

RESEARCH ARTICLE

The Importance of Negative Emotions Toward the French Government in the Yellow Vest Movement

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The Yellow Vests (YV) movement stands out because of its length and its unusual violent outbursts. This paper aims to better understand the emotional path underlying YVs' intention to engage in more or less radical collective action. To this end, we opposed two models: one based on Becker and Tausch's (2015) model of engagement in collective action – whereby only contempt is supposed to predict radical collective action – and one based on Matsumoto, Frank and Hwang's (2017) ANCODI hypothesis – according to which anger, contempt and disgust as a whole are supposed to predict radical collective action. We assumed that support for the YVs' demands would be associated with negative emotions (i.e., anger, contempt and disgust) towards the government which in turn would foster behavioral intentions in favor of YV. The results (Study 1, $N = 677$; Study 2, $N = 738$) confirmed this hypothesis and also showed that the model in which negative emotions (i.e., anger and contempt) are treated separately (i.e., Becker and Tausch's model) presented a better fit with the data. Taken together, these results suggest that negative emotions towards the French president and his government have a key role in understanding the Yellow Vests mobilization.

Keywords: Yellow Vests; Radicalism; Negative Emotions; Disgust; Anger; Contempt; Collective Action**Introduction**

The Yellow Vest (YV) movement appeared in France in October 2018 in response to an increase in fuel taxes. Starting in November 2018, YVs were particularly active on roundabouts in rural or peri-urban areas and began to protest every Saturday. Urban clashes (e.g., breaking store windows, setting fire to cars) quickly emerged, suggesting the 'radical' tendencies – i.e., a willingness to engage in violent and illegal political actions (Moskalenko & McCauley, 2009) – of some YV protesters. On the other side, police repression was also violent. Between November and July 2019, yellow vest rallies resulted in approximately 11,000 people in police custody and around 3,000 convictions (Ministry of Justice) and thousands of YV protesters were wounded, including twenty-four lost eyes and five hands blown off (Dufresne, 2019). France had not experienced such brutality from both sides since May 1968. Because of its duration, scale and the sometimes violent protests, the YV movement represents an unusual social phenomenon that this article aims to better understand.

The socio-demographic portraits that can be drawn of the movement's support refer to individuals being mostly

abstentionists or populist voters (right-wing populism for Marine Le Pen and left-wing populism for Jean-Luc Mélenchon) who live below the French median income (Algan et al., 2019; IFOP, 2019). Moreover, the largest rallies took place in regions where the distance between home and work is significant, without public transport alternatives (Boyer et al., 2020). Social psychology research has also identified certain causes of the movement. For example, Jetten, Mols, & Selvanathan (2020) suggested that the YV movement was triggered by the perception of significant socio-economic inequalities, which foster categorization in terms of income – opposing groups with little or no possessions to wealthy ones – therefore strengthening stereotypes and ingroup bias. Moreover, the YV's support for violent collective action seems to be fostered by feelings of loss of significance, through increased feelings of anomia (Mahfud & Adam-Troian, 2019); but also, by the violent police repression (Mahfud & Adam-Troian, in press). These different works agree in considering frustration as a trigger for supporting or carrying out the YVs' radical collective actions. More specifically, this frustration seems related with the socio-economic inequalities that led to the emergence of the movement; but also with the fact that the President and the French government are not taking their requests and demands into account (Jetten et al., 2020).

To better understand the emotional motivations behind peaceful and more radical YV actions, we opposed two

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existent models of collective action, that address two distinct emotional paths leading to political radicalism: the model of engagement in normative and non-normative collective action (Becker & Tausch, 2015) and the ANCODI model (Matsumoto, Frank & Hwang, 2017).

Determinants of Radical Action: The Role of Emotions

The scientific literature has highlighted several factors that could lead to radical collective action. According to Moghaddam (2005), the feeling of being ignored increases dissatisfaction and might motivate people to go through different stages of the radicalization process. Indeed, when someone is excluded from the political system, they can believe that engagement in violent action is the only viable political option (Kamans et al., 2010; Schwarzmantel, 2010). Extant studies also showed that perceived injustice, a sense of dispossession and lack of control over government action, as well as a lack of trust in the political system, can lead to negative reactions and radical action (Becker & Tausch, 2015; Kamans et al., 2011; Hooghe & Marien, 2013).

When studying this radicalization process, emotions are highly relevant, since they are *accelerators*, promoting the transition between evaluations and action (van Stekelenburg & Klandermans, 2007). Indeed, emotions provide motivations for action (Tomkins, 1963) and therefore drive actions aimed at changing an uncomfortable situation (Roseman, 1984; Lazarus, 1991a). As suggested by van den Bos (2020), 'the study of emotions can play a pivotal role in our understanding of the linkage between perceptions of unfairness and core components of radicalization' (p.577). Several studies have already examined the relationships between emotions and radical collective action and have shown that negative emotions mediate the relationship between the perception of unfairness and radicalism (Tausch et al., 2011; Van den Bos 2020). However, there is no consensual agreement in the literature as to which specific negative emotion is at stake in this process. Indeed, some authors argue that radicalism is associated with an emotional cocktail of anger, contempt and disgust (Matsumoto et al., 2017), while others identify contempt as the core emotion in violent collective action (Becker & Tausch, 2015).

