UNDERSTANDING PROTEST DYNAMICS: SOCIAL IDENTIFICATION, PERCEIVED INJUSTICE, ANGER AND DISOBEDIENT PROTEST IN THE CONTEXT OF THE AMELISWEERD MOVEMENT

Manoah de Haan (6778615)
Supervisor: Amarins Jansma
Second Assessor: Chris Harris
Utrecht University
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Abstract

This study examines the influence of social identification, feelings of injustice, and anger on the willingness of individuals to engage in disobedient protest acts within the Amelisweerd movement. This research aims to replicate a pathway of the SIMCA model proposed by Van Zomeren et al. (2008), specifically focusing on the perceived injustice pathway and incorporating anger as an additional factor. This is done by using a survey study approach with a sample size of N=50, consisting of individuals aged 19 to 74 years. The results indicated a significant association between perceived injustice and willingness to participate in disobedient protest, supporting previous research on the link between perceived injustice and collective action. The study did not find significant associations between social identification and disobedient protest intentions, contrary to the SIMCA model's predictions. Furthermore, the study revealed that social identification indirectly predicted legal protest intentions through perceptions of unfair police treatment. Consequently, individuals who strongly identify with the movement may be motivated to engage in legal forms of collective action, considering the perceived past unfairness regarding the police. While this study has limitations, including a small sample size and low statistical power, it contributes to our understanding of the perceived injustice pathway in collective action and highlights the importance of addressing subgroup differences within the Amelisweerd movement. The findings suggest that appealing to perceptions of injustice can be a valuable strategy for motivating collective action, and future research should further investigate subgroup dynamics within the movement.

Keywords: social identification, perceived injustice, anger, disobedient protest, Amelisweerd movement, collective action.

Introduction

In 2020, a new plan to expand the A27 highway in the Netherlands was issued. To expand this highway, several hundreds of trees will need to be cut down in Amelisweerd, a nature reserve in Utrecht (Rijkswaterstaat & Ministerie van Infrastructuur en Waterstaat, 2023). This sparked a lot of anger among different environmentalist groups and they have decided to take collective action to stop this from happening (NOS, 2020). Organisations like 'Amelisweerd niet Geasfalteerd' call out for collective action in the form of civil disobedience, which is a tactic used by lots of different protest groups (Amelisweerd niet geasfalteerd, n.d.). Collective action often arises in response to social, political or ecological issues, such as the Amelisweerd case. Collective action refers to the coordinated efforts of a group of individuals who come together to achieve a common goal or address a shared issue. It involves individuals joining forces and working collectively rather than pursuing their goals individually (Wright et al. 1990). A popular form of collective action within the climate protest movement is civil disobedience. This is defined as non-violent lawbreaking that is public and conscientious, with the aim of bringing change in policies or the law (Rawls, 1971; Bedau, 1961). Examples of this type of protest are blocking a highway, occupying a government building and chaining oneself to an object.

What motivates Amelisweerd protesters to use tactics like these? Previous research has shown that social identification is an important motivator for collective action, as well as feelings of injustice and anger (Van Stekelenburg et al., 2011; Van Zomeren et al., 2004; Van Zomeren et al., 2008). The Amelisweerd protests represent an interesting case study to dive deeper into the different social identities that protesters can take on. This is because the Amelisweerd movement is heterogeneous, meaning that different people participate in protests ranging from signing petitions to chaining oneself to trees and occupying the forest. The diversity of protest actions organized by Amelisweerd groups (e.g., Extinction Rebellion, Amelisweerd niet geasfalteerd and Vrienden van Amelisweerd), makes this group interesting because these groups might share different norms about protesting, which can influence their protest motivation. For the preservation of the Amelisweerd forest, climate activists' protest motivation and the willingness to use civilly disobedient tactics might be vital. Civil disobedience has been proven to be an effective protest strategy, with one of the most popular examples in the Netherlands being the 'Stop de Kindermoord' protests (Feddes et al., 2020). In this case, hundreds of individuals protested for safer bike lanes by blocking roads and organizing 'die-ins'. These protests succeeded, which led to the installation of a safer infrastructure for cyclists. To reach their aim, the Amelisweerd movement might need to use

similar tactics. The current study focuses on several psychological constructs that might play a role in motivating individuals to participate in disobedient protest acts. The research question is: In what way is the willingness of individuals to perform disobedient protest acts in the Amelisweerd protests influenced by social identification, feelings of injustice and anger?

The current study has two aims. The main aim is to replicate one pathway of the Social Identification Model of Collective Action by Van Zomeren et al. (2004) to study the relation between social identification, anger, unfairness and disobedient protest intentions (see Figure 1). While the SIMCA model proposed by van Zomeren et al. (2004) includes both the efficacy pathway and the perceived injustice pathway as factors linking social identification and collective action, the current study aims to refine the model by focusing specifically on the perceived injustice pathway and expanding it with anger as an additional factor. It is important to note that although efficacy is a significant predictor of collective action, it is not considered in this study (Van Zomeren et al., 2004). This omission is due to efficacy being more closely related to goal attainment, rather than the emotional aspects of collective action. On top of that, Thomas et al. (2011) found that the path from efficacy towards action was relatively small. Incorporating anger as an additional linking factor can provide a more comprehensive understanding of the underlying, emotional processes driving disobedient protest intentions (Furlong & Vingoles, 2021; Van Zomeren et al., 2004; Clayton, 1992). By narrowing the focus towards disobedient protest intentions and enriching the perceived injustice pathway with the inclusion of anger, this study seeks to shed light on the specific emotional mechanisms that underlie the relationship between social identification and protest intentions in the context of perceived injustices. The exploratory aim of this study is based on the different subgroups present in the Amelisweerd protest movement, because these subgroups might differ in their norms about protesting. This will be tested in an exploratory manner, as the convenience sample in the current study does not allow for careful reconstruction of each group and its relative size.

