

'Too good to eat meat': collective narcissism as the dark side of ingroup love among vegans and vegetarians

Received: 23 September 2025

Accepted: 28 July 2026

Published online: 07 August 2026

Cite this article as: Bagci, S.C., Guvensoy, I., Kaplan, B. *et al.* 'Too good to eat meat': collective narcissism as the dark side of ingroup love among vegans and vegetarians. *Humanit Soc Sci Commun* (2026). <https://doi.org/10.1057/s41599-026-08577-y>

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Abstract

Through a pre-registered correlational study ($N = 540$, 273 vegetarians and 267 vegan), we aimed at integrating the social psychological construct of *collective narcissism* —the belief that the ingroup is superior, but insufficiently recognized by others—into the study of vegan/vegetarian (veg*n) identities. We investigated a) dietary motivations associated with collective narcissism and b) how collective narcissism was related to intergroup (attitudes towards meat-eaters, collective action and behavioral tendencies), and individual (life satisfaction) outcomes among veg*ns. Contrary to our expectations, prosocially-motivated individuals and particularly vegetarians reported higher levels of collective narcissism compared to morally-motivated individuals, and vegans. As expected, veg*n collective narcissism predicted greater hostility towards meat-eaters (more negative attitudes and behavioral tendencies), as well as greater motivation to engage in both normative and non-normative collective action, whereas a non-narcissistic ingroup positivity (i.e., ingroup satisfaction) was associated with relatively more productive outcomes such as reduced negative outgroup behavioral tendencies and reduced non-normative collective action motivation. Unlike our initial suggestion, however, both collective narcissism and ingroup satisfaction contributed positively to life satisfaction, indicating the potential of collective narcissism to function as a coping mechanism among this group. These findings extend the construct of collective narcissism to a moralized lifestyle minority group and provide a nuanced account of how different forms of ingroup positivity may shape intergroup hostility, activism, and well-being among veg*ns.

Keywords: vegan, vegetarian, collective narcissism, dietary motivation, outgroup attitudes

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1. Introduction

“People hate vegans... they think we’re humourless, that we think we’re better than non-vegans... and all those things are true. I am better than you if you’re not vegan. In terms of my ethical decisions, I am so much better than you...”

As the health and ecological benefits of plant-based diets gain global recognition, recent years have witnessed a notable rise in the number of individuals who decide to follow meatless diets (e.g., Clem & Barthel, 2021; Sullivan et al., 2024). Although meat reduction now spans a continuum—from strict veganism to more moderate forms such as flexitarianism—research consistently shows that both vegans/vegetarians (veg*ns) and meat-eaters express prejudicial attitudes toward one another (e.g., Guidetti et al., 2023; MacInnis & Hodson, 2017). As reflected in a remark by a British comedian (Ettinger, 2019), public discourse surrounding veg*ns and meat-eaters has become increasingly polarized. Similar social media exchanges further illustrate a contentious food landscape in which dietary practices are framed not merely as personal lifestyle choices, but as moralized and socially charged positions (e.g., Gregson et al., 2022). Accumulating evidence suggests that restricting meat consumption represents a central element of individuals’ self-concept and broader social identity (e.g., Bagci, Rosenfeld et al., 2022; Cherry, 2015; Rosenfeld & Burrow, 2017). This identity-based commitment, in turn, shapes a range of attitudinal and behavioral outcomes among veg*ns, including their evaluations of the

meat-eater outgroup (e.g., Bagci, Rosenfeld et al., 2022; Plante et al., 2019), their engagement in veg*n activism (Judge et al., 2022), and their psychological well-being (Bagci & Olgun, 2019).

Despite this recent focus on the importance of social identities among veg*ns, existing empirical studies have typically treated veg*n identification as a unidimensional construct (e.g., Bagci, Rosenfeld et al., 2022), without considering the more complex nuances involved in social identification processes. Contemporary approaches derived from social identity literature suggest that individuals may genuinely see their ingroup as a positively valued social group to which they feel a secure attachment, whereas they may also develop a more ‘destructive’ form of ingroup love called *collective narcissism* (see Cichocka, 2016; Golec de Zavala et al., 2009; Golec de Zavala, 2018; 2024). The current study aims to incorporate the construct of collective narcissism into the study of veg*nism by a) investigating the particular dietary motivations associated with it, and b) testing the role of collective narcissism in predicting veg*ns’ attitudes and behavioral tendencies towards meat-eaters, their collective action intentions, as well as their life satisfaction.

1.1. Veg*nism as a social identity

Although veg*nism is broadly defined as the preference of a meat-free diet on purpose, an extensive body of literature suggests that it includes social psychological processes that go beyond simple dietary choice (e.g., Cherry, 2015; Fox & Ward, 2008; Rosenfeld & Burrow, 2017a, 2018; Rosenfeld et al., 2020; Vestergren & Uysal, 2022). Introducing the social identity perspective to the study of vegetarianism, Rosenfeld and Burrow (2017a, 2017b) proposed the *unified model of vegetarian identity* (UMVI) whereby veg*n identification was defined as a key social psychological mechanism involved in the process of following a meatless diet. In a further

review, Nezelek and Forestell (2020) argued that by defining themselves as veg*n, individuals adopt a social identity through which they feel socially connected to each other by similar values and beliefs. Accordingly, adhering to a veg*n diet serves as a way to express ideals and fulfill various psychological needs—such as finding meaning and feeling effective (Bagci & Olgun, 2019). Other researchers argued that people may be motivated to pursue a meat-reductionist diet primarily for the social identity benefits of veg*nism, such as being part of a highly valued and distinctive social group (e.g., Plante et al., 2019; Rosenfeld et al., 2020).

Despite these recent theoretical advancements, relatively few studies have investigated the multidimensional nature of veg*n identification, and even fewer have explicitly examined whether these dimensions carry distinct implications for veg*ns. For example, taking an identity process approach, Bagci and Yilmaz (2024) suggested that veg*n identity development occurs through stage-like identity processes, moving from a *diffused identity* (low identity exploration and commitment) to an *achieved identity* (high identity exploration and commitment) whereby veg*ns understand the meaning of their dietary group and fully adhere to its norms. Other researchers have distinguished between different evaluative dimensions such as private and public regard, which refer to one's own positivity towards the ingroup and the perception of how positively the others evaluate the ingroup, respectively (Plante et al., 2019; Rosenfeld & Burrow, 2018; see also Luhtanen & Crocker, 1992).

Nevertheless, existing research has primarily approached veg*n identification from perspectives that emphasize either its developmental dynamics—examining how individuals come to adopt veg*n identities over time (e.g., Bagci & Yilmaz, 2024) or its structural features, such as strength, centrality, or salience (e.g., Rosenfeld & Burrow, 2018). While these contributions have been instrumental in illuminating the role of dietary identities in veg*ns, they

largely portray such identities as coherent, value-driven, and prosocial. What remains comparatively underexplored is whether veg*n identification may also entail a potential “dark side”. In the current study, we take a more contemporary approach to examine the different facets of one’s attachment to their dietary group by focusing on the distinction between a genuine, secure ingroup positivity and the dark side of ingroup love: *collective narcissism* (Golec de Zavala et al., 2019; Golec de Zavala, 2024).

1.2. Collective narcissism

Despite growing interest in examining social identity processes among veg*ns, previous research has not so far considered the potential detrimental outcomes of a strong ingroup identification among veg*ns. The social identity literature now acknowledges that a positive evaluation of one’s ingroup can carry different meanings, especially highlighting the distinction between secure and insecure forms of identification (e.g., blind vs. constructive patriotism; Schatz et al., 1999; glorification vs. attachment; Roccas et al., 2006; nationalism vs. patriotism; Kosterman & Feshbach, 1989). In the current study, we have taken a more recent approach - collective narcissism - that could be extended beyond the national context and applied into any group membership (regardless status differentials, Golec de Zavala, 2024), focusing on key mechanisms that might be particularly relevant in the context of veg*nism such as the perception of ingroup superiority and need for external validation.

According to this framework, an individual may view their ingroup favorably and experience positive emotions based on the group’s valued characteristics, without necessarily expecting external approval—an orientation typically known as ‘ingroup satisfaction’ (Golec de Zavala et al., 2020; Leach et al., 2008) or ‘non-narcissistic ingroup positivity’ (Cichocka, 2016).

Individuals may also feel positive about their ingroup based on a perceived sense of its superiority and the desire for external recognition—an orientation commonly referred to as ‘collective narcissism’ (e.g., Golec de Zavala et al., 2009). While ingroup satisfaction represents a secure form of ingroup attachment that does not necessarily predict hostility toward outgroups, collective narcissism constitutes a rather defensive, insecure form of ingroup positivity that triggers outgroup hostility, thus reflecting the potential ‘dark side’ of ingroup love (Golec de Zavala et al., 2009; Golec de Zavala & Lantos, 2020). Studies including both ingroup satisfaction and collective narcissism have mainly concluded that these two dimensions of identification are predictive of various intergroup outcomes in opposite ways, with only collective narcissism producing counter-productive outcomes for group members (e.g., Golec de Zavala, 2024).

Research on collective narcissism has so far largely focused on national, ethnic, and political identities (e.g., Golec de Zavala, 2024), with little attention to lifestyle-based or opinion groups. Unlike other social identities, veg*n group membership is likely to provide a unique context for studying collective narcissism, as veg*nism is typically a morality-based and value-expressive choice that becomes a central aspect of one’s overall self-concept (e.g., Rosenfeld & Burrow, 2017b), while simultaneously being subject to growing stigmatization and societal dislike (MacInnis & Hodson, 2017). These characteristics make veg*nism a theoretically relevant domain in which defensive, recognition-seeking forms of ingroup positivity may emerge. Importantly, dietary identities are not homogeneous; individuals may avoid meat consumption for different motivational reasons (e.g., moral, prosocial, or personal), some of which could be particularly relevant to understanding whether one develops a secure or insecure ingroup identity. Accordingly, the present study advances collective narcissism research by examining whether its established correlates generalize to this distinctive lifestyle-based identity

that has been often associated with ‘moral superiority’ (Minson & Monin, 2012). At a more practical level, identifying detrimental ingroup processes such as collective narcissism is essential for understanding key mechanisms that increase polarization around food choices. This line of research can therefore inform strategies aimed at reducing intergroup defensiveness and promoting a more constructive and less antagonistic dialogue around dietary identities.