In their model of engagement in normative and non-normative collective action, Becker and Tausch (2015) have shown that injustice appraisals are associated with anger and contempt. However, anger is supposed to lead to normative collective action while contempt leads to non-normative action. Finally, collective action may result in several outcomes such as self-directed emotions (e.g., joy, happiness), achievement-related emotions (e.g., pride in success, anger about failure), a decrease in identification with the broader group, increased politicized identification, etc.

In the ANCODI model (Matsumoto et al., 2017), when anger, contempt and disgust (ANCODI) are directed against an outgroup, these negative emotions motivate hostility and violence towards that group. According to this model, expressions of anger predict non-violent collective actions (e.g., peaceful civil disobedience, demonstrations) while

contempt and disgust are linked to violent actions against the outgroup, its devaluation and finally, its elimination. Like charcoal, sulfur and potassium nitrate, the ANCODI combination can be a dangerous explosive mix (Rozin et al., 1999). Unlike Becker and Tausch (2015) who believe that contempt leads to violence while anger leads to more peaceful actions, Matsumoto et al. (2017) state that it is the combination of anger, contempt and disgust that leads to radicalism.

Moskalenko and McCauley (2009) suggested a distinction between radicalism (i.e., illegal and violent political action) and activism (i.e., legal and non-violent political action), these factors being considered as correlated, yet clearly separate. Such definitions are close to the distinction made by Wright et al. (1990) which oppose actions that conform to the norms of the existing social system (i.e., normative actions) to actions that violate these rules (i.e., non-normative actions), such as violence or terrorism. In this paper, in order to be able to compare the ANCODI model (Matsumoto et al., 2015) and the model of engagement in collective action (Becker & Tausch, 2015), we used the word 'activism' as a substitute for 'normative action', and 'radicalism' as a substitute for 'non-normative action'.

Group-Based Emotions

The role of emotions in collective actions can be more clearly understood through Intergroup Emotion Theory (IET), which has provided a body of empirical evidence on the role of group membership in the process underlying the emergence of emotional states (Kuppens & Yzerbyt, 2012; Mackie et al., 2008; Smith, 1993). The IET articulates the Social Identity Theory (Tajfel & Turner, 1986) and appraisal theories of emotions (Lazarus, 1991b). According to IET, people experience different emotions when they perceive themselves as an individual vs. as a member of a group (i.e., shifting from the pole of personal identity to social identity: depersonalization process). When the social pole of identity is salient, individuals make an evaluation of the environment based on the characteristics of their salient group membership (Tajfel, 1978). It is the consequence of this evaluation that produce an emotional reaction, and the behaviours that result from it (Smith & Mackie, 2015). Because of this group-based appraisal, these emotions are called Group Based Emotions (Kuppens & Yzerbyt, 2014; Niedenthal & Brauer, 2012; Smith & Mackie, 2015). Individuals experience these Group Based Emotions even in the absence of other group members (Smith & Mackie, 2015), or even when the event or object being appraised does not impact them personally (Doosje et al., 1998; Smith & Mackie, 2015).

Thus, depending on the situation and the group with which the individual is going to self-categorize, he or she will experience emotions specific to the salient group membership (Yzerbyt et al., 2003). Beyond self-categorization, ingroup identification (Turner et al., 1987) also impact the emotional appraisal process. When individuals strongly identify with a group, they will adopt the prototypical characteristics of the group; so within a group, emotional reactions are shared (Kuppens & Yzerbyt, 2012; Smith & Mackie, 2015).

In this paper, we aimed to examine the role of emotions in the YV movement by comparing two models explaining different emotional paths to radicalism. Because negative emotions predict collective action against a political enemy, they seem to be a fundamental consideration when examining the YV movement. Indeed, one can assume that supporting the YVs' demands may increase identification with this group and therefore increase the probability of experiencing negative emotions towards Emmanuel Macron and his government – since the YV movement started in reaction to their policy.

Moreover, Emmanuel Macron's responses to the social crisis may have had a violence-inducing effect. According to Berkowitz (1989), 'frustrations are aversive events and generate aggressive inclinations only to the extent that they produce negative effect' (p. 71). Frustrating events can be perceived as short-term stressors that can supply an immediate motive for violence (Ferguson et al., 2008). In the YV movement context, perceiving that Emmanuel Macron and his government would not meet the YVs' demands may have caused frustration and motivation for violence within the movement. Furthermore, previous research showed that experiencing humiliation fostered violent behavioral intentions in favor of the YV movement (Mahfud & Adam-Troian, 2019). The government's rejection of the YVs' demands could have been perceived by the supporters of the movement as an additional humiliation, prompting even more violent collective action. In other words, by refusing to accede to YVs' requests, the government could have created a situation that fosters the transformation of negative emotions into radical collective actions. Hence, we assumed that the relationship between negative emotions and the behavioral intentions will be stronger for participants who believe that Emmanuel Macron and his government will not meet the YVs' demands.

Overview of the Present Research

We examined whether people's support for the YV demands was associated with negative emotions (i.e., anger, contempt and disgust) towards Emmanuel Macron and his government, therefore fostering support for radical action in favor of the YVs. To better understand the emotional motivations behind the more or less radical mobilization of YVs, we opposed two existent models of collective action: the ANCODI model (Matsumoto et al., 2017) and Becker and Tausch's model (2015; called the 'BT Model' in this paper). In both models, support for YV demands was associated with negative emotions towards Emmanuel Macron and his government. However, in the ANCODI model, anger, contempt and disgust were treated as a whole: the ANCODI variable, supposed to foster radical collective action; while in the BT model, the emotions (anger and contempt) were treated separately, as only contempt should predict radicalism.