Figure 1

Visual representation of the presumed relations between the concepts
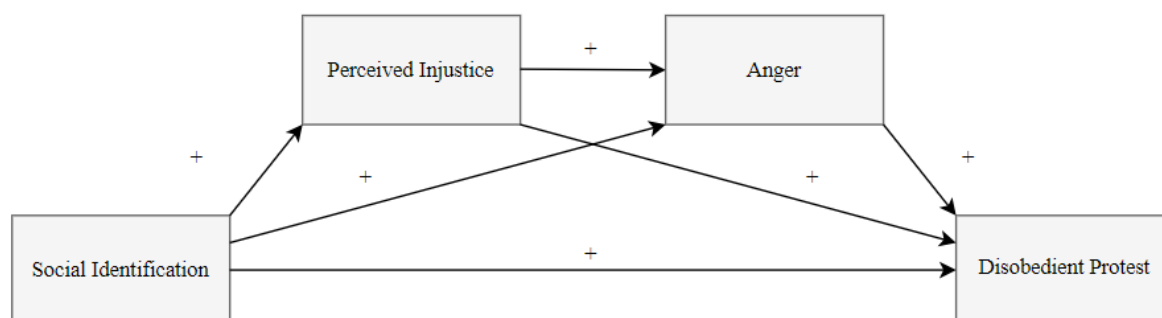
The Social Identity Model of Collective Action (SIMCA)

According to the Social Identification Model of Collective Action (SIMCA; Van Zomeren et al., 2008), social identity plays a crucial role in motivating individuals to engage in collective action. Social identification is a process by which individuals categorize themselves and others into social groups based on shared characteristics such as age, gender, race, religion, occupation, and so on (Tajfel & Turner, 1979). Once individuals have identified with a particular social group, they tend to view themselves and others in terms of that group. For example, a person who identifies strongly with a certain environmental group may view themselves and others in terms of their concern for the environment, and they may evaluate others based on whether they share the same beliefs and values. In this way, social identification influences how individuals perceive themselves and others, and it shapes their attitudes and behaviors towards members of different social groups. According to Van Zomeren et al. (2008), when individuals identify strongly with their group, they are more likely to perceive group-level threats and to engage in collective action to address these threats. Thus, when people socially identify with a protest group, they would be more willing to participate in protest acts, according to this theory. Following this work, the expectation is that people who socially identify more with the Amelisweerd protest group will be more willing to participate in disobedient protest (Hypothesis 1). This entails that individuals who identify with the group norms of the Amelisweerd protest group will be more likely to, for example, tie themselves to a tree, than people who identify less with the Amelisweerd movement.

The SIMCA model states that the relation between social identification and collective action can be partly explained by how much injustice individuals perceive (Van Zomeren et al., 2008). When individuals perceive that their group is facing injustice, they are more likely to mobilize for collective action (Van Zomeren et al., 2008; Smith & Ortiz, 2002). This concept

of perceived injustice is based in the Relative Deprivation Theory (RDT) (Crosby, 1976; Folger, 1987; Walker & Smith, 2002; Smith & Ortiz, 2002). Relative deprivation as a psychological concept was introduced by Stouffer et al. (1949). They found that subjective feelings of injustice and deprivation seemed to be a more important predictor of satisfaction than actual deprivation. RDT also draws on Festinger's social comparison theory (1954), by stating that feelings of deprivation arise when individuals socially compare themselves to specific others and perceive a discrepancy between how their own group is treated versus how other groups are treated. Thus, when individuals socially identify with a certain group, they would be more likely to perceive these injustices and therefore be motivated to participate in collective action.

Following these theories, a few expectations regarding disobedient protest arise. It is expected that people who socially identify with the Amelisweerd movement also experience more perceived injustice, compared to individuals who identify less with the movement (Hypothesis 2; Van Zomeren et al., 2004). According to the SIMCA model, perceived injustice is related to collective action, therefore the expectation is that people who experience more perceived injustice, in contrast to those who experience this less, will be more willing to participate in disobedient protest (Hypothesis 3; Van Zomeren et al., 2004). On top of these hypotheses, it is expected that a connection between social identification and disobedient protest intentions exists, with perceived injustice playing a linking role. It is likely that individuals who strongly identify with a particular group will be more inclined to engage in acts of disobedient protest when they perceive injustice (Hypothesis 4; Van Zomeren et al., 2004).

Anger

Studies have found that collective action is more strongly predicted by affective responses to perceived injustice, such as group based-anger, than by cognitive perceptions of injustice (Van Zomeren et al., 2004; Christensen, Rothgerber, Wood, & Matz, 2004, Van Stekelenburg et al., 2011). Anger is one of the most common experienced emotions when feeling deprived (Clayton, 1992). When people feel angry about certain perceived injustices, such as ecological injustices or injustices regarding police treatment, they may be more likely to engage in collective action (Clayton, 1992; Leach, Lyer, & Pederson, 2006). This might be because anger is related to action tendencies, which can be a motivator to seek justice (Troost et al., 2013; Becker & Tausch, 2015). Anger is an important emotion for the climate activist movement, because merely knowing that something is unjust is not enough to motivate people to act. Actually feeling the injustice, experiencing anger, is necessary in order to act upon it (Roeser, 2012).

On top of that, Furlong and Vingoles (2021) found a connection between social identification and anger. When individuals identified more with a certain group, they would be more likely to experience group-based anger. The expectation is that people who socially identify with the Amelisweerd group will experience more anger (Hypothesis 5). Following the findings of Van Zomeren et al. (2008), a relation is expected between perceived injustice and anger (Hypothesis 6). People who experience more perceived injustice may experience more anger as well. Higher experienced anger is in turn expected to be related to more willingness to participate in disobedient protest (Hypothesis 7; Furlong & Vingoles, 2021). Following Furlong & Vingoles (2021), it is anticipated there is a link between social identification and disobedient protest intentions, with anger serving as an intermediary factor. It is likely that individuals who strongly identify with a particular social group will be more willing to engage in acts of disobedient protest when they experience feelings of anger (Hypothesis 8). Lastly, Furlong and Vingoles (2021) found all of the construct mentioned above to be connected in their research on Extinction Rebellion. They found that the relationship between social identification and collective action tendencies could be explained sequentially through perceived injustice and anger. Extinction Rebellion is known for their strategy of civil disobedience, as a form of collective action (Extinction Rebellion, n.d.). Thus, the findings of Furlong & Vingoles might include more than just legal forms of collective action. The current study aims to give more insight into whether this relation holds true for disobedient protest intentions and whether this relation is generalizable to the Amelisweerd movement. Therefore, in the current study, it is expected that individuals who strongly identify with the Amelisweerd movement will first experience perceived injustice, which in turn will trigger feelings of anger, ultimately leading to a greater likelihood of engaging in acts of disobedient protest (Hypothesis 9; Furlong & Vingoles, 2021).

The second aim of this study is based on the different subgroups present in the Amelisweerd protest movement, because these subgroups might hold different norms about protesting. However, the current study uses a convenience sample, which means the number of people from each group cannot be carefully reconstructed. Therefore, this aim will be tested in an exploratory manner. Differences between each group on social identification, perceived injustice and disobedient protest intentions will be looked at. The expectation is that groups with more radical protest norms, such as civil disobedience, will also score higher on social identification, feelings of perceived injustice and disobedient protest intentions (Hypothesis 10).