1.2.1. Dietary motivations and veg*n collective narcissism

Our first research question was concerned with whether veg*ns with particular dietary motivations would display higher levels of collective narcissism. Derived from UMVI and defined as goal-oriented ambitions that shape the self-concept behind food choices, dietary motivations are suggested to stand as critical psychological mechanisms that guide dietary identities (Rosenfeld & Burrow, 2017a; 2017b). While scholars have suggested different types of motivations behind meat reduction in the literature, three well-established motivations have been commonly found to successfully predict one’s meat avoidance. Accordingly, the first motivation, the *personal* motivation, is concerned with the desire to benefit oneself and often includes self-focused goals, such as personal health. The second motivation, the *prosocial* motivation, goes beyond the benefits to the self and is rather concerned with the goal of benefitting something external such as animals and environment. The third motivation, the *moral* motivation, is derived from self-ascribed moral obligations that guide eating behavior and involves the beliefs about whether meat consumption is ethically right or wrong. In a comprehensive analysis of these different motivations, Plante et al. (2019) demonstrated that all different motivations were associated with greater veg*n identity centrality, as well as veg*n esteem - the extent at which the veg*n identity is seen as positive. This suggests that regardless of the motivation, veg*ns tend to positively evaluate their ingroup, particularly compared to other dietary groups such as

omnivores and flexitarians (e.g., Bagci, Rosenfeld et al., 2022; Rosenfeld et al., 2020). However, whether some motivations play a relatively more important role in predicting a narcissistic view of the dietary ingroup has not been explored yet.

While people with all three motivations are likely to report a positive evaluation of dietary identities, we argue that collective narcissism might be particularly salient among veg*ns who are motivated by moral reasons. Morally (ethically) motivated veg*ns tend to have stronger beliefs about animal rights, experience greater disgust toward meat, and hold greater dietary strictness, compared to personally (health) motivated veg*ns (e.g., Jabs et al., 1998; Janssen et al., 2016; Rozin et al., 1997). Veg*nism is typically associated with moral superiority (Minson & Monin, 2012) and condescendence (Aloni et al., 2024), and especially morally motivated veg*ns are seen as threats to mainstream meat consumption practices, which further fuels the general dislike of veg*ns in society (De Groeve et al., 2021). Accordingly, vegan advocates are generally seen as morally admirable, but at the same time stereotyped negatively especially by being arrogant and overcommitted (De Groeve & Rosenfeld, 2022). Previous empirical research suggests that minority group members who report high private regard for their group but perceive low public regard may be especially prone to collective narcissism (Bagci et al., 2023). Extending this reasoning to the present context, we propose that morally motivated veg*ns may be particularly susceptible to this dynamic. Specifically, those who hold strong positive evaluations of their ingroup (e.g., “I feel positively about my group”) and endorse beliefs in its moral superiority, yet perceive that society fails to adequately acknowledge or appreciate this superiority (e.g., “society does not recognize its true value”), may be more likely to exhibit collective narcissism—the conviction that one’s ingroup is exceptionally valuable, but insufficiently recognized by others.

Previous researchers have also argued that in morality-based intergroup contexts, ingroup love is more likely to turn into outgroup hate especially among groups with relatively less power, as a compensatory group behavior (Guidetti et al., 2023; see also Branscombe et al., 1999). As such, ingroup positivity and outgroup negativity become more co-dependent constructs for social groups based on moral convictions (Parker & Janoff-Bulman, 2013). Hence, the veg*n moral motivation which highlights the rightness of veg*nism and the wrongfulness of meat-eating consumption might particularly trigger a collectively narcissistic view of the ingroup whereby the ingroup is perceived as an admirable and virtuous group that is insufficiently recognized by the others. On the other hand, for prosocially-oriented or personally-oriented veg*ns who are potentially less concerned with the superiority of the ingroup, the ingroup positivity may be less dependent on outgroup recognition. We, therefore, hypothesized that:

H1. Morally-motivated veg*ns would display greater collective narcissism compared to personally and prosocially-motivated veg*ns.

1.2.2. Veg*n collective narcissism and hostility towards meat-eaters

Our second research question was concerned with the intergroup outcomes of collective narcissism among veg*ns. Previous research has consistently shown that, compared to omnivores and flexitarians, veg*ns are particularly likely to indicate strong ingroup favoritism and even exclude groups that do not fully adhere to the ingroup's strict dietary norms (e.g., Bagci, Rosenfeld et al., 2022; MacInnis & Hodson, 2017; MacInnis & Hodson, 2021). Veg*ns, relative to omnivores, also display a more pronounced outgroup negativity, as well as outgroup dehumanization (Bagci, Rosenfeld et al., 2022; Guidetti et al., 2023). Given that veg*ns are strongly identified with their ingroup and derive positive distinctiveness as well as self-esteem

from their dietary group memberships, we argued that one of the primary reasons behind such dietary antagonism among veg*ns may partly stem from social identification processes (see also Guidetti et al., 2023).

The growing literature in collective narcissism research has been concerned with the distinction between a non-narcissistic ingroup evaluation (that we refer as ‘ingroup satisfaction’) and a narcissistic one. While both of these constructs involve a positive evaluation of the ingroup, only the latter is known to trigger hostile attitudes and behaviors towards the outgroup. Empirical research driven from multiple intergroup contexts indicates that collective narcissism, when ingroup satisfaction is partialled out, is the aspect of ingroup positivity that ultimately predicts outgroup hostility (e.g., Golec de Zavala et al., 2009; Golec de Zavala, 2011; Golec de Zavala, 2024) and outgroup derogation (Golec de Zavala et al., 2020). On the other hand, when the two aspects are differentiated, ingroup satisfaction is often not related to outgroup hostility or it promotes outgroup tolerance, unlike its narcissistic counterpart (e.g., Dyduch-Hazar et al., 2019).

While this distinction has not been previously considered in veg*nism literature, the existing evidence suggests veg*n identification, measured in various ways, to be linked to more negative attitudes towards the meat-eater outgroup. For example, vegetarian-based collective self-esteem —the extent at which veg*ns feel positive about their dietary ingroup— and ingroup bias were found to be positively associated (Plante et al., 2019). Bagci, Rosenfeld et al. (2022) further found that a stronger veg*n identification (operationalized as identity centrality) predicted more negative attitudes towards both flexitarians and meat-eaters. Guidetti et al. (2023) explicitly argued that the strong outgroup hostility found among veg*ns might be explained by social identity processes, and showed a strong veg*n identification to explain the salience of

veg*ns' hostile attitudes towards meat-eaters. While these theoretical and empirical findings suggest the possibility that social identity processes play a critical role in the emergence of hostile outgroup attitudes and behaviors among veg*ns, whether a narcissistic view of the dietary ingroup uniquely explains such outgroup hostility has not been tested yet.

Although this distinction has not yet been examined in the context of veg*nism, broader collective narcissism research suggests that narcissistic ingroup positivity predicts not only negative outgroup attitudes, but also hostile behavioral intentions directed at outgroups. For instance, collective narcissism has been linked to outgroup derogation (Golec de Zavala et al., 2020), support for collective action against immigrants and refugees (Górska et al., 2022), political engagement (Grežo et al., 2026), and hostile behavioral intentions (Guerra et al., 2022). These findings suggest that collective narcissism may extend beyond negative evaluations of outgroups and further manifest in behavioral tendencies. Based on the collective narcissism literature indicating particularly a narcissistic form of ingroup positivity to predict outgroup hostility (e.g., Golec De Zavala et al., 2019; Golec de Zavala & Lantos, 2020; Golec De Zavala, 2024), we expected that:

H2. Collective narcissism would be associated with more negative attitudes towards meat-eaters.

H3. Collective narcissism would be associated with higher levels of negative behavioral tendencies towards meat-eaters.

1.2.3. Veg*n collective narcissism and collective action motivation

While the critical role of collective narcissism on outgroup prejudice and hostility has been increasingly studied in various intergroup contexts, whether collective narcissism provides

implications for political and collective behavioral outcomes, such as collective action tendencies, has been only recently investigated in intergroup relations literature. Linking social identity and collective action literatures, theories such as Social Identity Model of Collective Action (SIMCA) indicate that social identification is at the heart of collective action motivation and is a key mechanism that motivates group members towards social change processes (Van Zomeren et al., 2008). Studies conducted among veg*ns also provide some evidence for the role of veg*n identification on collective action. Applying SIMCA to veg*n collective action, Judge et al. (2022) focused on veg*nism as a social action and found that a strong veg*n identification (measured by ingroup solidarity and commitment) was a critical predictor of veg*n collective action. Yet, the distinct roles of veg*n collective narcissism and ingroup satisfaction on veg*ns' collective action motivation have not been explored yet.

Research across various group contexts indicated that collective narcissism (vs. ingroup satisfaction) may indeed predict increased collective action motivation. For example, examining LGBTI individuals, Bagci, Acar et al. (2022) argued that collective narcissism may actually motivate group members to support their ingroup rights through increased anger and relative deprivation. Similarly, Marinthe et al. (2025) also indicated that collective narcissism is likely to motivate both advantaged and disadvantaged group members towards pro-ingroup action. In a further study, Górska et al. (2024) tested a similar research question, but particularly distinguishing between normative (socially accepted forms of protest and advocacy, such as peaceful demonstrations, petitions, or awareness campaigns) and non-normative forms of collective action (actions that violate prevailing social norms or legal standards, including property damage, sabotage, disruptive blockades, or physically confronting members of the outgroup in order to advance the group's goals). Accordingly, collective narcissism was a

predictor of group-based anger among LGBTI individuals, but unlike secure ingroup identification, it related more strongly to non-normative forms of collective action than normative forms of collective action. This pattern has been corroborated by subsequent research showing that collective narcissism is both directly and indirectly associated with non-normative collective action, but not with normative forms of action (Study 1, Podsiadlowski et al., 2025). Theoretically, this is consistent with evidence linking collective narcissism to retaliatory and aggressive action orientations, support for violence and radicalization (e.g., Golec de Zavala, 2025), and even ingroup behaviors that may ultimately harm group members themselves (e.g., Cichocka et al., 2022). Such tendencies align with violent collective action, which often undermines a movement's perceived legitimacy and, consequently, constitutes a less effective strategy for achieving sustainable social change (e.g., Becker & Tausch, 2017). Therefore, we expected that:

H4. Collective narcissism would be associated with greater pro-veg*n collective action, but particularly strongly with non-normative collective action supporting veg*ns.