We conducted two studies. The first one followed a correlational design while the second aimed to replicate and extend the results of Study 1, by manipulating the perception of the government's opposition (vs. acceptance) to the yellow vest movement's demands.

Study 1

This first study aimed to provide preliminary evidence of the relationship between support for the YVs' demands, negative emotions towards the government and actions in favor of the YVs.

Since we aimed to compare two models, we only made global hypotheses. For both models, we expected negative emotions to explain the relationship between support for the YVs' demands and behavioral intentions (*mediation hypothesis*). Moreover, we expected to observe an interaction between the negative emotions and the perception that the government would not meet the YVs' claims: the link between negative emotions and behavioral intentions should be stronger for participants perceiving Emmanuel Macron and his government's actions as an obstacle to the group's (i.e. the YV movement) interests (*moderated mediation hypothesis*).

Both models predict different emotional paths to radicalism. In the ANCODI model, anger, contempt and disgust – as a whole – are supposed to predict radicalism, not activism. In the BT model, anger is supposed to predict activism, while contempt is supposed to predict radicalism.

Method

Population and Procedure

The data was collected via an online study shared on social media during February 2019, when the movement was regaining strength after a decline in mobilizations following the Christmas holidays. Since our study took place while the movement was still in progress, opinions about it could change at any time. Therefore, we simply tried to get as many French participants as possible in a single week in order to have consistent data. The data collection reached 711 participants (79.63% women, $M_{age} = 32.80$, $SD_{age} = 14.11$, $min = 0$, $max = 88$). We excluded participants who were not French and those who were under 18 years of age (the legal age in France). The final sample was composed of 677 French participants (77.55% women $M_{age} = 32.90$, $SD_{age} = 13.94$, $min = 18$, $max = 76$). After reading a text that briefly described the study, participants completed sociodemographic information (e.g., age, gender, primary language, nationality). Then, they were invited to fill out the scales described in the measures section, in the same order of appearance.

Measures

For every scale, participants were invited to indicate their level of agreement with the statements, using a scale ranging from 1 (= Strongly disagree) to 7 (= Strongly agree). Descriptive statistics and correlations are displayed in **Table 1**. The items are available on https://osf.io/sze37/?view_only=b57921595d9e4232b9eed1f627d149b5.

Support for the YVs' demands

Four items were used to assess participants' support for YVs' demands (e.g., I support the establishment of the Citizen's Initiative Referendum). We computed a mean score combining the four items ($\alpha = 0.77$); higher scores indicated higher support for the YVs' demands.

Table 1: Descriptive statistics, correlations, and Cronbach's Alphas (Study 1).

	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	1.	2.	3.	4.	5.	6.	7.
1. Age	32.9	13.9	18	76	—						
2. Support for the YVs' demands	5.40	1.50	1	7	0.21***	0.77					
3. Perception of the government's intentions	2.19	1.07	1	7	-0.27***	-0.19***	0.74				
4. Anger	4.87	2.22	1	7	0.26***	0.63***	-0.25***	—			
5. Disgust	4.77	2.26	1	7	0.21***	0.59***	-0.29***	0.76***	—		
6. Contempt	4.51	2.33	1	7	0.20***	0.59***	-0.26***	0.74***	0.69***	—	
7. Behavioral intentions	3.25	2.02	1	7	0.37***	0.66***	-0.38***	0.64***	0.61***	0.59***	0.94

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Cronbach's Alphas are displayed in diagonals.

Perceptions that the government would meet the YVs' demands
We used four items in order to assess participants' perceptions that the government would meet the YVs' demands (e.g., In my opinion, the government is about to agree on... The establishment of the Citizen's Initiative Referendum). We created a score combining the four items ($\alpha = 0.74$); higher scores indicated higher perceptions that the government was about to meet the YVs' demands.

Anger, Disgust, Contempt

Participants were presented with a list of ten emotions and were asked to indicate to what extent they felt each of them when thinking about Emmanuel Macron and his government. The only emotions of interest to us were *anger*, *disgust* and *contempt*, while the other seven emotions were used as backfill (*Joy, Admiration, Fear, Surprise, Trust, Sympathy, Sadness*). Higher scores indicated higher feelings of anger, disgust and contempt towards Emmanuel Macron and his government.

Behavioral intentions of support for the YV movement

We translated and adapted Moskaleiko & McCauley's scale (2009) in order to assess participants' willingness to act in favor of the YV movement. In line with Moskaleiko & McCauley's work (2009), we first computed two scores: one activism score (e.g., *Travel for an hour to take part in a demonstration in order to demonstrate my support for the YVs; 4 items; $\alpha = 0.92$*) and one radicalism score (e.g., *Attack the police or the security forces if I see them hit a YV; 4 items; $\alpha = 0.90$*). However, given the strong correlation between the two scores (cf. **Table 1**), we finally decided to compute a single score ($\alpha = 0.94$). Higher scores indicated a higher willingness to engage in behavioral intentions to defend the YV movement.

Results

We used the jAMM package in Jamovi (1.0.9.0; Gallucci, 2019) to test our mediation hypotheses. To compare the two models, we subsequently conducted Structural Equation Modeling (SEM) in RStudio (1.2.5033) using the *lavaan* package.

For both models (the BT model, and the ANCODI model), we added behavioral intentions as the dependent

variable, support for the YVs' demands score as an independent variable, perception of the government's intention as a moderator, and negative emotions (anger and contempt for the BT model; anger, contempt and disgust for the ANCODI model) as mediators.