Method

Participants

89 participants participated in the current study, of which 50 participants were included after data inspection. This sample size reduction was mostly due to attrition. Due to the small sample size (N=50) the statistical power of this study was very low. A priori power testing using Monte Carlo Power Analysis for Indirect Effects (Schoeman et al., 2017) showed that to reach a power of $P = .8$ for all effects, this study needed a sample of 162 participants. Because this number of participants was not reached, the post-hoc power of this study was $P = .03$ (*Social Identification - Perceived Injustice - Anger - Disobedient Protest* - pathway). For the separate pathways the power was somewhat higher (*Social Identification - Perceived Injustice - Disobedient Protest, P = .53*; *Social Identification - Anger - Disobedient Protest*, $P = .16$). Regardless, a small sample size could still be useful in this case-study, since the protest motivations of this group have not been studied before. On the Amelisweerd niet Geasfalteerd website 3139 people have signed up to be a forest protector, although it is unlikely that all these people are active members. After contacting Amelisweerd niet Geasfalteerd it was found that the organization consists of 10 - 15 people and participants can freely join any actions they organize. The last action they organized (in February) consisted of 100 forest protectors. Therefore, a sample of $N = 50$ can be considered to be representative of the protest group.

The participants fell in the age category of 19 to 74 years. The mean age of the participants was 39.8 years old with a standard deviation of 18.3. There were 17 female participants (34%), 27 male (54%), 3 nonbinary/ third gender (6%) and 3 preferred to not say (6%). In addition, the participants were asked which groups they felt involved with. Here they could choose multiple options. For this the participants mostly chose Amelisweerd niet Geasfalteerd (33), Greenpeace (32), Milieudefensie (24) and Extinction Rebellion (23).

For the current research, Amelisweerd protesters were recruited through different methods. The participants were selected on the basis of a convenience sample and approached by the researchers. The objective was to try to make sure to have an inclusive sample, representing people of all ages and genders. The participants were approached via Facebook pages, WhatsApp groups, posters (see Appendix A) and E-mails. The researchers also walked through a neighborhood in Utrecht and handed out flyers to people that had a 'Amelisweerd'-solidarity poster on their window. On top of that, the researchers recruited participants at

protests actions[1]. Here, the protesters could scan a QR-code to fill out the survey. Subsequently, the social contacts were asked to forward the questionnaire to people within their circle, which resulted in snowball sampling.

Procedure

The Qualtrics program was used to compile and administer the questionnaire. The questionnaire was administered online in the period March 29, 2023 to June 12, 2023. Completing the questionnaire took approximately 10-15 minutes. First, the participants had the opportunity to choose whether they wanted to fill out the questionnaire in Dutch or English. Then, an informed consent letter was shown in the chosen language (see Appendix B). In this it was explained that participation in the study is completely voluntary and that the results will be processed anonymously. In addition, it was explained that the participants could stop participating in the study at any time. When the participant agreed to this informed consent, the questionnaire started. This questionnaire consisted of several different concepts: social identification, general motivation, different types of perceived injustice, group based anger, feelings of trust in authorities and protest intentions. Each new subject was briefly explained, so the participants knew what to expect. Lastly, some demographics were asked (gender, age, group affiliation). After the questionnaire, there was a short debriefing. To compensate the participants for their effort and time, the researchers gave them the opportunity to choose an initiative, to which money would be donated on their behalf.

Measurements

To test the hypotheses of this study, several questionnaires were used (see Appendix C). To measure social identification, the Social Identification Questionnaire was used (Cronbach's $\alpha = .67$) (Van Stekelenburg, Klandermans & Van Dijk, 2011). This consisted of four items, regarding emotional significance, commitment, shared identity and involvement (e.g. 'I have much in common with other Amelisweerd protesters'). This last item was reverse coded. All items were measured on a seven point Likert scale.

To measure perceived injustice, two dimensions of the Unfairness Questionnaire were used ($\alpha = .69$, Jansma et al.). The 'police-mistreatment' dimension (3 items, $\alpha = .76$) about

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[1] Since there were no protest actions for Amelisweerd during the recruitment period, the researchers visited actions of related groups, such as Extinction Rebellion, Grootouders voor het Klimaat and End Fossil Occupy. In total, 5 separate protest actions were attended.

perceived unfairness inflicted by the Dutch police (e.g. 'The Dutch police treat me as an Amelisweerd protester differently from other protesters'). Next, the 'ecological' dimension of the Unfairness Questionnaire was used (3 items, $\alpha = .78$; e.g. 'I find it unjust that humans feel superior to plants, animals, and other organisms'). Both dimensions were measured on a seven point Likert scale.

To measure group-based anger, four items composed by van Zomeren et al. (2004) were used: 'thinking about the government's intentions to expand the A27 makes me feel angry/irritated/furious/displeased' (Cronbach's $\alpha = .60$; Van Stekelenburg, Klandermans & Van Dijk, 2011). This was measured on a five point Likert Scale, from *does not describe my feelings* to *clearly describes my feelings.*

Lastly, the willingness to participate in disobedient protest acts was measured using the Protest-Intentions Questionnaire (Jansma et al.). This scale consisted of 18 items, measuring legal, disobedient and violent protest intentions. A factor analysis was run to determine which items belonged to the 'disobedient protest intentions' subscale (9 items, $\alpha = .92$). The items were measured on a nine point Likert scale, from extremely unlikely to extremely likely (e.g. 'occupying a forest or a tree'). To see whether the expected subscale division can be found, the whole questionnaire consisting of 18 items was included in the survey (see appendix C).

Data-analysis

Statistical Package for the Social Sciences (SPSS) version 27 (2021) was used for the data-inspection and the data-analysis. After collecting the data, the assumptions of linearity, homoscedasticity, normality, absence of strong multicollinearity, uncorrelatedness of residuals and absence of outliers were checked. Two outliers were found using *Mahanalobis distance* and *standardized residuals.* Upon inspecting the answers of these outliers, a pattern was found with interchanging high and low scores on the same constructs. This indicates poor answer quality, which led to deletion of these two participants from the data set.

To test the multiple hypotheses PROCESS model 6, which is a serial sequential multiple mediator model, was used (Hayes, 2012). In this model, the independent variable was 'social identification', the dependent variable was 'willingness to participate in non-normative protest acts'. Mediator 1 was 'perceived injustice' and mediator 2 was 'group-based anger'. The number of bootstrap samples that were used was 5000. Direct effect results were interpreted using *p*-value, indirect effects were interpreted using a 95% confidence interval (CI). See figure 1 for a visual representation. To analyze the subgroup differences in an exploratory manner, an

ANOVA was run, using dummy variables to compare the means of different subgroup within the sample on social identification, disobedient protest and perceived injustice.