1.2.4. Veg*n collective narcissism and well-being

We further aimed to investigate the extent at which veg*n collective narcissism would predict subjective well-being among veg*ns, using life satisfaction as a reliable and typically used index of well-being (Maddux, 2017). The traditional social identity literature often suggests that social identities provide many psychological needs such as belongingness, control, and meaning (Greenaway et al., 2016), and may even function as 'social cures' for group members (e.g., Jetten et al., 2017). A narcissistic ingroup evaluation, however, is known to produce negative outcomes at the individual level, beyond its destructive implications at intragroup and

intergroup level. Examining well-being outcomes alongside intergroup variables may therefore provide a more comprehensive understanding of the potentially destructive implications of collective narcissism among veg*ns. In various accounts, collective narcissism has been proposed to be a form of defensive ingroup attachment which stems from unmet individual needs (see Cichocka, 2016). In an initial empirical examination, Golec de Zavala (2019) found that, unlike ingroup satisfaction, collective narcissism was associated with negative emotionality and sensitivity to negative stimuli. Although the later empirical evidence was mixed, it has been largely confirmed that collective narcissism is not likely to be positively associated with well-being indicators. For example, studying disadvantaged ethnic groups, Bagci et al. (2023) demonstrated that, unlike ingroup satisfaction which was strongly and positively associated with psychological well-being, collective narcissism was not consistently associated with psychological well-being. Górska et al. (2024), on the other hand, demonstrated that LGBT collective narcissism predicted lower life satisfaction longitudinally, whereas a secure LGBT identity was positively associated with life satisfaction over time.

Empirical studies investigating the links between social identity processes and psychological well-being among veg*ns are rare. In a recent review paper, Nezlek and Forestell (2020) argued that adopting a vegetarian identity is likely to be associated with lower psychological well-being outcomes since veg*nism constitutes a social minority group who frequently receive discriminatory attitudes in society. Nevertheless, veg*nism may also fulfill various social identity needs in humans, ultimately promoting psychological well-being (Bagci & Olgun, 2019). It is therefore possible that veg*n ingroup identification is associated with different psychological outcomes when collective narcissism and ingroup satisfaction are

distinguished. In other words, only a defensive, insecure ingroup positivity is likely to be associated with lower life satisfaction among veg*ns. Therefore, we suggested that:

H5. Collective narcissism would be associated with lower life satisfaction among veg*ns.

1.3. The current study

The current study aims to incorporate the social psychology of collective narcissism into the study of veg*nism and explore its associated dietary motivations and its multiple level outcomes for veg*ns. Despite increasing interest in the understanding of veg*n identities, the current literature lacks insights about the potential dark side of such ingroup positivity among veg*ns. Collective narcissism hinders intergroup tolerance, increases hypersensitivity to external threats, and plays a major role in the perpetuation of intergroup polarization (Golec de Zavala & Lantos, 2020; Golec de Zavala, 2024). Such a narcissistic and defensive view of the ingroup might be salient among veg*ns who base their motivation and ideology on the grounds of moral superiority, for whom the ingroup is exclusive, and the mainstream meat-eater outgroup does not recognize sufficiently the importance of veg*nism. On the other hand, collective narcissism may also uniquely explain veg*ns' hostile attitudes and behaviors towards meat-eaters, which might ultimately hinder the mainstream society's motivation to reduce meat consumption (Kurz et al., 2020). Understanding the implications of veg*n collective narcissism may, therefore, indicate various ways to reduce tensions between different dietary groups. A collectively narcissistic evaluation of the ingroup is also an unhealthy way to cope with discriminatory or exclusionary behaviors in minority groups (Bagci et al., 2023) and motivates group members particularly towards non-normative collective action (Górska et al., 2024), overall representing a pattern of ingroup positivity that mainly provides adverse consequences for group members at intergroup

and individual levels. Note that we primarily aimed to examine the unique implications of collective narcissism, and we did not propose *a priori* hypotheses about ingroup satisfaction, due to mixed findings in the literature across various contexts and outcomes (see Golec de Zavala, 2024). Therefore, findings regarding the role of ingroup satisfaction should be considered exploratory.

2. Method

This study was pre-registered prior to data collection (https://osf.io/drzxf/?view_only=a0f3a35db70143bdbb268fcac48942c0) and all study materials, the main and exploratory variables, as well as the final dataset are available online at the Open Science Framework repository (OSF; https://osf.io/zy63t/?view_only=7fab50dff20d46528835eedd657eabfe).

2.1. Participants and Procedure

We conducted an *a priori* power analysis on G*Power 3.1 to determine the sample size. A meta-analysis about the relationship between collective narcissism and outgroup hostility (Golec de Zavala et al., 2019) shows a small-to-moderate correlation between the two constructs ($r = .19$). Therefore, for an effect size of $f^2 = .037$ and alpha level of .05, the required sample size was 414 to achieve 80%. Given our research budget and to be able to account for potential exclusions, we aimed to reach out to more than 500 vegan and vegetarian participants in total. We also conducted sensitivity analyses on G*Power for a sample size of 540, alpha level of .05 for both the ANOVA and the path model. The ANOVA design (2×3) allowed detection of effects as small as $f = .13$. The path model (2 predictors) was also sensitive to the effect sizes as small as $f^2 = .018$, indicating sensitivity to very small effects (Cohen, 1988).

Data was collected through an online survey posted on Prolific Academic. After the exclusions [1], a total of 540 US citizen veg*n adults (273 vegetarian and 267 vegan; 352 women, 174 men, 3 preferring not to say, 9 choosing ‘non-binary’, 2 choosing other; $M_{age} = 39.80$, $SD_{age} = 13.39$) participated in the study. The average subjective socio-economic status was 4.30 ($SD = 1.27$) ranging from 1 (*very low*) to 7 (*very high*). The majority of participants (77.1%) also reported having completed a bachelor’s degree or higher.

All participants were informed about the aims and procedures of the study and provided their voluntary, informed consent prior to participation. Then, participants reported their dietary group. Those who indicated their dietary group membership as meat-eaters were directed to the end of the study [Diet was already used as a filter in data collection, but there were still meat-eaters attempting the survey.] [2]. All the following questions were adapted to participants’ self-reported dietary group (either vegan or vegetarian). Next, participants completed questions about their motivations to become vegan/vegetarian, collective narcissism, ingroup satisfaction, life satisfaction, attitudes and behavioral tendencies towards meat-eaters, normative and non-normative collective action intentions, and demographics.

2.2. Measures

2.2.1. Dietary group membership

Dietary group membership was assessed with a single item whereby participants indicated their dietary preferences categorically by selecting one of the options: a) vegan (*“I prefer not to eat meat and meat-based products; I am vegan”*), b) vegetarian (*“I prefer not to eat meat and meat-based products; I am vegetarian”*), or c) meat-eater (*“I prefer to include meat in*

my diet; I eat both meat and plants”), as typically assessed in previous studies [3] (Bagci, Rosenfeld et al., 2022; Rosenfeld et al., 2020).

2.2.2. Veg*n collective narcissism

Veg*n collective narcissism was adapted from the commonly used nine-item Collective Narcissism Scale by Golec De Zavala et al. (2009). Sample items include: “If [vegans/vegetarians] had a major say in the world, the world would be a much better place” and “I will never be satisfied until [vegans/vegetarians] get all they deserve” (1 = *Strongly disagree*, 7 = *Strongly agree*, $\alpha = .87$).

2.2.3. Veg*n ingroup satisfaction

Veg*n ingroup satisfaction measure aimed to assess non-narcissistic ingroup positivity and has been typically used as a complementary measure to collective narcissism in the literature (e.g., Dyduch-Hazar et al., 2019). Four items were adapted from Leach et al. (2008) to examine ingroup satisfaction among veg*ns, including “I am glad to be a [vegan/vegetarian]”, and “[Vegans/vegetarians] have a lot to be proud of” ($\alpha = .87$). The response scale ranged from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

2.2.4. Dietary motivations

We asked participants’ primary motivation to be veg*n with a categorical item stating: “What is your primary motivation to become [vegetarian/vegan]?”. Participants could select one of the four options: a) prosocial (i.e., out of the desire to benefit something beyond oneself), b) personal (i.e., out of the desire to benefit oneself), c) moral (i.e., out of beliefs about the rightness or wrongness), or d) other (explained). We additionally used a continuous scale that included

four different types of motivations (Plante et al., 2019; Rosenfeld & Burrow, 2018) for exploratory purposes. While the categorical item captures participants' self-reported dominant motivation in a forced-choice format, the continuous scale assesses the extent to which multiple motivational orientations are endorsed concurrently. See SM for the results with these variables.

2.2.5. Attitudes and behavioral tendencies towards meat-eaters

We asked participants to report how warm they felt towards meat-eaters through a single-item feeling thermometer frequently used to assess outgroup attitudes in intergroup relations literature (Wright et al., 1997). The scale ranges from 0 to 100 degrees, where 0 means very cold or unfavorable feelings and 100 means very warm or favorable feelings, therefore higher scores indicating more positive attitudes towards meat-eaters. We further assessed negative behavioral tendencies towards meat-eaters with a four-item scale designed for the purpose of this study (e.g., "If I see someone eating meat, I feel the need to tell them it's wrong or harmful", and "I avoid being polite or friendly to people who openly eat meat around me", response scale ranging from 1 = *Strongly disagree* to 7 = *Strongly agree*, $\alpha = .90$).

2.2.6. Veg*n collective action motivation

We assessed veg*n collective action motivation with a seven-item scale by adapting previously used collective action scales in intergroup relations literature (Górska et al., 2023). We used four items to assess participants' likelihood to engage in normative collective action (attending a peaceful protest, signing a petition, distributing informational materials, and engaging in online behaviors, $\alpha = .92$) and three items of to assess participants' non-normative collective action intentions (putting vegan/vegetarian symbols on objects associated with meat consumption; engaging in violent demonstrations; and damaging vans carrying meat products or

shops selling meat-products, $\alpha = .83$). The response scale ranged from 1 (*Very unlikely*) to 7 (*Very likely*), with higher scores indicating greater motivation to engage in normative and non-normative veg*n collective action.