BT model

In order to test whether anger and contempt mediated the relationship between support for the YVs' demands and behavioral intentions (*parallel mediation hypothesis*), and whether the link between emotions and behavioral intentions was stronger as individuals perceived the government as unwilling to meet the YVs' demands (*moderated mediation hypothesis*), we estimated the effects via a bootstrapping procedure (1,000 samples, bias corrected).

Support for the YVs' demands significantly predicted behavioral intentions (total effect estimated at = 0.83, CI95% [0.76, 0.90], $p < 0.001$), even when the emotions were included in the model (direct effect estimated at = 0.53, CI95% [0.43, 0.63], $p < 0.001$), suggesting partial mediation. Regarding our *parallel mediation hypothesis*, results showed that indirect effects were significant via contempt (estimated at = 0.07, CI95% [0.01, 0.15], $\beta = 0.05$, $p = 0.04$) and anger (estimated at = 0.22, CI95% [0.14, 0.32], $\beta = 0.17$, $p < 0.001$). Regarding our *moderated mediation hypothesis*, results showed that the interaction between the perception that the government would not meet the YVs' demands and emotions was not significant (see **Table 2** for detailed information). Other effects are displayed in **Figure 1**.

Finally, the BT model presented an acceptable fit (Kline, 2011) with the data ($\chi^2(6) = 29.70$, $p < 0.01$; TLI = 0.96; RMSEA = 0.08, 95% CI [0.05, 0.11]; AIC = 7460.04).

ANCODI model

Regarding the *mediation hypothesis* of ANCODI (i.e. a single variable including anger, contempt and disgust) between support for the YVs' demands and behavioral intentions, results showed that indirect effect was significant (estimated at = 0.59, CI95% [0.51, 0.66], $\beta = 0.44$, $p < 0.001$). The direct effect of support for the YVs' demands on behavioral intentions was significant (estimated at = 0.24, CI95% [0.15, 0.33], $p < 0.001$; total

effect estimated at = 0.83, CI95% [0.76, 0.90], $p < 0.001$), suggesting partial mediation. Regarding our *moderated mediation hypothesis*, results showed that the moderating effect of the perception that the government would

not meet the YV's demands on the relationship between emotions and behavioral intentions was not significant (see **Table 3** for detailed information). Other effects are displayed in **Figure 1**.

Table 2: Parallel mediation and interaction in the BT model (Study 1).

Effect Type	Effect	Behavioral intentions						
		Estimate	SE	Lower	Upper	β	z	p
Indirect effects	Via Contempt	0.07	0.04	0.01	0.15	0.05	2.02	0.04
	Via Anger	0.22	0.05	0.14	0.32	0.17	4.94	<0.001
Direct effect		0.53	0.05	0.43	0.63	0.39	10.59	<0.001
Total effect		0.83	0.04	0.76	0.90	0.61	22.26	<0.001
Interaction	Contempt*government	0.00	0.04	-0.08	0.07	0.00	-0.03	0.98
	Anger*government	-0.02	0.04	-0.10	0.06	-0.07	-0.59	0.55

Table 3: Mediation and interaction in the ANCODI model (Study 1).

Effect Type	Effect	Behavioral intentions						
		Estimate	SE	Lower	Upper	β	z	p
Indirect effects	Via ANCODI	0.60	0.04	0.52	0.67	0.44	15.82	0.04
Direct effect		0.23	0.04	0.15	0.31	0.17	5.28	<0.001
Total effect		0.83	0.04	0.76	0.90	0.61	22.26	<0.001
Interaction	ANCODI: government	-0.03	0.02	-0.07	0.01	-0.07	-1.32	0.19