Results

Preliminary analysis

A confirmatory factor analysis was used to determine which factors were present in the Protest Intentions (PI) Questionnaire and the Unfairness Questionnaire (See Table 1 and Table 2). For the PI questionnaire, three factors were presumed (Jansma et al.). The expectation was to find: legal actions (items 1-6), disobedient actions (items 7-12) and violent actions (13-18). Of these scales, only disobedient protest intentions will be included in the analysis plan. After conducting the factor analysis, it appeared that items 6-15 loaded on one component (see table 1), meaning that those items appeared to measure the same construct. After looking at the items, it was decided to broaden the original 'disobedience' subscale, that originally involved 6 items (7-12). Item 6 was not included, since participating in a demonstration or protest march is theoretically considered to be a legal form of protest (Wright et al., 1990). Items 13, 14 and 15 that reflect damaging actions aimed towards objects (e.g. 'damaging a bulldozer') were included. It seemed these items were closely related to typically non-violent disobedient actions, such as blocking intersections. Items 16, 17 and 18 that reflect clearly violent actions aimed at people (e.g. 'scolding a police officer'), loaded on a third factor. Therefore, the Protest Intentions scale was broadened to include 'disobedient and damaging protest intentions'.

A factor analysis was run for the Unfairness Questionnaire (see table 2). This showed two distinctive components, similar to the expected 'Dutch police unfairness' subscale (items 1-3; e.g. 'I feel that the Dutch police do not guarantee my right to protest') and the 'ecological unfairness' subscale (items 4-6; e.g. 'I find it unjust that all this nature will be destroyed if the A27 gets expanded'). These expected subscales have been confirmed by the factor analysis and can be used to analyse the data.

Table 1

Confirmatory factor analysis Protest Intentions Questionnaire

Item	1	2	3
Legal actions			
1. attending an information evening	-0.056	**0.773**	-0.102
2. signing a petition	0.203	0.243	**-0.691**
3. handing out flyers	0.380	**0.581**	-0.260
4. participating in discussion meetings	0.012	**0.928**	0.081
5. participating in plenary meetings	-0.110	**0.954**	0.076
6. participating in a demonstration/protest march	**0.520**	0.408	-0.351
Disobedient actions			
7. disrupting events where responsible persons appear	**0.630**	0.271	0.226
8. blocking intersections	**0.911**	-0.169	-0.121
9. blocking entrances to buildings	**0.903**	-0.009	0.026
10. chaining or gluing yourself to an object, building or place	**0.808**	-0.202	0.129
11. occupying a (space in a) government or company building	**0.879**	0.094	0.019
12. occupying a forest or tree	**0.745**	-0.026	-0.172
Violent actions			
13. drawing graffiti on public, government or company property	**0.571**	0.078	0.034
14. damaging a bulldozer	**0.528**	0.095	0.466
15. cutting through a fence to reach an enclosed area	**0.652**	0.287	0.234
16. scolding a police officer	0.295	-0.014	**0.741**
17. physical attacks on the police	0.182	-0.162	**0.631**
18. visiting the home of responsible persons	-0.052	0.359	**0.658**

*Note: factor loadings in **bold** represent the highest factor loading for that item. N=50*

Table 2

Confirmatory factor analysis Unfairness Questionnaire

Item	1	2
Police Unfairness		
1. The Dutch police treat me as an Amelisweerd protester differently from other protesters	**0.725**	-0.095
2. I feel that the Dutch police do not guarantee my right to protest	**0.880**	-0.020
3. When I protest for the climate, the police treat me unfairly	**0.840**	0.125
Ecological Unfairness		
4. I find it unjust that humans feel superior to plants, animals, and other organisms	-0.178	**-0.869**
5. I find it unfair that trees, animals, and other organisms have no voice in the plans to expand the A27	-0.010	**-0.921**
6. I find it unjust that all this nature will be destroyed if the A27 gets expanded	0.312	**-0.698**

*Note: factor loadings in **bold** represent the highest factor loading for that item. N=50*

Correlation analysis

After checking the assumptions and performing factor analyses, a correlation analysis was run with all variables included in the analysis plan (see table 2). From this, a few things can be concluded. The variable *Social Identification* seems to have a significant weak to moderate correlation with *Police Unfairness*. *Ecological Unfairness* seems to have a significant moderate correlation with *Protest Intentions*. *Unfairness Combined* also has a moderate correlation with *Protest Intentions*.

In multiple cases, correlations were anticipated but did not emerge. The most notifiable one is *Anger*, which seems to have no correlations with any of the other variables. This means that this data will show no support for the hypotheses including *Anger* (hypotheses 5, 6, 7, 8 & 9). This, in combination with a low internal consistency (α = .60) led to the decision to run an exploratory analysis excluding *Anger* after conducting the main analysis.

The correlation table gives more insight into the relation between *Unfairness Combined* and the other constructs. It shows is that *Unfairness Combined* seems to have some different correlations than the two separate unfairness scales. The original plan was to only include the combined scale in the model. However, separating them and running an exploratory analysis might lead to more meaningful, nuanced results. The internal consistency of the scales were

also higher when separated than when tested together. This is another reason to use the separated scales instead of the combined scale in an exploratory analysis.

The correlation analysis showed some correlations for *Legal Protest*. This shows a significant correlation between *Legal Protest* and *Social Identification*, as well as a significant correlation between *Legal Protest* and *Police Unfairness.* Therefore it was decided to run an exploratory mediation analysis with *Social Identification* as the independent variable, *Legal Protest* as the dependent variable and *Police Unfairness* as the mediator.