2.2.7. Life satisfaction

We measured subjective well-being through the Life Satisfaction Scale by Diener et al. (1985). Participants were asked to indicate how satisfied they were feeling over the last two weeks (e.g., “The conditions of my life are excellent”, $\alpha = .90$) on a response scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

2.2.8. Demographics

The demographic form included information about age, gender (1 = woman, 2 = man, 3 = nonbinary, 4 = I prefer not to say, 5 = I chose to define myself), subjective socio-economic status (“Generally speaking, how would you describe your socio-economic status?”, 1 = very low, 7 = very high), education (“What is the last school you graduated from?”; 1 = no formal schooling, 2 = primary school, 3 = middle school, 4 = high school, 5 = bachelor’s degree, 6 = master’s degree and higher), and political orientation (“How would you rate your political orientation on a scale that shows 1- more left, 10 - more right?”).

2.2.9. Analysis plan

We conducted 2 (dietary group: vegan vs. vegetarian) x 3 (motivation: prosocial vs personal vs moral) between-subjects ANOVAs to examine differences in collective narcissism and ingroup satisfaction across dietary groups and motivations. Post-hoc comparisons were conducted using Fisher’s least significant difference (LSD) tests. These analyses were performed

using SPSS Version 26. Next, we examined whether collective narcissism and ingroup satisfaction were associated with behavioral tendencies, normative and non-normative collective action motivation, and life satisfaction. Collective narcissism and ingroup satisfaction were entered as simultaneous predictors of these outcomes. These associations were tested using path analyses conducted on MPlus Version 8 (Muthén & Muthén, 1998-2025).

3. Results

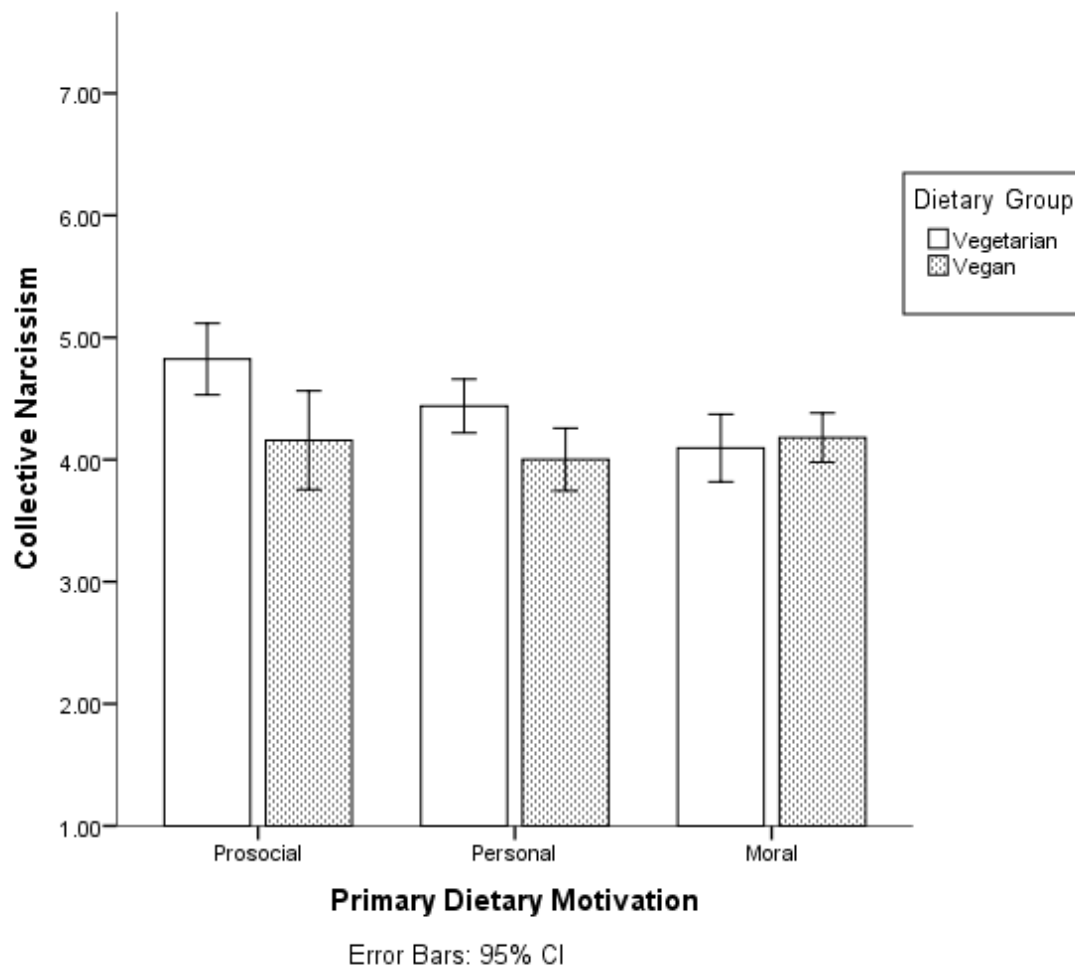
3.1. Group differences on collective narcissism

Figure 1 indicates the levels of collective narcissism across dietary group and motivation. Overall, the mean level of collective narcissism was 4.25 ($SD = 1.24$), deviating significantly from the mid-point 4 in the response scale (one sample t-test with the test value of 4, $t(539) = 4.71$, $p < .001$, Cohen's $d = 0.20$). Participants also reported a relatively high level of ingroup satisfaction ($M = 6.24$, $SD = .90$). We further report the distribution of responses to the forced-choice primary motivation item, with 19.4% selecting prosocial motivation, 40% selecting personal motivation, and 36.7% selecting moral motivation. In group difference analyses, we excluded the remaining 3.9% of the sample who stated 'other', which does not provide a statistically meaningful group size.

H1 aimed to test whether collective narcissism would significantly differ across dietary motivations. Nevertheless, our exploratory analyses comparing vegans and vegetarians demonstrated that there were potential sub-group differences across dietary groups (see SM). Therefore, in order to provide a more nuanced and appropriate analysis, we also included dietary group membership as a further factor, eventually leading to a 2 (dietary group: Vegan, Vegetarian) by 3 (dietary motivation: Personal, Prosocial, Moral) between-subjects ANOVA.

The main effect of the dietary group was significant within the overall analysis, $F(1, 513) = 8.98$, $p = .003$, $\eta^2_p = .017$, demonstrating that vegetarians displayed greater collective narcissism compared to vegans. The main effect of dietary motivation was marginally significant, $F(2, 513) = 2.94$, $p = .054$, $\eta^2_p = .011$. However, these main effects were qualified with a significant interaction, $F(2, 513) = 3.92$, $p = .020$, $\eta^2_p = .015$. Further pairwise comparisons through LSD post-hoc tests indicated that the only significant group difference was between prosocially and morally-motivated veg*ns, with prosocially-motivated veg*ns ($M = 4.51$, $SD = 1.29$) demonstrating significantly higher levels of collective narcissism compared to morally-motivated veg*ns ($M = 4.14$, $SD = 1.29$), $p = .017$, Cohen's $d = .29$. The other group differences were not significant (the difference between prosocially and personally-motivated veg*ns was marginally significant, $p = .078$, Cohen's $d = .20$). Simple effect analyses showed that morally-motivated vegetarians ($M = 4.09$, $SE = .13$) and vegans ($M = 4.18$, $SE = .11$) reported similarly low levels of collective narcissism, $t(513) = -.486$, $p_{tukey} = .997$, Cohen's $d = -.07$. There was no significant difference between personally-motivated vegetarians ($M = 4.44$, $SE = .11$) and vegans ($M = 4.00$, $SE = .13$), $t(513) = 2.61$, $p_{tukey} = .097$, Cohen's $d = -.36$. However, prosocially-motivated vegetarians ($M = 4.82$, $SE = .16$) showed marginally higher levels of collective narcissism traits than prosocially-motivated vegans ($M = 4.16$, $SE = .17$), $t(513) = 2.80$, $p_{tukey} = .059$, Cohen's $d = .55$.

A further two-way ANOVA with veg*n ingroup satisfaction as the dependent variable demonstrated no significant main effect of dietary group ($F(1, 513) = 1.39$, $p = .239$, $\eta^2_p = .003$), nor of primary motivation (as a categorical, forced-choice variable ($F(2, 513) = .53$, $p = .587$, $\eta^2_p = .002$), and no significant interaction between dietary group and primary motivation ($F(2, 513) = .01$, $p = .988$, $\eta^2_p < .001$).

Figure 1*Collective Narcissism Scores by Dietary Group and Primary Motivation*

Note. Collective narcissism scores of vegans and vegetarians are shown for prosocial, personal, and moral motivations (error bars show standard errors).

In summary, we did not find any evidence for our initial hypothesis (H1) about the salience of collective narcissism among primarily morally-motivated veg*ns. Contrary to our expectations, particularly prosocially-motivated meat-reducers and vegetarians reported higher levels of collective narcissism compared to morally-motivated meat-reducers, and vegans.

3.2. Collective narcissism and its outcomes

To test our further hypotheses and the role of collective narcissism (when ingroup satisfaction is partialled out) on various outcomes, we conducted a path analysis, whereby collective narcissism and ingroup satisfaction were entered as simultaneous predictors and outgroup attitudes and behavioral tendencies, normative and non-normative collective action motivation, as well as life satisfaction were entered as the dependent variables.

Descriptive statistics with the means and standard deviations, as well as correlations between the main variables are reported in Table 1.

Table 1. Means, standard deviations, and correlations for the main study variables

Variable	1	2	3	4	5	6	7
1. Collective narcissism	-	.27***	.30***	.61***	.58***	.60***	.24***
2. Ingroup satisfaction		-	.27***	.06	.33***	.16***	.23***
3. Attitudes towards meat-eaters			-	.16***	.26***	.15***	.08
4. Negative behavioral tendencies				-	.41***	.63***	.26***
5. Normative collective action					-	.69***	.22***
6. Non-normative collective action						-	.24***
7. Life satisfaction							-
<i>Mean</i>	4.46	6.24	44.81	2.53	4.82	3.40	4.89
<i>SD</i>	1.16	.90	25.64	1.60	1.74	1.61	1.49

Note. *** $p < .001$.

