



# The effect of disgust-eliciting media portrayals on outgroup dehumanization and support of deportation in a Norwegian sample



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## ABSTRACT

Public discourse regarding the Roma has been heated in many western European countries. This study investigates whether feelings of disgust, elicited through negative media portrayals, can lead to more dehumanization and support of deportation toward this minority. While Study 1 ( $N = 30$ ) validated a measure of dehumanization in the Norwegian context, Study 2 ( $N = 195$ ) experimentally tested whether disgust-eliciting media portrayals would increase dehumanization tendencies on this validated measure and support of deportation toward the Roma. As expected, reading a newspaper article focusing on allegedly low hygienic standards among the Roma increased the feeling of disgust, which, in turn, led to higher degrees of dehumanization and support of deportation. While being the first study experimentally showing that disgust leads to dehumanization of a real societal minority group, the results also have important implications for how media discusses and presents social issues regarding devalued minority groups.

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## 1. Introduction

Filthy scum (. . .). They roam the earth and wear gross, gypsy attire as they play their tambourines and dance around in a disgusting gypsy circle. ([Urban Dictionary, 2008](#))

The Roma is a minority group in Europe with a long history. They are often condescendingly referred to as Gypsies ([Crowe, 2008](#)) and in most of the countries they are settled in, including Norway, they are perceived as a negatively viewed outgroup. Arguably, they represent one of the most stigmatized minorities in many countries, and the media continues to produce negatively biased portrayals of the Roma, repeatedly depicting them as criminals and troublemakers ([Waringo, 2005](#)). It is not uncommon to see articles likening the Roma to animals, or associating them with feces in public places and unhygienic standards ([Brekke, 2013](#); [Haagensen, 2012](#); [Rud, 2011](#)). Even dating back to the 1940s, testimonials by the Nazis stated that the Roma were filthy ([Lewy, 2000](#)). The negative media depictions of the Roma could play an important role in the prejudice many people show toward this outgroup, perhaps by exacerbating already existing negative attitudes ([Haagensen, 2012](#)). Such media portrayals might elicit specific negative emotions, such as feelings of disgust. The implications of this is important,

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because emotions have been found to be better predictors of prejudice and discriminatory behavior than stereotypes, and people show distinct emotional profiles to different outgroups (Chamberlin, 2004; Cottrell & Neuberg, 2005).

The emotion disgust could be particularly pertinent to the Roma, as many media portrayals have associated them with disgusting stimuli (Eggesvik, 2013; Rostad, 2013; Rud, 2011), and disgust is an especially important factor in extreme forms of prejudice (Taylor, 2007). The core characteristic of the feeling of disgust is repulsion, and can function as a signal for danger (Hodson et al., 2013). Disgust can be elicited in several ways, including bad odors and other revolutive physical objects, or by acts committed by other people, such as incest. The feelings of disgust evoke the need to protect the self from possible contamination—either physically or morally (Horberg, Oveis, Keltner, & Cohen, 2009). When reacting with disgust toward a particular group, the threat is therefore not toward the resources of one's own group, but instead there is a fear and danger of being contaminated.

People who are perceived as being low in warmth and competence are more likely to induce the feeling of disgust and contempt in others (Cuddy, Glick, & Fiske, 2007). This can be contrasted to outgroups that evoke feelings of envy because they are perceived as high in competence, but low in warmth. In support of this, a study looking at brain images of people watching outgroups perceived as low in warmth and competence showed that brain regions associated with the feeling of disgust were activated (Fiske, 2009; Harris & Fiske, 2006). Furthermore, areas associated with social cognition were deactivated, suggesting that the outgroups were perceived as less human (Fiske, 2009; Harris & Fiske, 2006). People with low or no levels of education, the poor or welfare recipients, homeless, immigrants and drug addicts are generally perceived as being low in warmth and competence (Fiske, 2012). The Roma, who are often poor and low in education (O'Higgins & Ivanov, 2006), is therefore a group, which could be perceived as low in warmth and competence. Thus, they might also be seen as disgusting. A study conducted in Norway indeed found that the Roma together with beggars and drug addicts were perceived as low in warmth and competence (Bye, Herrebrøden, Hjetland, Røyset, & Westby, 2014).