Table 3

Correlation table

Variable	M	SD	1.	2.	3.	4.	5.	6.
1. Social Identification	5.71	.90	-					
2. Police Unfairness	5.94	1.62	.302*	-				
3. Ecological Unfairness	7.43	1.79	.005	.053	-			
4. Unfairness Combined	6.69	1.24	.201	.693**	.757**	-		
5. Anger	3.52	.85	.249	.073	.201	.193	-	
6. Disobedient and Damaging Protest Intentions	4.86	1.95	.007	.209	.387**	.416**	-.033	-
7. Legal Protest Intentions	7.22	.85	.347*	.408**	.073	.109	.320**	.368**

Note: correlations between Unfairness Combined and Police Unfairness or Ecological

Unfairness can be disregarded, since there is overlap in the scales.
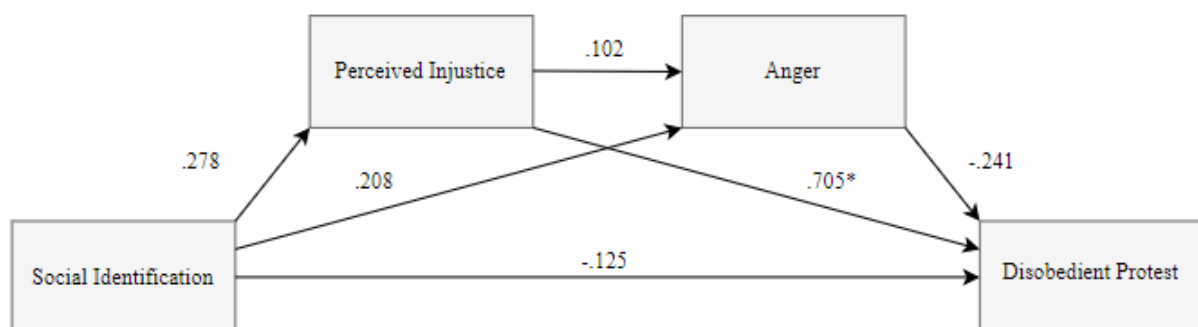
* $p < 0.05$

** $p < 0.01$

Main analysis: Mediation Model

The results of the original analysis plan, using Process model 6, were run and will be explained in this section (Hayes, 2012). The results of the direct effects in the mediation analysis showed that *Social Identification* did not predict *Disobedient and Damaging Protest Intentions, b*= -.13, *t*(50) = -.41, *p* = .682, 95% CI [-.734, .485]. Secondly, *Social Identification* did not predict *Unfairness, b*= .28, *t*(50) = 1.42, *p* = .162, 95% CI [-.116, .673]. The data shows that *Unfairness* did predict *Disobedient and Damaging Protest Intentions,* since the relation is positive and significant, *b*= .71, *t*(50) = 3.27, *p* < 0.005, 95% CI [.271, 1.139]. Next, *Social Identification* did not predict *Anger, b*= .21, *t*(50) = 1.54, *p* = .131, 95% CI [-.064, .481]. *Unfairness* also did not predict *Anger, b*= .10, *t*(50) = 1.05, *p* = .300, 95% CI [-.094, .299]. Sixthly, the data shows that *Anger* did not predict *Disobedient and Damaging Protest Intentions, b*= -.24, *t*(50) = -.76, *p* = .451, 95% CI [-.881, .398].

Lastly, three indirect effects were presumed. *Social Identification* did not predict *Disobedient and Damaging Protest Intentions*, indirectly through *Unfairness*, a_1b_1= .196, *SE* = .155, 95% CI [-.015, .573]. *Social Identification* did not predict *Disobedient Protest* indirectly through *Anger*, a_2b_2= -.050, *SE* = .075, 95% CI [-.226, .074]. *Social Identification* also did not predict *Disobedient and Damaging Protest Intentions* indirectly through *Unfairness* and *Anger*, a_1db_2= -.007, *SE* = .023, 95% CI [-.075, .013]. The direct effect of *Social Identification* on *Disobedient Protest,* controlled by the indirect effects of *Unfairness* and *Anger* was also insignificant, *c=-.13*, *SE* = .303, *t*(50) = -.41, *p* = .682, 95% CI [-.734, .485]. The observed data mostly did not correspond to the predicted trends. None of the hypotheses, except for hypothesis 3, were supported by the data.

Figure 2

*Results filled out in the conceptual model.*

*= p < 0.005

Exploratory analysis: Mediation Model

The results of the exploratory analysis are as follows. *Social Identity* significantly predicted *Police Unfairness, b* = .55, *t*(50) = 2,19, *p* < 0.05, 95% CI [.045, 1.049]. *Social Identity* did not significantly predict *Legal Protest, b* = .39, *t*(50) = 1.82, *p* = 0.07, 95% CI [-.039, .824]. *Police Unfairness* had a significant relation with *Legal Protest, b*= .29, *t*(50) = 2.47, *p* < 0.05, 95% CI [.055, .530]. *Social Identification* predicted *Legal Protest* indirectly through *Police Unfairness, ab* = .16, *SE* = .11, 95% CI [.010, .418]. The total effect of the model was significant, *ab*= .55, *t*(50) = 2.57, *p* < 0.05, 95% CI = .120, .985.

Figure 3

Results of the exploratory mediation filled out in a model.
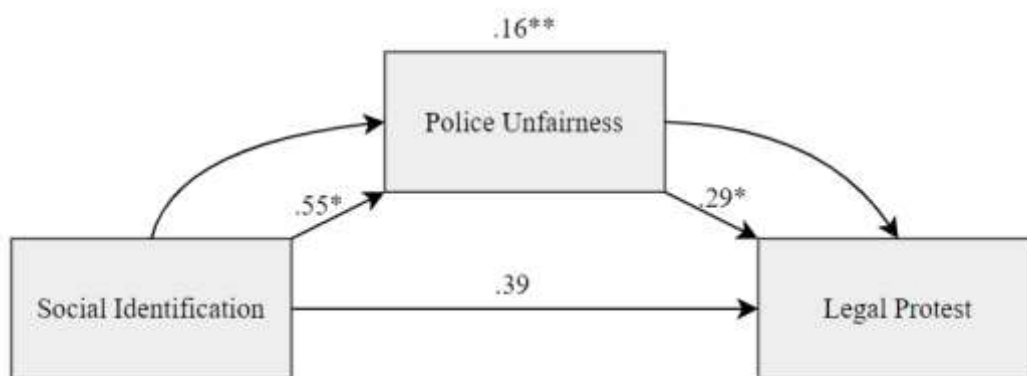
* p < 0.05
** 95% CI [.010, .418]

Exploratory analysis: Group Differences

Lastly, the means of different groups on *Disobedient and Damaging Protest, Social Identification* and *Unfairness* were compared (see Appendix D). Since there are large differences in group sizes, and participants were able to choose more than one group, an ANOVA model was run comparing people who identified with a group vs. people who did not identify with that group. This was done by creating dummy variables (0 = not part of the group, 1 = part of the group). By running all groups in the same model, overlap in group membership was corrected. All groups were included in the analysis, only the results of the largest groups are reported here These are: Amelisweerd niet Geasfalteerd (AnG), Greenpeace (Gp), Extinction Rebellion (XR), Milieudefensie (Md). The results can be found in Appendix D.