3.2.1. Hostility towards meat-eaters

As expected, collective narcissism was associated with more negative attitudes towards meat-eaters (H2), as well as more negative behavioral tendencies (H3). Ingroup satisfaction was also negatively associated with positive feelings towards meat-eaters. More importantly, ingroup satisfaction predicted less negative behavioral tendencies towards meat-eaters. This provides partial evidence for the suggestion that collective narcissism is uniquely associated with increased outgroup hostility among veg*ns; as expected (H2 and H3) collective narcissism was associated with less positive attitudes and more negative behavioral tendencies towards meat-eaters, whereas the association between ingroup satisfaction and attitudes was also significant, but relatively weaker. On the other hand, a non-narcissistic ingroup positivity - ingroup satisfaction, was indeed associated with lower levels of negative behavioral tendencies, when both forms of ingroup positivity were accounted for.

3.2.2. Veg*n collective action motivation

We further tested whether collective narcissism was associated with veg*n collective action motivation and whether this association was particularly salient for non-normative forms of collective action (H4). Veg*n collective narcissism was equally strongly associated with both normative and non-normative collective action. Ingroup satisfaction was also associated with higher levels of normative collective action intentions, but with lower levels of non-normative collective action intentions, which indicates collective narcissism to be a unique predictor of non-normative collective action motivation.

3.2.3. Life satisfaction

Finally, we examined how veg*n collective narcissism was associated with life satisfaction among veg*ns (H5). Findings demonstrated that collective narcissism was significantly and positively associated with life satisfaction (H5). Moreover, we observed that ingroup satisfaction contributed positively to veg*ns' life satisfaction. Hence, as opposed to our initial prediction, both collective narcissism and ingroup positivity contributed meaningfully to greater life satisfaction among veg*ns. Table 2 shows standardized path coefficients, standard error and p-values among the two predictors and all outcome variables.

Table 2. Path coefficients with the main variables

Predictors	Outcome	β	SE	<i>p</i> -value	95% CI	sr ²
Collective narcissism	Outgroup attitudes towards meat-eaters	-.29	.04	< .001	[-.38, -.20]	.09
Ingroup satisfaction		-.19	.04	< .001	[-.28, -.11]	.04
<i>R</i> ² = .15						
Collective narcissism	Negative behavioral tendencies	.63	.03	< .001	[.58, .68]	.48
Ingroup satisfaction		-.11	.04	.002	[-.18, -.04]	.02
<i>R</i> ² = .37						
Collective narcissism	Normative collective action motivation	.55	.03	<.001	[.48, .61]	.39
Ingroup satisfaction		.20	.03	<.001	[.13, .27]	.06
<i>R</i> ² = .40						
Collective narcissism	Non-normative collective action motivation	.54	.03	< .001	[.47, .59]	.33
Ingroup satisfaction		-.14	.04	< .001	[-.21, -.07]	.03

$$R^2 = .27$$

Collective narcissism	Life satisfaction	.19	.04	< .001	[.10, .26]	.04
Ingroup satisfaction		.18	.04	< .001	[.10, .25]	.03

$$R^2 = .08$$

Note. Standardized coefficients were reported.

As an additional analysis, we also tested a multigroup model distinguishing the results between vegans and vegetarians. The significance and the direction of the relationships between collective narcissism and outcome variables were replicated across groups. However, associations between ingroup satisfaction and outcome variables varied across group membership such that only among vegetarians, ingroup satisfaction predicted lower levels of negative attitudes and behavioral intentions towards meat-eaters and lower levels of non-normative collective action motivation. The details of these analyses are reported in Supplementary Materials.

4. Discussion

The current study aimed at integrating the concept of collective narcissism (e.g., Golec de Zavala et al., 2009; Golec de Zavala, 2024) into the study of dietary group memberships. While veg*nism has been growingly investigated from the perspective of social identity theories (e.g., Bagci & Olgun, 2019; Nezlek & Forestell, 2020; Rosenfeld & Burrow, 2017a), existing research has typically conceptualized veg*n identification in terms of either strength, centrality, or general positivity (e.g., Bagci, Rosenfeld et al., 2022; Plante et al., 2019), without considering the potential dark aspect of one's ingroup positivity. Across multiple intergroup contexts, collective narcissism, as a destructive form of ingroup love, has been found to produce critically negative

outcomes for group members, perpetuating intergroup hostility, aggression, and tension (e.g., Golec de Zavala, 2011; 2024). In the current study, we examined which groups of meat-avoiders were more likely to display collective narcissism, while also investigating whether and how collective narcissism uniquely predicted various outcomes among both vegans and vegetarians.

Our first research question was concerned with the specific dietary motivation(s) that would be particularly associated with collective narcissism. Based on the ‘moral superiority’ assumptions in veg*nism (e.g., Minson & Monin, 2012), we expected morally-motivated veg*ns to display greater collective narcissism compared to prosocially- and personally-motivated veg*ns (H1). Deviating from our initial pre-registration, at this stage, we also included dietary group membership as a further grouping variable, given the subgroup differences observed. Based on these analyses, we found particularly vegetarians (compared to vegans) and prosocially-oriented veg*ns (compared to morally-oriented ones) to display greater collective narcissism. More importantly, there was an interaction effect between dietary group and dietary motivation. Specifically, morally motivated vegans and vegetarians reported comparably lower levels of collective narcissism. In contrast, prosocial motivation was differentially associated with collective narcissism across dietary groups: vegetarians who were primarily prosocially motivated reported the highest levels of collective narcissism in the sample, whereas this pattern was not observed among vegans. Vegetarianism combined with a prosocial motivation may represent a more socially ambiguous or transitional identity position (compared to veganism and moral motivation, e.g., Bagci & Yilmaz, 2024), which needs greater recognition and appreciation from the others, potentially increasing sensitivity to external evaluation manifested as elevated levels of collective narcissism. While moral motivation may be a more internal motivation that requires relatively less external recognition, prosocial motivation is rather about protecting

animals and environment and stands more as an external motivation that indicates a person to avoid or reduce meat consumption based on something beyond the self (Rosenfeld & Burrow, 2017a). Such motivation may therefore lead prosocially-oriented individuals to strive for a special treatment from others and create the conviction that the ingroup is superior, but not sufficiently recognized by the others.

Our further research question was concerned with the implications of collective narcissism among veg*ns. Based on the intergroup relations literature accumulating the harmful consequences of collective narcissism for outgroup attitudes and behaviors (e.g., Golec de Zavala et al., 2009; Gole de Zavala, 2024; Golec de Zavala & Lantos, 2020) and building on the evidence that heightened outgroup hostility among veg*ns could stem from social identification processes (e.g., Guidetti et al., 2023), we expected veg*n collective narcissism to be a critical driver of hostility towards meat-eaters (H2 & H3). Our findings provided support for this suggestion; collective narcissism was a significant predictor of both negative outgroup attitudes and behavioral tendencies. Unexpectedly, however, collective narcissism was not a unique predictor of negative attitudes. Ingroup satisfaction was also negative, but relatively weakly, associated with outgroup attitudes. These findings are partly in line with previous studies whereby veg*n esteem and private regard have been found to be negatively associated with outgroup negativity (Plante et al., 2019). However, with the addition of collective narcissism as a complementary mechanism, we expected the associations between ingroup satisfaction and outgroup attitudes to be either null or negative (e.g., Dyduch-Hazar et al., 2019; Golec De Zavala, 2024). Nevertheless, when it comes to negative behavioral tendencies towards meat-eaters which rather reflected overt aggressive behavioral tendencies, collective narcissism emerged as a strong predictor. Ingroup satisfaction, on the other hand, was associated with lower

tendencies to engage in such hostile behaviors, which indeed echoes previous studies that have demonstrated a suppression effect for ingroup satisfaction, when collective narcissism was accounted for (Dyduch-Hazar et al., 2019; Verkuyten et al., 2022). These findings underscore the critical role of veg*n collective narcissism in triggering veg*ns' overt hostile behaviors towards meat-eaters and the perpetuation of antagonistic relationships between veg*ns and meat-eaters.

We further examined the associations between veg*n collective narcissism and collective action motivation and argued that collective narcissism would particularly trigger non-normative forms of collective action intentions among veg*ns (H4), based on previous research demonstrating the links between collective narcissism and collective action to be more salient for non-normative actions (Górska et al., 2024). Overall, our findings indicated collective narcissism to strongly predict both forms of actions with no particular differences across the type of actions. This provides evidence for H4, but also points to the potential of collective narcissism to create both productive and counter-productive outcomes for societal change. Previous research on the associations between collective narcissism and collective action motivation has been rather mixed but highlighted the fueling role of collective narcissism towards collective action, especially in disadvantaged groups (Bagci, Acar et al., 2022; Golec de Zavala, 2024; Keenan & Golec de Zavala, 2025). Nevertheless, the close association between collective narcissism and non-normative collective action motivation also indicates various repercussions such narcissistic orientation could produce for minority groups' pursuit of ingroup rights; non-normative collective action is often costly and counterproductive for the success of disadvantaged group members' social change agenda (e.g., Becker & Tausch, 2017). On the other hand, the association between ingroup satisfaction and non-normative collective action motivation was negative after collective narcissism was taken into account, indicating only a collectively

narcissistic ingroup positivity to trigger intentions towards destructive forms of collective action. Note that the correlation between ingroup satisfaction and non-normative collective action was significant and positive (see Table 1), indicating a suppression effect. Such suppression effects have been frequently detected in collective narcissism research (e.g., Dyduch-Hazar et al., 2019) and indicate the importance of assessing both variables simultaneously.

Finally, we predicted collective narcissism to be associated with lower life satisfaction (H5), based on longitudinal research studies indicating the harmful consequences of collective narcissism on life satisfaction over time (Górska et al., 2024). Confirming previous research showing ingroup satisfaction to be positively associated with subjective well-being measures (e.g., Bağcı et al., 2023; Golec de Zavala, 2019), a non-narcissistic ingroup positivity was indeed associated with greater life satisfaction. However, providing counter-evidence for our initial suggestion, collective narcissism was also associated with higher life satisfaction. Previous research studying collective narcissism among minority group members discussed the possibility of collective narcissism to function as a coping mechanism in the face of perceived discrimination (e.g., Bağcı et al., 2023). Alternatively, collective narcissism may stand as compensatory group behavior that regulates life satisfaction among veg*ns and the belief that one is part of a superior group who deserves greater recognition may serve as a psychological tool to justify veg*ns' identification with a relatively disliked minority group. Particularly, in the context of a moralized and voluntary lifestyle identity, narcissistic ingroup positivity may provide a sense of meaning and moral purpose which may function as a psychological buffer that protects subjective well-being by reframing external criticism as unjust underappreciation of an exceptional ingroup. On the other hand, it is also known that collective narcissism shares the 'ingroup positivity' aspect of ingroup identification, and social identification may in fact

function as a ‘social cure’ by satisfying various identity needs (e.g., Greenaway et al., 2016). More research is needed to understand in which ways collective narcissism may predict subjective well-being among veg*ns, examining different mechanisms involved and the longer-term implications.