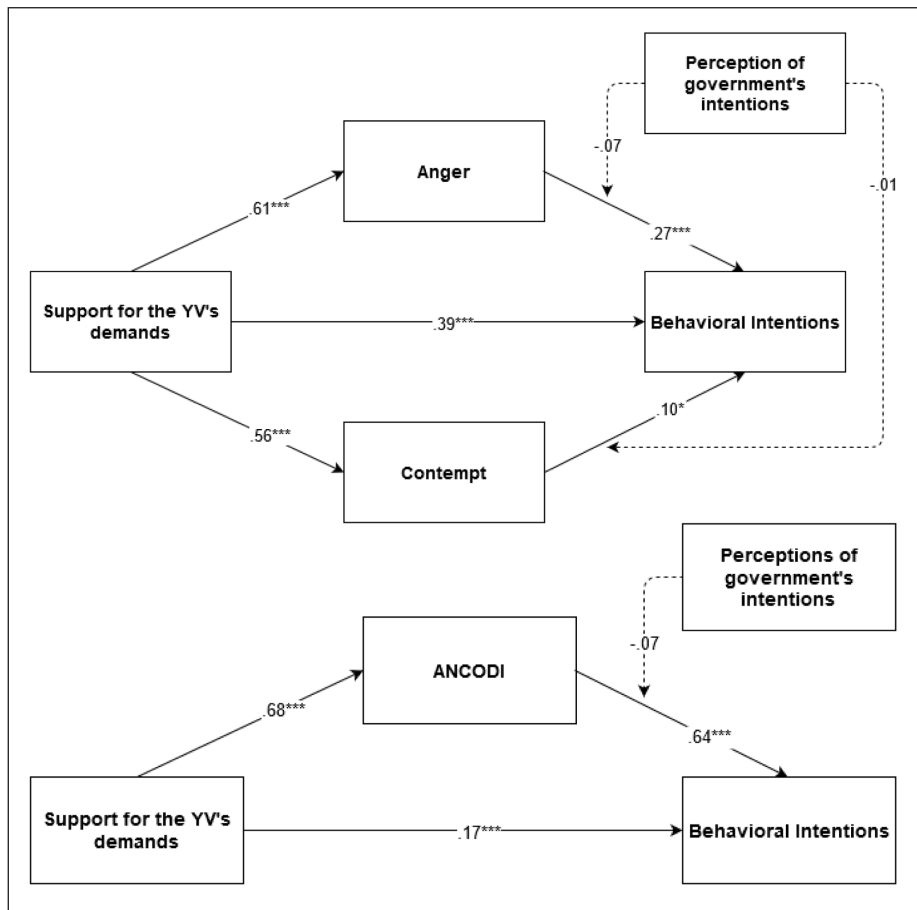


Figure 1: Mediation models for Study 1, numbers represent β coefficients for each path.

The ANCODI model presented a poor fit (Kline, 2011) with the data ($\chi^2(2) = 37.98$, $p < 0.01$; TLI = 0.88; RMSEA = 0.16, 95% CI [0.12, 0.21]; AIC = 4786.122). Therefore, the BT model (in which only anger and contempt mediate the relationship between support for the YVs' demands and behavioral intentions) seemed to present a better fit with the data than the ANCODI model.

Discussion

The results of this first study supported our *mediation hypothesis*. In both models, negative emotions toward Emmanuel Macron and his government explained the relationship between support for the YVs' demands and behavioral intentions. Even though the YV movement became popular through actions that were not necessarily violent, the latter often infringed the law. Indeed, occupations of roundabouts and spontaneous demonstrations are, to a certain extent, forms of civil disobedience. Therefore, it may be possible that participants considered engagement in the YV movement as intrinsically non-normative. Because of this, we could have expected contempt to be the only predictor of behavioral intentions. However, both contempt and anger predicted participants' intentions. However, this result is not that surprising, considering that we did not use the exact same model as Becker and Tauch (2015); which besides showed that anger sometimes predicts non-normative collective actions. Despite poor fit indices, the ANCODI model also worked: indeed, the *explosive cocktail* composed of anger, contempt and disgust (ANCODI) also mediated the relationship between support for the YVs' demands and behavioral intentions.

The *moderated mediation hypothesis* was not corroborated. We tested alternative models (see https://osf.io/sze37/?view_only=b57921595d9e4232b9eed1f627d149b5) but the perception that the government would meet the YVs' demands never moderated the mediation. The low mean score ($M = 2.19$) and low variability ($SD = 1.07$) of the perceived government's intentions regarding YVs' demands' score in our sample – which suggest that most participants believed that the government will not meet the YVs' demands – could explain the lack of moderation effects to a certain extent.

Despite the encouraging results, we conducted a second study to further investigate the interactions in our models, by manipulating the government's response to the social crisis.

Study 2

In this study, the perception of the government as being about to meet the YVs' demands was not measured but manipulated: a condition in which Emmanuel Macron and his government were presented as about to meet the YVs' demands ('social shift' condition) was opposed to a condition in which Emmanuel Macron and his government were presented as not willing to meet the YVs' demands at all ('no social shift' condition).

The hypotheses were identical to those of Study 1: For both models, we expected negative emotions to explain the relationship between support for the YVs' demands and behavioral intentions (*mediation hypothesis*) and assumed that we would observe an interaction between

the negative emotions and the perception that the government would not meet the YVs' demands (*moderated mediation hypothesis*).

Method

Participants

In order to determine the sample size for a moderated mediation analysis, a power analysis was conducted using G*Power (Faul et al., 2014). The analysis was based on a multiple linear regression. With a small effect size (f^2) of 0.02, an alpha of 0.05, a standard power level of 0.80, and a total of six predictors (which corresponds to the BT model), the results of the power analysis showed that a minimum of 688 participants would be needed to achieve an appropriate power level for this study.

The data was collected via an online study shared on social media in July 2019, when the YVs' rallies were at their weakest point. After excluding participants who were not French, those who were under 18 years old, and those who did not complete the final manipulation check correctly ($n = 139$), our final sample was composed of 738 French participants (78.18% women; $M_{age} = 36.71$, $SD_{age} = 13.47$, min = 18, max = 81) who completed the study entirely voluntarily.

Procedure and Material

We collected the data via an online survey shared on social networks. Participants started by reading a short presentation of the study and then filled in sociodemographic information (e.g., age, gender, primary language, nationality). Then, they were randomly assigned to one of the two experimental conditions: the *social shift* condition ($N = 344$) or *no social shift* condition ($N = 394$). In both conditions, participants read a fictitious newspaper article about Emmanuel Macron and his government (available at https://osf.io/sze37/?view_only=b57921595d9e4232b9eed1f627d149b5). In the *social shift* (SS) condition, the article presented Emmanuel Macron and his government as about to meet the demands of the YVs; in the *no social shift* (NSS) condition, Emmanuel Macron and his government were presented as not at all willing to meet the YVs' demands.