Discussion

In the current research, a survey study was conducted consisting of 50 people who felt involved in the Amelisweerd protest movement. Building on the SIMCA model of Van Zomeren et al. (2008), the objective was to find relations between climate activists' social identity, perceived injustice, anger and willingness to participate in disobedient protest acts. To test this, we focused on Amelisweerd as a case study. We included anger in the SIMCA model, because previous research on the climate activist movement Extinction Rebellion showed that anger was a factor involved in the relation between social identification and perceived injustice (Furlong & Vingoles, 2021). The current research aimed to test whether this relation exists for a subcategory of collective action, namely disobedient protest intentions. However, this study was unable to find a similar result. The results did show some evidence for a relationship between the perceptions of injustice and disobedient protest intentions of the Amelisweerd protesters that participated in this study.

Perceived Injustice and Disobedient Protest

An expected relation that was found in the data, was the relation between perceived injustice and disobedient protest. This is in line with the findings of previous research, in which a relation was found between perceived injustice and collective action (Van Zomeren et al., 2008; Furlong and Vingoles, 2021). Jansma et al. also found this relation in their qualitative research, since injustice was a motivator for collective action mentioned by all climate activists in the study. The finding of the current study implies that, within the Amelisweerd movement, people who perceive more injustice, could also be more likely to participate in collective action in the form of civil disobedience. Consequently, this finding means that the existing bank of research on the relation between collective action and perceived injustice could be expanded to include disobedient protest as a specific type of collective action. As a practical implication, this could mean that when trying to mobilise people for civil disobedience, the Amelisweerd movement could address the experienced injustice to motivate possible 'forest protectors'.

Although the present study failed to find evidence for a mediating role of perceived injustice in general, we did find that identification with Amelisweerd indirectly predicted legal protest intentions via perceived unfair police treatment. This means that people who socially identify themselves with the Amelisweerd movement are motivated to participate in legal protest, through their perceptions of unfair police treatment. This might be explained by the history of the Amelisweerd movement with the police. Forty years ago, activists occupied the forest to stop the A27 highway from being built, but they were forcefully removed by the police

(Buiter, 2006). This experienced past unfairness could be a motivator for the current movement to take legal forms of collective action.

Social Identification and Different Types of Protest

Social identification did not seem to have the presumed relation with disobedient actions according to the data in the current study. The prediction was that respondents who socially identified with the Amelisweerd movement would be more willing to participate in disobedient protest acts. This seems to contradict the findings of Van Zomeren et al. (2008), since the SIMCA model states that social identification is one of the most important predictors of collective action.

A reason that the current study did not find the same effect could be due to the subgroups present in the Amelisweerd movement. The sample existed of people who identified with multiple different subgroups; all of these subgroups could have different norms regarding protest intentions. As mentioned before, Amelisweerd niet Geasfalteerd explicitly calls out for civil disobedience on their website (Amelisweerd niet Geasfalteerd, n.d.), while other groups might have different protest strategies. Therefore, an overlapping social identity of the Amelisweerd movement might not successfully predict disobedient protest, since there is too much subgroup difference. The current study explored some of the differences between these subgroups (see Appendix D). Here we found that Extinction Rebellion showed significantly lower willingness to participate in disobedient protest than people who did not belong to Extinction Rebellion. This is an interesting finding, since civil disobedience is a key part of this movement's strategy, which is not in line with the findings of the current study (Extinction Rebellion, n.d.). This is the only significant group difference we found for disobedient protest intentions. However, this does support the statement that group norms about civil disobedience might differ between subgroups. To gain valuable insights into the connection between social identification and the willingness to engage in disobedient protest within the Amelisweerd movement, future research should consider the diverse subgroups involved. One promising approach is to conduct observational research that examines the behaviors exhibited by various protest groups during Amelisweerd protests. Participants affiliated with specific protest groups often visually represent their association through carried or worn items, facilitating easy identification. By systematically coding and categorizing their protest behaviors, it becomes possible to analyze and compare the differences in protest intentions among these groups.

The exploratory analysis shows that legal protest, contrary to disobedient protest, does correlate with social identification, supporting the findings of Van Zomeren et al. (2008). This

means that when people socially identify with the Amelisweerd protest group more, they would also be more willing to participate in legal protest. This can be a nuance on the existing SIMCA model: social identification does have a relation with collective action, but within the Amelisweerd movement this relation can only be found when it concerns legal collective action, according to the current study. These different relations for legal protest and disobedient protest with social identification could be explained through a feeling of success. The plans to broaden the A27 have been postponed, which the Amelisweerd movement could perceive as a success, because this aligns with their activist goals to preserve the Amelisweerd forest. Therefore, people who identify strongly with the movement might experience this success as well. Research has shown that a history of success using normative protest actions lowered the support for more radical tactics, such as civil disobedience (Louis et al., 2022). The notion that the Amelisweerd movement could currently be on the 'winning side', makes their need for more radical steps less necessary. Similarly, failed radical protest acts can lead to less support of those acts and more support for conventional protest acts (Louis et al., 2022). The Amelisweerd-case is interesting in that sense, because 40 years ago, the protest actions failed and the A27 highway was built at the cost of hundreds of trees. Back then, civil disobedience was used as a tactic: protesters collectively tied themselves to the trees to protect them. This experienced failure might have influenced the Amelisweerd supporters to use more conventional methods now.

Anger

Anger does not seem to be related to any of the other constructs in the current study. This is not in line with the findings of Furlong & Vingoles (2021). A reason that the current study could not find any evidence suggesting that anger could play a role in the current study might be due to the fact that anger could be perceived as an undesirable emotion that needs to be treated with caution and control (Stearns, 1994). Since the current study used a self-report scale, it could be that participants were influenced by societal norms and therefore might not have truthfully reported their emotions (Donaldson & Grant-Vallone, 2002). This might be especially true for climate activists. It is not uncommon for climate activists to be portrayed in a certain way by the media. This can include labels like 'angry', 'radical', or 'extremist' (Van Schoonhoven, 2023). Such portrayals often result from negative media framing. Activists might be aware of this and might want to correct this, influencing them to report lower levels of anger.

Literature shows that anger is a powerful driver of activism, since it is related to action tendencies. However, burnout and internal conflict can also be the effect of anger in activism,

potentially contributing to the decline of the movement (Kleres & Wettergren, 2017; Gould,2009; Summers-Effler, 2007). This might be a reason why anger is expressed differently in contemporary protest. Wettergren (2009) states that activists using civil disobedience effectively manage their anger by redirecting it into humorous, ambivalent, and "silly" forms of protest, which pose a challenge to the opposing party. This humorous approach is also seen in the protest acts visited by the researchers. At the A12 blockade, water cannons were deployed, but the activists reacted to this by dancing in swimsuits. End Fossil Occupy also used 'fun' tactics in their occupation of the University of Utrecht, by calling it a 'festival' and organising clothing swaps and workshops. The rise of these kinds of protests could mean that emotions other than anger play a larger role in climate protest and as an outing for perceived unfairness. Thus future studies could look into the role of 'fun in protest' within the Amelisweerd movement.