4.1. Limitations and future directions

Despite providing novel research avenues in the understanding of social identification processes among veg*ns, we should note some of the limitations of the current study. First of all, methodologically, our findings could not indicate any causal associations between the variables measured. Experimental studies manipulating collective narcissism through increased threats and criticism (Guerra et al., 2023) or longitudinal studies examining bidirectional relationships between the main variables (Górska et al., 2024) are extremely rare, given that collective narcissism is typically conceptualized as a dispositional, and relatively stable individual construct that is often treated as an independent variable in most of the collective narcissism research (Golec de Zavala, 2024). Future research is likely to provide more robust results about the longitudinal or experimental effects of collective narcissism among veg*ns.

A further methodological consideration concerns the use of a categorical measure of primary dietary motivation, in which participants selected a single dominant motivation. While we have also used a continuous measure (see SM for correlations), the high level of correlations between the different motivations indicate many participants to hold various motivations concurrently, a finding also observed in previous studies (Fox & Ward, 2008). We relied on the categorical primary motivation measure which is likely to distinguish between people who are primarily prosocially, personally, or morally motivated (Rosenfeld & Burrow, 2018), allowing

the identification of the most salient self-reported motivation within the sample. Nevertheless, this measure may not capture the relative strength or coexistence of multiple motivational orientations. Moreover, morally framed motivations are often normatively valued, which may increase susceptibility to socially desirable responses when selecting a single primary motivation. Future research may use more integrative analytical approaches to reveal which motivation(s) are likely to predict greater levels of collective narcissism among veg*ns.

Moreover, although we included both vegans and vegetarians and considered sub-group differences between the two with additional analyses, we did not include *flexitarians*, a growing meat-reducer group, who also build their social identities around dietary group memberships (e.g., Rosenfeld et al., 2020). While flexitarians were suggested to be a more flexible group for whom dietary groups are less central and identities are diffused (Bagci & Yilmaz, 2024), whether or not flexitarians also display a collectively narcissistic evaluation around their eating pattern, especially in comparison to meat-eaters or omnivores, has not been explored yet. It is also possible that, especially in cultures whereby meat is the symbol of power and masculinity, meat-eating dietary groups may also display strong dietary ingroup identification (e.g., Bagci, Rosenfeld et al., 2022), and display collective narcissism around their meat-eating consumption.

We also exclusively focused on dietary identities, although individuals may simultaneously hold multiple social identities (e.g., social class, political, environmental, or activist identities) that may further shape intergroup attitudes in the relevant context (e.g., Johnson & Shreer, 2026). For example, research has shown that veg*ns' advocacy status may further create differences in their overall evaluation and advocate vegans could be perceived more negatively than non-advocate veg*ns (De Groeve et al., 2022). On the other hand, it is relatively less known whether collective narcissism in one social identity is associated with

collective narcissism in another social identity. For example, do veg*ns who display high levels of collective narcissism in their dietary group also report greater levels of narcissism in their activist, politicized, or sexual identities? Future research is needed to understand the role of these additional social identities that could further impact dietary groups' relationships.

Finally, all of the outcome variables we used in the current research were based on self-report measures rather than directly observable behaviors, which has been one of the commonly reported limitations in similar research (e.g., Plante et al., 2019). This issue has been also observed in collective narcissism literature whereby outcome measures mainly included support or intentions for aggressive and collective actions (see Golec de Zavala, 2024 for an extensive list of outcomes). While we included negative behavioral tendencies, as well as collective action motivation as the closest behavioral proxies of group-based behaviors, future research may target extending these outcomes to more directly observable behavioral assessments. Particularly our negative behavioral tendencies measure was designed for the current study to reflect outgroup hostility together with attitudes. While the items were likely to implicate moral outrage and conviction that could go beyond simple behavioral tendencies (see e.g., Skitka et al., 2005), they involved both active harm (e.g., expressing anger) and passive harm (e.g., avoidance) items that have been traditionally used in previous negative behavioral tendency scales (e.g., López-Rodríguez et al., 2017). A related research direction may be measuring further outcomes of veg*n collective narcissism by extending attitudes and behavioral tendencies/intentions to various other dimensions of intergroup relationships such as emotions and beliefs (e.g., Alonso-Arbiol et al., 2023).

4.2. Practical and theoretical implications

Our study is the first to incorporate the social psychological phenomenon of collective narcissism into the study of dietary group memberships. At the theoretical level, our findings highlight that the distinction between a narcissistic and non-narcissistic ingroup positivity is critical to understand veg*ns' attitudes and behavioral intentions. Our findings demonstrated that while a secure and genuine ingroup positivity (i.e., ingroup satisfaction) was indeed associated mostly with productive outcomes (except relating to negative outgroup attitudes relatively weakly), the belief in the superiority of the ingroup and lack of external motivation (i.e., collective narcissism) was mainly associated with counter-productive outcomes among veg*ns (except relating positively to life satisfaction). The strong association between veg*n collective narcissism and negative behavioral tendencies towards meat-eaters also suggests that the prevalent asymmetrical outgroup negativity from the part of veg*ns (e.g., Bagci, Rosenfeld et al., 2022) may stem partly from such perceptions of unrecognized ingroup admiration. This is also critical for practical research, since veg*n advocacy is known to deviate the meat-eater group from meat-reductionist consumption if such advocacy is purely based on moral superiority grounds (De GROEVE & Rosenfeld, 2022; Kurz et al., 2020).

It is also important to note that such collectively narcissistic ingroup positivity among veg*ns may not emerge in complete isolation; it may be enhanced as a result of negative encounters with the mainstream meat-eating society which posits veg*nism as a potential threat to values (e.g., Macinnis & Hodson, 2017). As such although veg*ns are acknowledged as a morally admirable group, they are also generally disliked and underappreciated by meat-eaters due to the meat-paradox (Rothgerber, 2014). This suggests that a narcissistic evaluation of the ingroup among veg*ns may not be purely dispositional, but also get reinforced through various negative social encounters as a coping mechanism. In line with this, previous research

demonstrated high quality intergroup contact to be associated with decreased levels of collective narcissism (Yilmaz et al., 2024). Other interventions such as mindfulness practices have been also shown to decrease the negative impact of collective narcissism on outgroup prejudice (Golec de Zavala et al., 2024). The current study indicated a clear destructive role of collective narcissism among veg*ns particularly in relation to outgroup hostility. The decrease in collective narcissism through various social psychological interventions may therefore create improvements in dietary group relationships and eventually reduce tensions across different dietary groups.

At the societal level, we also observed veg*n collective narcissism to be associated with both normative and non-normative forms of collective action motivation which suggests that such a belief may stand as one of the main drivers of social change motivation among veg*ns. Nonetheless, collective narcissism which generally produces greater anger and relative deprivation, but not greater collective efficacy (Bagci, Acar et al., 2022), may enhance such actions only to some extent. Hence, it is critical to acknowledge both productive and counter-productive roles of collective narcissism in minority groups' motivation towards social change.

Finally, the current study also provides unique theoretical and empirical implications for the collective narcissism literature. By applying this framework for the first time to a morally-based opinion/lifestyle group and showing its potential constructive and destructive effects, we provided evidence about the generalizability of this construct across various group memberships. Previous research has shown disadvantaged minority groups to display greater collective narcissism than advantaged majority group members (Bagci et al., 2023). While veg*ns may not constitute a traditionally studied disadvantaged group and may be even considered a privileged group (e.g., Greenebaum, 2017), they are still the target of micro-aggressions and stigmatization

in society (e.g., LeRette, 2014), making this group membership a unique setting for the study of collective narcissism.

5. Conclusions

The current study investigated veg*n collective narcissism, dietary motivations associated with it, and its outcomes among vegans and vegetarians. Overall, our findings largely confirmed that, unlike ingroup satisfaction, veg*n collective narcissism qualified with the belief that one's dietary ingroup is superior, but lacks external recognition is rather a destructive form of ingroup positivity that has a critical role in various outcomes among veg*ns. Further research is needed to understand the more extended implications of veg*n collective narcissism and assess various individual and group level factors that create these beliefs.

Funding: This project is funded by a grant awarded to the first author as part of the TÜBA GEBİP for outstanding young scientists. The fund was used for data collection only.

Ethics approval

Ethical approval for this study was obtained on 22 May 2025 from the Sabancı University Research Ethics Committee (SUREC; protocol number: FASS-2025-24), in accordance with the Declaration of Helsinki. SUREC is the local institutional ethics board of Sabancı University, where all authors of this work are affiliated and where the research was conducted.

Informed consent

All participants were informed about the study procedures before participation. Informed consent was obtained online, where participants were asked to read the consent form carefully and

indicate their approval or disapproval. Data collection, and thus the process of obtaining informed consent, took place between 29 May 2025 and 1 June 2025.

End Notes:

[1]: In the vegetarian survey, 372 participants attempted the survey. Nevertheless, we excluded 1 person who did not give their informed consent, 46 people who were meat-eaters, 47 people who were vegan, 3 people who did not respond beyond informed consent, and 1 person who completed the survey in less than 2 minutes, where the median for survey completion was 8 minutes. In the vegan survey, we reached out to 316 participants. We excluded 1 person for not giving their informed consent, 13 people for being meat-eaters, 28 people for being vegetarian, 6 people for not responding beyond informed consent, 1 person for not living in the US.

[2] Although 'Diet' was already used as a filter in data collection on Prolific, but there were still meat-eaters attempting the survey.

[3] We did not include flexitarianism at this stage although some previous studies included this option too (Bagci, Rosenfeld et al., 2022). The current study was focused only on vegans and vegetarians for whom meat-reduction is a stronger aspect of overall identities.

References

- Aloni, M., Hopwood, C. J., Lenhausen, M. R., Rosenfeld, D. L., & Mohan, K. O. (2024). The structure and correlates of vegan stereotypes. *Group Processes & Intergroup Relations*, 27(8), 1978–2009. <https://doi.org/10.1177/13684302241230001>
- Alonso-Arbiol, I., Bobowik, M., Pascual, A., Conejero, S., & Padoan, S. (2024). Moral exemplars promote positive attitudes, beliefs, intentions, and behaviors toward outgroups during the COVID-19 pandemic: The explanatory role of self-transcendent emotions.