Afterwards, participants completed the same measures as for Study 1: emotions towards Emmanuel Macron and his government, support for the YVs' demands, perceptions that the government would meet the YVs' demands (we used this as a manipulation check and not as an independent variable), and behavioral intentions of support for the YVs (activism and radicalism). Some minor modifications were made compared to the first study. First, we lowered the number of backfill emotions to three (Admiration, Trust, and Sympathy) in order to shorten the survey. Second, we added a second manipulation check at the end of the study to control whether participants correctly read and understood the article. Participants had to indicate whether the text they read at the beginning mentioned that Emmanuel Macron and his government were about to propose reforms that met/did not meet the demands of the YVs. A 'I don't know' (IDK) alternative was also available. We removed 139 participants who made a

mistake in remembering the content of the article, as well as those who checked the IDK answer. Finally, participants were debriefed and thanked. All measures presented acceptable internal consistency. Descriptive statistics, correlations and Cronbach's Alphas are displayed in **Table 4**.

As in Study 1, we computed an overall score of behavioral intentions (8 items; $\alpha = 0.93$), since the two subscales correlated strongly ($r = 0.80, p < 0.001$).

Results

Manipulation Check

We first checked that participants in the *SS* condition reported greater perceptions that the government was about to meet the YVs' demands than those in the *NSS* condition. As expected, results showed that participants in the *SS* condition perceived the government as more willing to meet the YVs' demands ($M = 3.11, SD = 1.72$) than the respondents in the *NSS* condition ($M = 1.94, SD = 1.43$). This difference between the two conditions was significant ($t(736) = 10.1, p < 0.001, Cohen's d = 0.74$).

BT model (Study 2)

In order to test whether anger and contempt mediated the relationship between support for the YVs' demands and behavioral intentions (*parallel mediation hypothesis*), and whether the link between emotions and behavioral intentions was stronger in the *NSS* condition (*moderated mediation hypothesis*), we conducted the same analyses as in the first study.

Regarding our *parallel mediation hypothesis*, results showed that indirect effects were significant via contempt (estimated at = 0.12, CI95% [0.07, 0.18], $\beta = 0.11, p < 0.001$) and anger (estimated at = 0.14, CI95% [0.09, 0.20], $\beta = 0.11, p < 0.001$). The direct effect of support for the YVs' demands on behavioral intentions was significant (estimated at = 0.33, CI95% [0.26, 0.40], $p < 0.001$; total effect estimated at = 0.59, CI95% [0.52, 0.66], $p < 0.001$), suggesting partial mediation. Regarding our *moderated mediation hypothesis*, results showed that the condition (*SS* or *NSS*) did not moderate the relationship between negative emotions and behavioral intentions were not significant (see **Table 5** for detailed information). Other effects are displayed in **Figure 2**.

Once again, the BT model presented an acceptable fit (Kline, 2011) with the data ($\chi^2(6) = 25.78, p < 0.01$; TLI = 0.97; RMSEA = 0.07, 95% CI [0.04, 0.94]; AIC = 7619.67).

ANCODI model (Study 2)

Regarding the *mediation hypothesis* of ANCODI (i.e. a single variable including anger, contempt and disgust) between support for the YVs' demands and behavioral intentions, results showed that indirect effect was significant (estimated at = 0.28, CI95% [0.22, 0.33], $\beta = 0.25, p < 0.001$). The direct effect of support for the YVs' demands on behavioral intentions was significant (estimated at = 0.32, CI95% [0.26, 0.40], $p < 0.001$; total effect estimated at = 0.59, CI95% [0.52, 0.66], $p < 0.001$),

Table 4: Descriptive statistics, correlations, and Cronbach's Alphas (Study 2).

	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	1.	2.	3.	4.	5.	6.	7.
1. Age	36.7	13.5	18	81	–						
2. Support for the YVs' demands	5.26	1.50	1	7	–0.09*	0.67					
3. Perception of the government's intentions	2.48	1.67	1	7	–0.07*	0.10**	0.85				
4. Anger	4.36	2.15	1	7	0.05	0.50***	–0.11**	–			
5. Disgust	4.09	2.30	1	7	–0.02	0.48***	–0.14***	0.78***	–		
6. Contempt	4.15	2.24	1	7	–0.04	0.48***	–0.13***	0.74***	0.79***	–	
7. Behavioral intentions	2.55	1.66	1	7	–0.01	0.53***	–0.04	0.56***	0.56***	0.55***	0.93

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Cronbach's Alphas are displayed in diagonals.

Table 5: Parallel mediation and interaction in the BT model (Study 2).

Effect Type	Effect	Behavioral intentions						
		Estimate	SE	Lower	Upper	β	<i>z</i>	<i>p</i>
Indirect effects	Via Contempt	0.12	0.03	0.07	0.18	0.11	4.51	<0.001
	Via Anger	0.14	0.03	0.09	0.20	0.13	4.97	<0.001
Direct effect		0.33	0.04	0.26	0.40	0.32	9.12	<0.001
Total effect		0.59	0.03	0.52	0.66	0.54	17.12	<0.001
Interaction	Contempt: government	0.04	0.07	–0.10	0.17	0.06	0.53	0.59
	Anger: government	–0.02	0.07	–0.16	0.12	–0.03	–0.29	0.77

suggesting partial mediation. Regarding our *moderated mediation hypothesis*, results showed that the condition (*SS* or *NSS*) did not moderate the relationship between negative emotions and behavioral intentions were not significant (see **Table 6** for detailed information). Other effects are displayed in **Figure 2**.