Limitations

The main limitation of the current study is that is has a small sample size. This resulted in a low statistical power. A low power means that the chance of a Type II error will be high, which means that even if there are genuine effects present, the study may fail to identify them, leading to missed opportunities for scientific discovery or practical implications. A low power also indicates reduced generalizability, meaning that the findings might not be representative of the broader population.

Another limitation is that a low internal consistency was measured on the anger questionnaire. The majority of the participants answered the questionnaire in Dutch, which means that the original items were translated. Even though this was carefully done, this might have given them a slightly different meaning. In order to get a more valid result, either a different, originally Dutch questionnaire could be used, or the questions could be posed in English.

Conclusion

In conclusion, most effects in the SIMCA model, as well as the effect of anger, could not be replicated by the current study. However, the current study did find support for the relation between perceived injustice and willingness to participate in disobedient protest acts. The relation between social identification, perceived police injustice and willingness to participate in legal protest that was found in this study supports the perceived injustice pathway of the SIMCA model (Van Zomeren et al., 2008). Future research could focus more on the role

of subgroup differences within the Amelisweerd movement. Overall, perceived injustice seems to play a role in both legal protest as in disobedient protest. For the Amelisweerd movement this means that injustice appraisals could be useful to motivate people for collective action and in some cases even for civil disobedience. By mobilizing more people to join the protests for Amelisweerd, pressure might be exerted on the government to reconsider their plans to expand the A27 highway. This would be a significant stride forward, which could pave the way for continued protection of the Amelisweerd forest.

References

Becker, J. C., & Tausch, N. (2015). A dynamic model of engagement in normative and non-normative collective action: Psychological antecedents, consequences, and barriers. *European Review of Social Psychology, 26*, 43–92. DOI: 10.1080/10463283.2015.1094265

Buiter, H. (2006). De strijd om een stadsbos: 25 jaar na de Slag bij Amelisweerd. *Oud-Utrecht: Tijdschrift voor Geschiedenis van Stad en Provincie Utrecht, 79,* 150-155.

Christensen, P.N., Rothgerber, H., Wood, W., & Matz, D.C. (2004). Social norms and identity relevance: A motivational approach to normative behavior. *Personality and Social Psychology Bulletin, 30,* 1295–1309. Doi: 10.1177/0146167204264480

Clayton, S. D. (1992). The experience of injustice: Some characteristics and correlates. *Social Justice Research, 5*, 71-91. DOI: 10.1007/BF01048378

Crosby, F. J. (1976). A model of egotistical relative deprivation. *Psychological Review, 83*, 85–113. DOI: 10.1037/0033-295X.83.2.85

Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding self-report bias in organizational behavior research. *Journal of business and Psychology, 17,* 245-260.

Feddes, F., de Lange, M., & te Brömmelstroet, M. (2020). Hard work in paradise. The contested making of Amsterdam as a cycling city. In *The Politics of Cycling Infrastructure*, 133-156. Policy Press.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117–140.

Folger, R. (1987). Reformulating the conditions of resentment: A referent cognition model. In J. C. Masters & W. P. Smith (Eds.), *Social comparison, social justice, and relative deprivation* (pp. 183–215). London: Erlbaum.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]. Retrieved from http://www.afhayes.com/public/process2012.pdf

Jansma, A., Van den Bos, K., & De Graaf, B. A. (2023). *Climate Rebels: How Unfairness Perceptions and Trust in the Police Predict Protesters' Willingness to Engage in Disruption*. [Unpublished manuscript]. Psychology, Utrecht University.

Kleres, J., & Wettergren, A. (2017). Fear, hope, anger, and guilt in climate activism, *Social Movement Studies, 16*, 507-519. DOI: 10.1080/14742837.2017.1344546

Leach, C. W., Iyer, A., & Pedersen, A. (2006). Anger and guilt about ingroup advantage explain the willingness for political action. *Personality and Social Psychology Bulletin, 32*, 1232-1245. DOI: https://doi.org/10.1177/0146167206289729

Rawls, J. (1971). *A theory of justice*: Revised edition. Belknap Press.

Rijkswaterstaat & Ministerie van Infrastructuur en Waterstaat. (2023b, februari 28). A27/A12: Tracébesluit Ring Utrecht 2022 vastgesteld en ter inzage gelegd. *(Rijkswaterstaat & Ministerie van Infrastructuur en Waterstaat, 2023)*. https://www.rijkswaterstaat.nl/nieuws/archief/2022/08/a27-a12-tracebesluit-ring-utrecht-2022-vastgesteld-en-ter-inzage-gelegd

Roeser, S. (2012). Risk communication. Public Engagement, and Climate Change: A Role for Emotions, *Risk Analysis , 32*, 1033–1040. DOI: https://doi.org/10.1111/j.1539-6924.2012.01812.x

Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science, 8*(4), 379–386. https://doi.org/10.1177/1948550617715068

Smith, H. J., & Ortiz, D. J. (2002). Is it just me? The different consequences of personal and group relative deprivation. In I. Walker & H. J. Smith (Eds.), *Relative deprivation: Specification, development, and integration* (pp. 91–115). Cambridge, England: Cambridge University Press.

Stouffer, S. A., Suchman, E. A., De Vinney, L. C., Star, S. A., & Williams, R. M. (1951). *Studies in Social Psychology in World War II. Vol. I: The American Soldier: Adjustment during Army Life*. Princeton Univ. Press.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of inter-group conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of inter-group relations* (pp. 33–47). Monterey, CA: Brooks/Cole

Thomas, E. F., Mavor, K. I., & McGarty, C. (2012). Social identities facilitate and encapsulate action-relevant constructs: A test of the social identity model of collective action. *Group Processes & Intergroup Relations, 15*, 75–88. Doi: 10.1177/1368430211413619

Troost, D. V., Stekelenburg, J. V., & Klandermans, B. (2013). Emotions of protest. In *Emotions in politics* (pp. 186-203). Palgrave Macmillan, London.