- Group Processes & Intergroup Relations*, 27(1), 118–141.
<https://doi.org/10.1177/13684302231165730>
- Bagci, S. C., & Olgun, S. (2019). A social identity needs perspective to Veg*nism: Associations between perceived discrimination and well-being among Veg*ns in Turkey. *Appetite*, 143, Article 104441. <https://doi.org/10.1016/j.appet.2019.104441>
- Bagci, S. C., Acar, B., Eryuksel, E., & Ustun, E. G. (2022). Collective narcissism and ingroup satisfaction in relation to collective action tendencies: The case of LGBTI individuals in Turkey. *TPM: Testing, Psychometrics, Methodology in Applied Psychology*, 29(1).
<https://doi.org/10.4473/TPM29.1.3>
- Bagci, S. C., Rosenfeld, D. L., & Uslu, D. (2022). Intergroup attitudes between meat-eaters and meat-avoiders: The role of dietary ingroup identification. *Group Processes & Intergroup Relations*, 25(5), 1223–1247. <https://doi.org/10.1177/13684302211012768>
- Bagci, S. C., Stathi, S., & Golec de Zavala, A. (2023). Social Identity Threat Across Group Status: Links to Psychological Well-Being and Intergroup Bias Through Collective Narcissism and Ingroup Satisfaction. *Cultural Diversity & Ethnic Minority Psychology*, 29(2), 208–220. <https://doi.org/10.1037/cdp0000509>
- Bagci, S. C., & Yilmaz, A. D. (2024). A dynamic identity process approach to veg* nism: Does identity status matter among meat-reducers?. *Journal of Community & Applied Social Psychology*, 34(4), e2853. <https://doi.org/10.1002/casp.2853>
- Becker, J. C., & Tausch, N. (2017). A dynamic model of engagement in normative and non-normative collective action: Psychological antecedents, consequences, and barriers. *European Review of Social Psychology*, 26(1), 43–92. <https://doi.org/10.1080/10463283.2015.1094265>

- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*, 77(1), 135–149. <https://doi.org/10.1037/0022-3514.77.1.135>
- Brewer, M. B. (1999). The psychology of prejudice: Ingroup love and outgroup hate? *Journal of Social Issues*, 55(3), 429–444. <https://doi.org/10.1111/0022-4537.00126>
- Cameron, J. E. (2004). A three-factor model of social identity. *Self and Identity*, 3(3), 239–262. <https://doi.org/10.1080/13576500444000047>
- Cherry, E. (2015). I was a teenage vegan: Motivation and maintenance of lifestyle movements. *Sociological Inquiry*, 85(1), 55–74. <https://doi.org/10.1111/soin.12061>
- Cichocka, A. (2016). Understanding defensive and secure in-group positivity: The role of collective narcissism. *European Review of Social Psychology*, 27(1), 283–317. <https://doi.org/10.1080/10463283.2016.1252530>
- Cichocka, A., Cislak, A., Gronfeldt, B., & Wojcik, A. D. (2022). Can ingroup love harm the ingroup? Collective narcissism and objectification of ingroup members. *Group Processes & Intergroup Relations*, 25(7), 1718–1738. <https://doi.org/10.1177/13684302211038058>
- Clem, J., & Barthel, B. (2021). A look at plant-based diets. *Missouri Medicine*, 118(3), 233–238. PMID: PMC8210981.
- De Groot, B., Hudders, L., & Bleys, B. (2021). Moral rebels and dietary deviants: How moral minority stereotypes predict the social attractiveness of veg*ns. *Appetite*, 164, Article 105284. <https://doi.org/10.1016/j.appet.2021.105284>
- De Groot, B., & Rosenfeld, D. L. (2022). Morally admirable or moralistically deplorable? A

- theoretical framework for understanding character judgments of vegan advocates. *Appetite*, 168, 105693. <https://doi.org/10.1016/j.appet.2021.105693>
- De Groot, B., Rosenfeld, D. L., Bleys, B., & Hudders, L. (2022). Moralistic stereotyping of vegans: The role of dietary motivation and advocacy status. *Appetite*, 174, Article 106006. <https://doi.org/10.1016/j.appet.2022.106006>
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13
- Dyduch-Hazar, K., Mrozinski, B., & Golec de Zavala, A. (2019). Collective narcissism and ingroup satisfaction predict opposite attitudes toward refugees via attribution of hostility. *Frontiers in Psychology*, 10, 1901. <https://doi.org/10.3389/fpsyg.2019.01901>
- Ettinger, J. (2019, May 17). *Romesh Ranganathan: 'People hate vegans because they know they're right'*. LiveKindly. <https://www.livekindly.com/romesh-ranganathan-people-hate-vegans/>
- Fox, N., & Ward, K. (2008). Health, ethics and environment: A qualitative study of vegetarian motivations. *Appetite*, 50(2), 422–429. <https://doi.org/10.1016/j.appet.2007.09.007>
- Golec de Zavala, A. (2011). Collective narcissism and intergroup hostility: The dark side of “in-group love.” *Social and Personality Psychology Compass*, 5(6), 309–320. <https://doi.org/10.1111/j.1751-9004.2011.00351.x>
- Golec de Zavala, A. (2024). *The psychology of collective narcissism: Insights from social identity theory*. Routledge: London & New York.

- Golec de Zavala, A. (2025). Collective narcissism, political violence and terrorism. In M. Yalch, M. Taylor, L. Brown, A. Merari, & B. Bongar (Eds.), *The Oxford handbook of the psychology of terrorism and terrorist behavior*. Oxford University Press.
- Golec de Zavala, A., Cichocka, A., Eidelson, R., & Jayawickreme, N. (2009). Collective narcissism and its social consequences. *Journal of Personality and Social Psychology*, 97(6), 1074–1096. <https://doi.org/10.1037/a0016904>
- Golec de Zavala, A., Dyduch-Hazar, K., & Lantos, D. (2019). Collective narcissism: Political consequences of investing self-worth in the ingroup's image. *Political Psychology*, 40(S1), 37–74. <https://doi.org/10.1111/pops.12569>
- Golec de Zavala, A., Federico, C. M., Sedikides, C., Guerra, R., Lantos, D., Mroziński, B., Cypryńska, M., & Baran, T. (2020). Low self-esteem predicts out-group derogation via collective narcissism, but this relationship is obscured by in-group satisfaction. *Journal of Personality and Social Psychology*, 119(3), 741–764. <https://doi.org/10.1037/pspp0000260>
- Golec de Zavala, A., & Keenan, O. (2023). Collective narcissism and the clash of advantaged and disadvantaged groups. In *The psychology of politically unstable societies* (pp. 119–135). Routledge. <https://doi.org/10.4324/9781003282181-11>
- Golec de Zavala, A., Keenan, O., Ziegler, M., Mazurkiewicz, M., Nalberczak-Skóra, M., Ciesielski, P., ... & Sedikides, C. (2024). Mindful-gratitude practice reduces prejudice at high levels of collective narcissism. *Psychological Science*, 35(2), 137–149. <https://doi.org/10.1177/09567976231220902>
- Golec de Zavala, A., & Lantos, D. (2020). Collective narcissism and its social consequences:

The bad and the ugly. *Current Directions in Psychological Science: A Journal of the American Psychological Society*, 29(3), 273–278.

<https://doi.org/10.1177/0963721420917703>

Górska, P., Stefaniak, A., Matera, J., & Marchlewska, M. (2024). The different effects of collective narcissism and secure ingroup identity on collective action and life satisfaction among LGBTQ+ individuals. *Group Processes & Intergroup Relations*, 27(2), 366–392. <https://doi.org/10.1177/13684302221147125>

Górska, P., Stefaniak, A., Marchlewska, M., Matera, J., Kocyba, P., Łukianow, M., Malinowska, K., & Lipowska, K. (2022). Refugees unwelcome: Narcissistic and secure national commitment differentially predict collective action against immigrants and refugees. *International Journal of Intercultural Relations*, 86, 258–271. <https://doi.org/10.1016/j.ijintrel.2021.11.009>

Greenaway, K. H., Cruwys, T., Haslam, S. A., & Jetten, J. (2016). Social identities promote well-being because they satisfy global psychological needs. *European Journal of Social Psychology*, 46(3), 294–307. <https://doi.org/10.1002/ejsp.2169>

Greenebaum, J. (2012). Veganism, Identity and the Quest for Authenticity. *Food, Culture, & Society*, 15(1), 129–144. <https://doi.org/10.2752/175174412X13190510222101>

Greenebaum, J. B. (2017). Questioning the Concept of Vegan Privilege: A Commentary. *Humanity & Society*, 41(3), 355–372. <https://doi.org/10.1177/0160597616640308>

Grežo, M., Havan, P., Adamus, M., & Ballová Mikušková, E. (2026). Tearing Apart the Social Fabric: How Do Conspiracy Beliefs, Tendency for Distinction and Distrust Relate to Political Engagement? *Terrorism and Political Violence*, 1–19. <https://doi.org/10.1080/09546553.2026.2616809>

- Guerra, R., Bierwaczzonek, K., Ferreira, M., Golec de Zavala, A., Abakoumkin, G., Wildschut, T., & Sedikides, C. (2022). An intergroup approach to collective narcissism: Intergroup threats and hostility in four European Union countries. *Group Processes & Intergroup Relations*, 25(2), 415-433. <https://doi.org/10.1177/1368430220972178>
- Guerra, R., Golec de Zavala, A., Bierwaczzonek, K., Ciesielski, P., Abakoumkin, G., Wildschut, T., & Sedikides, C. (2025). A case of mistaken identity: Miscategorisation of the ingroup as a historically rivalrous outgroup triggers collective narcissism. *Group Processes & Intergroup Relations*, OnlineFirst. <https://doi.org/10.1177/13684302251345405>
- Guidetti, M., Graziani, A. R., & Cavazza, N. (2023). Veg*ns' and omnivores' reciprocal attitudes and dehumanization: The role of social dominance orientation, ingroup identification, and anticipated reproach. *European Journal of Social Psychology*, 53(3), 419–434. <https://doi.org/10.1002/ejsp.2911>
- Jabs, J., Devine, C. M., & Sobal, J. (1998). Model of the process of adopting vegetarian diets: Health vegetarians and ethical vegetarians. *Journal of Nutrition Education*, 30(4), 196–202. [https://doi.org/10.1016/S0022-3182\(98\)70319-X](https://doi.org/10.1016/S0022-3182(98)70319-X)
- Janssen, M., Busch, C., Rödiger, M., & Hamm, U. (2016). Motives of consumers following a vegan diet and their attitudes towards animal agriculture. *Appetite*, 105, 643–651. <https://doi.org/10.1016/j.appet.2016.06.039>
- Jasko, K., Webber, D., Kruglanski, A. W., Gelfand, M., Taufiqurrohman, M., Hettiarachchi, M., & Gunaratna, R. (2020). Social context moderates the effects of quest for significance on violent extremism. *Journal of Personality and Social Psychology*, 118(6), 1165–1187. <https://doi.org/10.1037/pspi0000198>
- Jetten, J., Haslam, S. A., Cruwys, T., Greenaway, K. H., Haslam, C., & Steffens, N. K. (2017).