The ANCODI model did not present an acceptable fit (Kline, 2011) with the data ($\chi^2(2) = 34.132$, $p < 0.01$; TLI = 0.84; RMSEA = 0.15, 95% CI [0.11, 0.19]; AIC = 5349.40). Hence, as for the first study, the BT model seemed to provide a better fit with the data than the ANCODI model.

Discussion

This second study aimed to replicate and extend the results of the first study. All previous results were replicated. Indeed, the *mediation hypothesis* of emotions between support for the YVs' demands and behavioral intentions was verified in both models. However, as in the first study, the results did not highlight any interaction between the negative emotions and the perception that the government will meet the YVs' demands. Unfortunately, even though participants in the *Social Shift* condition believed significantly more than those in the *No Social Shift* condition that Emmanuel Macron and his government were

Table 6: Mediation and interaction in the ANCODI model (Study 2).

Effect Type	Effect	Behavioral intentions						
		Estimate	SE	Lower	Upper	β	z	p
Indirect effects	Via ANCODI	0.28	0.03	0.22	0.33	0.25	10.36	<0.001
Direct effect		0.32	0.04	0.26	0.40	0.29	9.03	<0.001
Total effect		0.59	0.03	0.52	0.66	0.54	17.12	<0.001
Interaction	ANCODI: Condition	0.04	0.05	-0.05	0.12	0.05	0.82	0.42

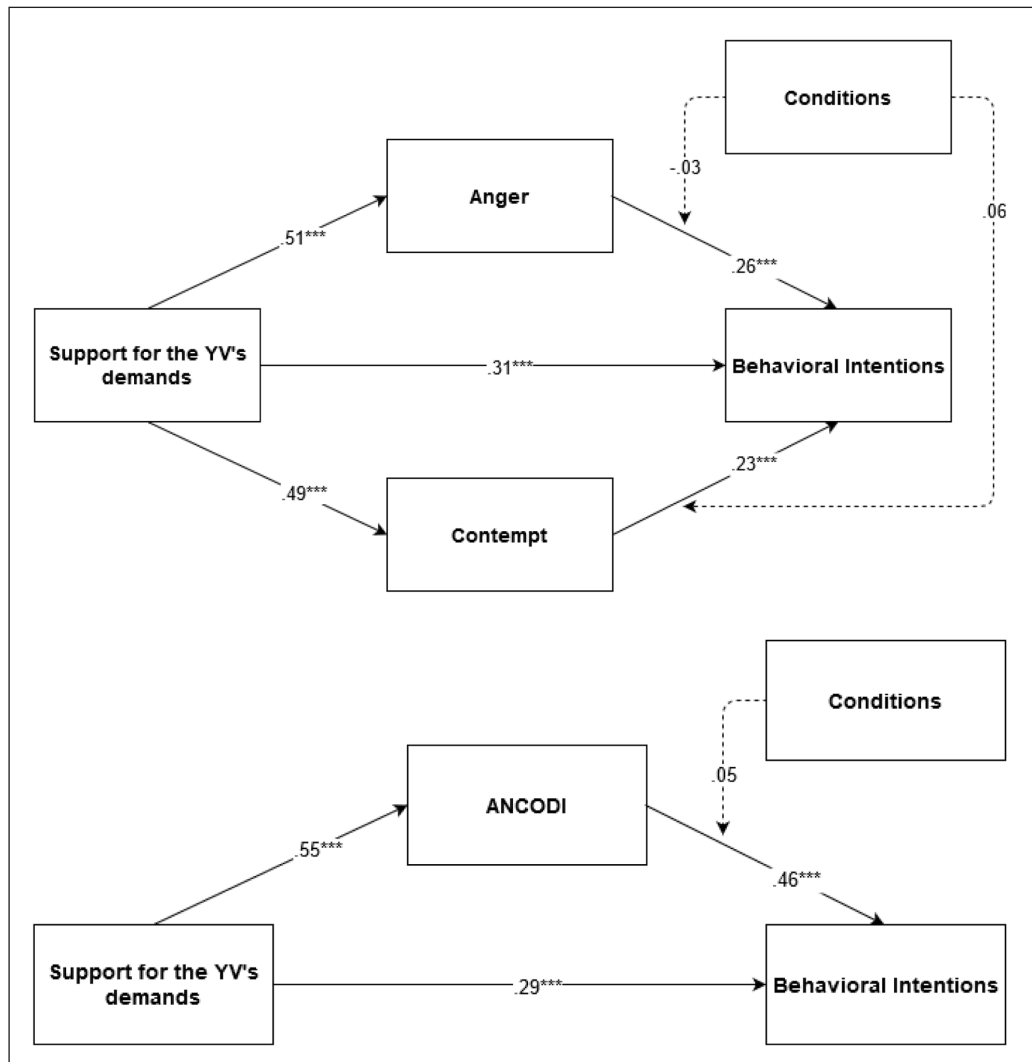


Figure 2: Mediation models for Study 2, numbers represent β coefficients for each path.

about to meet the YVs' demands, the mean manipulation check score of the *Social Shift* condition ($M = 3.11$) suggest that most of them were not really convinced. This could explain why the data did not show that the perception of the government intention regarding the YV moderated the relationship between emotions and behavioral intentions.

General Discussion

In this article, we wanted to provide evidence of the relationship between support for the YVs' demands, negative emotions towards the government, perception of the government as unwilling to meet the YVs' demands, and action in favor of the Yellow Vest (YV) movement. To this end, we opposed two models: one (the BT model) based on Becker and Tausch's (2015) model of engagement in collective actions, and the other (the ANCODI model) based on Matsumoto et al. (2017) ANCODI hypothesis.