Van Schoonhoven, G. (2023, 7 juni). Waarom Extinction Rebellion achter aaibare facade echt heel radicale club is. *EWMagazine.* *https://www.ewmagazine.nl/nederland/opinie/2023/06/kritiek-op-extinction-rebellion-47466w/*

Van Stekelenburg, J., Klandermans, B., & Van Dijk, W. W. (2011). Combining motivations and emotion: The motivational dynamics of collective action participation. *Revista de Psicología Social, 26*, 91-104. doi: 10.1174/021347411794078426

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*, 504–535. https://psycnet.apa.org/doi/10.1037/0033-2909.134.4.504

Van Zomeren, M., Spears, R., Fischer, A. H. & Leach, C. W. (2004). Put your money where your mouth is! Explaining protest tendencies through group-based anger and group efficacy. *Journal of Personality and Social Psychology, 87*, 649-664. doi: 10.1037/0022-3514.87.5.649

Walker, I., & Smith, H. J. (2002). *Relative deprivation: Specification, development, and integration*. Cambridge, England: Cambridge University Press.

Wettergren, A. (2009). Fun and Laughter: Culture Jamming and the Emotional Regime of Late Capitalism. *Social Movement Studies, 8*, 1-0. DOI: 10.1080/14742830802591119

Wright, S. C., Taylor, D. M., & Moghaddam, F. M. (1990). Responding to membership in a disadvantaged group: From acceptance to collective protest. *Journal of Personality and Social Psychology, 58*(6), 994–1003. https://doi.org/0O22-3SI4/9O/S00.75

Appendix A: Recruitment Poster

Appendix B: Informed Consent Letter

Dear participant,

Thank you for your interest in our research. In this study, we will examine what motivates people to protest against the government's plans to expand the A27 motorway, which will result in the loss of part of Amelisweerd. Our goal is to gain more insight into different motivations of protesters, such as their sense of commitment to the environmental movement, experiences with injustice, and emotions like anger. We study different types of protest, ranging from conventional methods such as protest marches to actions that involve civil disobedience such as chaining yourself to a tree.

The questionnaire will take about 10 to 15 minutes to complete. We kindly ask you to fill out the survey completely, otherwise we will not be able to use your answers in our research. As compensation for your time and effort, we offer you the opportunity to make a small donation to charity at the end of the survey.

Participation in this survey is completely voluntary and without obligation. You can choose to stop at any time without giving a reason. The Faculty Ethics Review Committee (FETC) has approved this study for ethical aspects. Research data will be carefully stored according to the guidelines of European privacy legislation (General Data Protection Regulation). Your data will be used only for research purposes and will be made available to other researchers. The retention period for data is 10 years.

This study is part of the PhD dissertation of Amarins Jansma, a doctoral researcher working in the Psychology department of Utrecht University. The findings of this research will be presented in the form of a scientific publication. Manoah de Haan conducts her master's thesis research under the supervision of Amarins Jansma.

We want to thank you in advance for your participation.

Kind regards,

Amarins Jansma & Manoah de Haan

Do you have any questions or comments? Please contact the principal investigator: a.jansma@uu.nl
Do you have any complaints? Please contact the FETC: klachtenfunctionaris-fetcsocwet@uu.nl

Appendix C: Research Questionnaire

Block 1 – Social Identification Questionnaire (van Stekelenburg, Klandermans & Van Dijk, 2011)

The following statements are about your involvement in the Amelisweerd protest movement. Please fill out the extent to which you identify with this movement.

<insert scale: 1 (not at all) to 7 (very much)>

1. I like being part of the Amelisweerd protest movement
2. I feel committed to the Amelisweerd protest movement
3. I have much in common with other Amelisweerd protesters
4. I do not feel involved in the Amelisweerd protest movement (R)

Block 2 – Unfairness questionnaire (Jansma, unpublished manuscript)

The next few questions are about views on the Dutch police and ecological matters. The first three statements are about parties that have power, such as the Dutch police. Select the answer that best reflects the extent to which you agree or disagree with each statement.

<insert scale: strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, strongly agree >

<Dutch police>

1. The Dutch police treat me as an Amelisweerd protester differently from other protesters
2. I feel that the Dutch police do not guarantee my right to protest
3. When I protest for the climate, the police treat me unfairly

The last three statements deal with ecological issues, such as the impact of climate change on ecosystems (the totality of plants, animals, and other organisms in a given environment).

<ecological injustice>

4. I find it unjust that humans feel superior to plants, animals, and other organisms
5. I find it unfair that plants, animals, and other organisms have no voice in the plans to expand the A27 highway
6. I find it unjust that all this nature will be destroyed if the A27 gets expanded

Block 3 – Group based anger (van Stekelenburg, Klandermans & Van Dijk, 2011)

The following statements are about the extent to which you feel discontented with the governments decision to broaden the A27.

<Insert scale: 1 (not at all) – 7 (very much)>

Thinking about the governments intentions to broaden the A27 makes me feel:

1. angry
2. irritated
3. furious
4. displeased

Block 4 – Protest intentions questionnaire (Jansma, unpublished manuscript)

*The statements below are about your **involvement in climate protests**. Please indicate on the scale below, how likely it is that you would do the following actions in the future.*
< Extremely unlikely, Moderately unlikely, Slightly unlikely, Neither likely nor unlikely, lightly likely, Moderately likely, Extremely likely >

Legal actions
1. attending an information evening
2. signing a petition
3. handing out flyers
4. participating in discussion meetings
5. participating in plenary meetings
6. participating in a demonstration/protest march
Disobedient actions
7. disrupting events where responsible persons appear
8. blocking intersections
9. blocking entrances to buildings
10. chaining or gluing yourself to an object, building or place
11. occupying a (space in a) government or company building

12. occupying a forest or tree
Violent actions
13. drawing graffiti on public, government or company property
14. damaging a bulldozer
15. cutting through a fence to reach an enclosed area
16. scolding a police officer
17. physical attacks on the police
18. visiting the home of responsible persons

Appendix D: Exploratory analysis output

Variable	Estimate	*SE*	*t*	*p*
Social Identification				
Intercept	5.729	.317	18.10	.000**
AnG	.565	.315	1.78	.081
Gp	-.245	.342	-.72	.479
XR	-.348	.289	-1.17	.250
Md	-.586	.367	-1.59	.120
Unfairness	Estimate	*SE*	*t*	*p*
Intercept	6.230	.462	13.481	.000**
AnG	1.053	.460	2.29	0.028*
Gp	-.224	.500	-.45	0.656
XR	0.053	0.434	.122	0.904
Md	0.120	0.536	.22	.825
Disobedient & Damaging Protest Intentions	Estimate	*SE*	*t*	*p*
Intercept	4.366	.626	6.97	.000**
AnG	0.686	.623	1.10	.278
Gp	-.607	.677	-.90	.376
XR	-1.277	.589	-2.17	0.037*
Md	1.125	0.727	1.55	0.131

*$p < 0.05$

**$p < 0.001$