- Advancing the social identity approach to health and well-being: Progressing the social cure research agenda. *European Journal of Social Psychology*, 47(7), 789–802.
<https://doi.org/10.1002/ejsp.2333>
- Johnson, C., & Schreer, G. (2026). Identity and Diet: Politics, Religion, Social Class and Vegetarian Diet. *Appetite*, 108519. <https://doi.org/10.1016/j.appet.2026.108519>
- Judge, M., Fernando, J. W., & Begeny, C. T. (2022). Dietary behaviour as a form of collective action: A social identity model of vegan activism. *Appetite*, 168, Article 105730.
<https://doi.org/10.1016/j.appet.2021.105730>
- Keenan, O., & Golec de Zavala, A. (2025). Collective narcissism of White supremacy and minority resistance. *Group Processes & Intergroup Relations*, 28(4), 795-830.
<https://doi.org/10.1177/13684302241305370>
- Kosterman, R., & Feshbach, S. (1989). Toward a Measure of Patriotic and Nationalistic Attitudes. *Political Psychology*, 10(2), 257–274. <https://doi.org/10.2307/3791647>
- Kurz, T., Prosser, A. M., Rabinovich, A., & O'Neill, S. (2020). Could vegans and lycra cyclists be bad for the planet? Theorizing the role of moralized minority practice identities in processes of societal-level change. *Journal of Social Issues*, 76(1), 86-100.
<https://doi.org/10.1111/josi.12366>
- Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L. W., Pennekamp, S. F., Doosje, B., Ouwerkerk, J. W., & Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of ingroup identification. *Journal of Personality and Social Psychology*, 95(1), 144–165. <https://doi.org/10.1037/0022-3514.95.1.144>
- LeRette, D. E. (2014). *Stories of microaggressions directed toward vegans and vegetarians in social settings* (Order No. 3615270). Available from ProQuest Dissertations & Theses

- Global. (1523728680). <https://www.proquest.com/dissertations-theses/stories-microaggressions-directed-toward-vegans/docview/1523728680/se-2>
- López-Rodríguez, L., Cuadrado, I., & Navas, M. (2017). I will help you because we are similar: Quality of contact mediates the effect of perceived similarity on facilitative behaviour towards immigrants. *International Journal of Psychology*, 52(4), 273–282.
<https://doi.org/10.1002/ijop.12212>
- Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, 18, 302–318.
<https://doi.org/10.1177/0146167292183006>
- MacInnis, C. C., & Hodson, G. (2017). It ain't easy eating greens: Evidence of bias toward vegetarians and vegans from both source and target. *Group Processes & Intergroup Relations*, 20(6), 721–744. <https://doi.org/10.1177/1368430215618253>
- MacInnis, C. C., & Hodson, G. (2021). Tensions within and between vegans and vegetarians: Meat-free motivations matter. *Appetite*, 164, Article 105246.
<https://doi.org/10.1016/j.appet.2021.105246>
- Maddux, J. E. (2017). Subjective well-being and life satisfaction: An introduction to conceptions, theories, and measures. In *Subjective well-being and life satisfaction* (pp. 3–31). Routledge.
- Marinthe, G., Cislak, A., Stronge, S., Biddlestone, M., Azevedo, F., Kasper, A., Sibley, C. G., & Cichocka, A. (2025). Yes, we can (but for different reasons): Collective narcissism is linked to different values but similar pro-ingroup collective action tendencies among disadvantaged and advantaged ethnic groups. *British Journal of Social Psychology*, 64(1), e12790-n/a. <https://doi.org/10.1111/bjso.12790>

- Minson, J. A., & Monin, B. (2012). Do-gooder derogation: Disparaging morally motivated minorities to defuse anticipated reproach. *Social Psychological & Personality Science*, 3(2), 200–207. <https://doi.org/10.1177/1948550611415695>
- Mummendey, A., Klink, A., & Brown, R. (2001). Nationalism and patriotism: National identification and out-group rejection. *British Journal of Social Psychology*, 40(2), 159–172. <https://doi.org/10.1348/014466601164740>
- Muthén, L. K., & Muthén, B. O. (1998–2025). Mplus user's guide (Version 8.10) [Computer software]. Muthén & Muthén. <https://www.statmodel.com>
- Nezlek, J. B., & Forestell, C. A. (2020). Vegetarianism as a social identity. *Current Opinion in Food Science*, 33, 45–51. <https://doi.org/10.1016/j.cofs.2019.12.005>.
- Parker, M. T., & Janoff-Bulman, R. (2013). Lessons from morality-based social identity: The power of outgroup “hate”, not just ingroup “love”. *Social Justice Research*, 26(1), 81–96. <https://doi.org/10.1007/s11211-012-0175-6>
- Phinney, J. S., Jacoby, B., & Silva, C. (2007). Positive intergroup attitudes: The role of ethnic identity. *International Journal of Behavioral Development*, 31, 478–490. <https://doi.org/10.1177/0165025407081466>
- Plante, C. N., Rosenfeld, D. L., Plante, M., & Reysen, S. (2019). The role of social identity motivation in dietary attitudes and behaviors among vegetarians. *Appetite*, 141, Article 104307. <https://doi.org/10.1016/j.appet.2019.05.038>
- Podsiadłowski, W., Górski, P., Marchlewska, M., & Molenda, Z. (2025). Normative or not? Emotional processes in identity-motivated collective action. *Emotion*. Advance online publication. <https://doi.org/10.1037/emo0001644>

- Roccas, S., Klar, Y., & Liviatan, I. (2006). The Paradox of Group-Based Guilt: Modes of National Identification, Conflict Vehemence, and Reactions to the In-Group's Moral Violations. *Journal of Personality and Social Psychology*, 91(4), 698–711.
<https://doi.org/10.1037/0022-3514.91.4.698>
- Rosenfeld, D. L. (2019). A comparison of dietarian identity profiles between vegetarians and vegans. *Food Quality and Preference*, 72, 40–44.
<https://doi.org/10.1016/j.foodqual.2018.09.008>
- Rosenfeld, D. L., & Burrow, A. L. (2017a). Vegetarian on purpose: Understanding the motivations of plant-based dieters. *Appetite*, 116, 456–463.
<https://doi.org/10.1016/j.appet.2017.05.039>
- Rosenfeld, D. L., & Burrow, A. L. (2017b). The unified model of vegetarian identity: A conceptual framework for understanding plant-based food choices. *Appetite*, 112, 78–95.
<https://doi.org/10.1016/j.appet.2017.01.017>
- Rosenfeld, D. L., & Burrow, A. L. (2018). Development and validation of the Dietarian Identity Questionnaire: Assessing self-perceptions of animal-product consumption. *Appetite*, 127, 182–194. <https://doi.org/10.1016/j.appet.2018.05.003>
- Rosenfeld, D. L., Rothgerber, H., & Janet Tomiyama, A. (2020). From mostly vegetarian to fully vegetarian: Meat avoidance and the expression of social identity. *Food Quality and Preference*, 85, Article 103963. <https://doi.org/10.1016/j.foodqual.2020.103963>
- Rothgerber, H. (2014). Efforts to overcome vegetarian-induced dissonance among meat eaters. *Appetite*, 79, 32–41. <https://doi.org/10.1016/j.appet.2014.04.003>
- Rozin, P., Markwith, M., & Stoess, C. (1997). Moralization and becoming a vegetarian: The

- transformation of preferences into values and the recruitment of disgust. *Psychological science*, 8(2), 67-73. <https://doi.org/10.1111/j.1467-9280.1997.tb00685.x>
- Skitka, L. J., Bauman, C. W., & Sargis, E. G. (2005). Moral conviction: Another contributor to attitude strength or something more?. *Journal of personality and social psychology*, 88(6). <https://doi.org/10.1037/0022-3514.88.6.895>
- Sullivan, V. K., Martínez-Steele, E., Garcia-Larsen, V., & Rebholz, C. M. (2024). Trends in plant-based diets among United States adults, 1999–march 2020. *The Journal of nutrition*, 154(12), 3575-3584. <https://doi.org/10.1016/j.tjnut.2024.08.004>
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-37). Monterey, CA: Brooks/Cole.
- van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin*, 134(4), 504–535. <https://doi.org/10.1037/0033-2909.134.4.504>
- Vestergren, S., & Uysal, M. S. (2022). Beyond the choice of what you put in your mouth: A systematic mapping review of veganism and vegan identity. *Frontiers in Psychology*, 13, Article 848434. <https://doi.org/10.3389/fpsyg.2022.848434>
- Verkuyten, M., Kollar, R., Gale, J., & Yogeeswaran, K. (2022). Right-wing political orientation, national identification and the acceptance of immigrants and minorities. *Personality and Individual Differences*, 184, 111217. <https://doi.org/10.1016/j.paid.2021.111217>
- Whitehead, K. A., Ainsworth, A. T., Wittig, M. A., & Gadino, B. (2009). Implications of ethnic

identity exploration and ethnic identity affirmation and belonging for intergroup attitudes among adolescents. *Journal of Research on Adolescence*, 19, 123-135.

<https://doi.org/10.1111/j.1532-7795.2009.00585.x>

Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, 73(1), 73–90. <https://doi.org/10.1037/0022-3514.73.1.73>

Yilmaz, A. D., Bagci, S. C., & Stathi, S. (2024). Decomposing the role of ingroup evaluation in the contact-deprovincialization path: the role of collective narcissism versus ingroup satisfaction. *International Journal of Intercultural Relations*, 103, 102089.

<https://doi.org/10.1016/j.ijintrel.2024.102089>