduced my meat consumption

Questionnaire 2: Disgust towards factory farming

Please indicate for each of these statements how much you agree or disagree (1=strongly disagree to 6= strongly agree)

- I dislike factory farmed animal products because of what it is or where they come from
- The thought of consuming factory farmed animal products makes me nauseous
- I am afraid of contamination with a trace of factory farmed meat
- I resist (avoid) eating factory farmed animal products because I find it offensive, repulsive or disgusting

Questionnaire 3: Anger towards factory farming

Please indicate how much you agree with the following two statements (1= strongly disagree, 7= strongly agree)

- I'm furious about animal products produced in factory farms
- Animal products produced in factory farms anger me
-

Questionnaire 4: Willingness for collective action questionnaire

How likely is it for you to participate in the following actions against factory farming in the future? (1= very unlikely, 7= very likely)

- Participating in discussion meetings
- Participating in plenary meetings
- Writing flyers
- Signing a petition
- Going to a street theatre
- Going to demonstrations
- Throwing stones/ bottles
- Performing arson attacks on factory farms
- Performing arson attacks on private property of responsible persons
- Attacking the police
- Attacking responsible persons
- Disturbing events where meat is eaten
- Blocking factory farms

- Blocking the highway
- Boycotting meat consumption
- Going on strike

Questionnaire 5: Evaluation of factory farming

Please indicate to what extent you agree with the following statements (1=strongly disagree to 5=strongly agree)

- *Animals in factory farms do not have enough space*
- *Factory farms are bad for animal welfare*
- *Through factory farming, the appreciation for each individual animal gets lost*
- *Keeping 40000 chickens in one barn, can never be animal-friendly*
- *Often animals in factory farms have never seen a green meadow*
- *Without factory farms, there would be less scandals around food.*