In both studies, experiencing negative emotions towards Emmanuel Macron and his government (anger and contempt in the BT model, a mix of anger, contempt and disgust in the ANCODI model) partially explained the relationship between support for the YVs' demands and behavioral intentions to engage in collective action in favor of the movement. However, perceiving that the government would not meet the YVs' demands did not significantly moderate this relationship. This could be explained by a lack of variance: indeed, respondents in our sample overwhelmingly believed that the government would not meet the YVs' demands ($M = 2.19$, $SD = 1.07$ in Study 1; $M = 3.11$, $SD = 1.72$ in the *Social Shift* condition and $M = 1.98$, $SD = 1.43$ in the *No Social Shift* condition in Study 2). Thus, the absence of significant moderation is not that surprising, all the more if there is generalized anger, contempt and disgust towards Emmanuel Macron and his government.

One of the main objectives of this paper was to oppose two models of engagement in collective action in an ecological context of social movement. In both our studies, the BT model based on Becker and Tausch's work seems to present a better fit with the data than the ANCODI model. This does not mean that Becker and Tausch's model is always more effective in explaining radical collective action. We believe that the YV movement was not violent enough to highlight the accuracy of the ANCODI hypothesis. Indeed, Matsumoto et al. (2017) explain that every stage of the radicalization process is accompanied by different emotions. In the first phase, opposition to the outgroup is associated with anger. In the second phase, individuals are fueled by contempt and consider the outgroup as morally inferior. In the last phase, individuals experience disgust and consider the elimination of the outgroup necessary. The YV movement never reached this level of radicalization. Therefore, we can assume that the ANCODI model really operates only in situations where social groups are willing to eliminate other ones. Since our samples did not show much lower levels of disgust than anger or contempt, it would be interesting to study the role that disgust might have in a model based on Becker and Tausch's works. However, it would be better to

study these emotions when they are not directed towards a target hated by the majority of the sample; as it was in our case with Emmanuel Macron and his government: too much covariance between emotions might hide the subtle effects that could exist.

When starting this research, our aim was to study the role of emotions in the YV's activism vs. radicalism. However, in the YV movement context, these two types of collective actions seemed to merge. This is not that unexpected, given that the movement became popular through illegal actions such as occupations of roundabouts, unauthorized demonstrations, and the removal of the President's portraits in town halls. That way, the movement could have been considered as intrinsically radical; and normative action in its favor could therefore be perceived as non-normative. This could explain why, in both studies, the ANCODI variable predicted behavioral intentions, while half of the items were supposed to assess activism. Future research could investigate the social representations associated with the YV movement, to further the understanding of the above-mentioned phenomena.

Limitations

Despite our findings, several limitations can be underlined. Since both studies were carried out using an online questionnaire, the representativeness of the French population is not guaranteed; for example, the proportion of female respondents was much higher than that of male in both studies. In addition, we did not assess the sense of collective efficacy, the level of identification with Yellow Vests or the injustice perceived by participants, although the latter are supposed to play a role in the emergence of anger and non-normative actions, according to Becker & Tausch's work (2015). Moreover, we did not check the credibility of our manipulation in Study 2; some participants may have doubted the veracity of the articles, which might have diminished the effect of the experimental manipulation. Finally, although we provided empirical evidence of a relationship between support for the YV's movement, negative emotions towards the government and behavioral intentions, these results are nonetheless limited by their cross-sectional nature and prevent us to conclude with certainty about the directions in these relationships. Indeed, even though we have theoretical reasons to defend that support for YV's claims fosters negative emotions towards Emmanuel Macron and his government (Kuppens & Yzerbyt, 2012; Smith & Mackie, 2015), one can rightfully assume that experiencing negative emotions towards Emmanuel Macron and his government could also have fostered people's support for the YV movement in the first place. Furthermore, the only variable we manipulated in Study 2 did not reach statistical significance. Therefore, further studies are needed to provide experimental corroboration of the present results.

Conclusion

In this paper, we wanted to explore the relationship between negative emotions toward the French government and behavioral intentions in favor of the YV movement, through the opposition of two models used in

the literature to explain collective action. At the origin of the rallies is a whole section of the population that is completely opposed to the policy pursued by Emmanuel Macron and his government. The present research suggests that this ideological conflict might have led to negative emotions that in turn reinforce intentions to engage in an oppositional movement. Experiencing these negative emotions seems like a fair reaction when people perceive that their political ideas and demands are swept away by the people supposed to represent them and their interests. Similarly, when people realize that they do not have access to political institutions, then it is not that surprising to see them adopting the only possible escape route: non-normative collective action.

Data Accessibility Statement

The data that support the findings of this study are available at https://osf.io/sze37/?view_only=b57921595d9e4232b9eed1f627d149b5.

Additional File

The additional file for this article can be found as follows:

- **Additional analyses & material.** DOI: <https://doi.org/10.17605/OSF.IO/SZE37>

Competing Interests

The authors have no competing interests to declare.

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How to cite this article: Morales, A., Ionescu, O., Guegan, J., & Tavani, J. L. (2020). The Importance of Negative Emotions Toward the French Government in the Yellow Vest Movement. *International Review of Social Psychology*, 33(1): 8, 1–11. DOI: <https://doi.org/10.5334/irsp.373>

Submitted: 16 October 2019

Accepted: 27 April 2020

Published: 01 June 2020

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