Most studies on the relationship between prejudice and emotions have been correlational, looking at which emotions are related to appraisals of different kinds of outgroups (Cottrell & Neuberg, 2005; Cuddy et al., 2007; Taylor, 2007). While a study by Hodson et al. (2013) looked at the link between disgust and negative attitudes toward a fictitious outgroup, no study has experimentally investigated the link between disgust and dehumanization tendencies toward a *real* outgroup. This is an important limitation because different results can be expected if a real outgroup is used as a target, because people already have preconceived thoughts and notions about such groups. Furthermore, while a large volume of studies on prejudice have been conducted (Paluck & Green, 2009), there are only a few studies on attitudes against the Roma in particular (Ljujic, 2011). The aim of the present paper is therefore to look at how media portrayals focusing on alleged insufficient hygienic standards among the Roma may elicit feelings of disgust, which in turn may predict biases such as dehumanization or even the most extreme forms of biases such as support of deportation.

## 2. Portrayals of the Roma in Norwegian media

An increasing number of Romas have come to Norway the past years, partly due to the legalization of begging in Norway in 2006 (Adolfsson, 2014). As a consequence, there has been a lot of focus on the Roma in the Norwegian media. Depictions of the Roma in Norwegian media often has a negative focus (Denne, 2012), drawing on generalized stereotypes and stigmatizing views about them (Adolfsson, 2014). For instance, in an article by Brekke (2013), published in the major Norwegian newspaper *Aftenposten*, the following quote by a Hungarian politician was cited: "The majority of the Roma are not capable of living with other people. They are ineligible to live amongst humans. These gypsies are animals, and they act like animals." In this article, the Roma are described as animals, not human beings. There are numerous additional examples in the media where the Roma have been likened to animals, and described in ways that can give animalistic connotations (Brekke, 2013; Haagensen, 2012).

In addition to articles comparing the Roma to animals, there are also examples of the Roma being described as disgusting or associated with disgusting stimuli. An example is how media portrayals of the Roma often have associated them with filthiness or excrements in their surroundings, also implying that they are the cause of this (Eggesvik, 2013; Rostad, 2013; Rud, 2011). The following quote about the Roma was written in a Norwegian newspaper: "(...) There was a certain amount of soaked feces in the area. There were feces almost right next to where they were standing and making food, just one meter away" (as cited by Romsaas in Rostad, 2013, own translation). These media examples coincide with psychological research. The tendency to associate devalued outgroups with disgust can also be found in the media. For example, Taylor (2007) found that hateful texts about outgroups often included various words related to disgust. This implies that disgust is an important emotion in prejudice.

Feelings of disgust toward outgroups which can result from negative media portrayals, can have serious implications—such as increased dehumanization and rejection tendencies (Hodson & Costello 2007; Cuddy et al., 2007; Neuberg & Cottrell, 2002).

## 3. Disgust as predictor of dehumanization

Dehumanization is a tendency to view others as less than human or even as inhuman (Haslam & Loughnan, 2012). Thus, it involves likening groups of people to animals, and is often manifested as an extreme form of prejudice (Haslam & Loughnan, 2012). Ingroup members are often perceived as more human than outgroup members (Haslam & Bain, 2007).

However, dehumanization can range from the more extreme versions aforementioned, where people are viewed as animals or machines, to more subtle forms, where outgroups are denied unique human characteristics. In other words, they are denied aspects of the human “essence” (Leyens et al., 2001).

According to Leyens et al. (2000), attributes such as intelligence, language, politeness, cognitive abilities and more unique human emotions are a part of the so-called human “essence”, and are more often associated with the ingroup. Emotions such as hope, love, guilt and contempt are seen as more complex emotions, and are generally perceived as *exclusive* to humans and are called secondary emotions (Eyssele & Ribas, 2012). Secondary emotions are contrasted to the more universal primary emotions such as happiness and anger, which are more easily associated with *both* humans and animals than secondary emotions (Eyssele & Ribas, 2012). Prejudice involving the denial of uniquely human emotions to outgroups, is therefore a form of dehumanization.

Consequently, one way to assess dehumanization tendencies is to measure the extent to which people deny the outgroup secondary emotions, indicating a view of the outgroup as less human than the ingroup. Leyens et al. (2000) used such a measure to look at the differential attribution of emotions to the ingroup and outgroups. They found that people attribute more secondary emotions to their ingroup relative to the outgroup, regardless of the emotional valence (i.e., whether emotions were positive or negative). Consequently, secondary emotions seem more likely to be attributed to the ingroup, even if they have a negative valence.

Disgust has been found to be a predictor of prejudice and dehumanization toward outgroups (Buckels & Trapnell, 2013). In a study by Hodson and Costello (2007) it was found that interpersonal disgust sensitivity predicted dehumanizing of immigrants. Crucially, feelings of disgust are often accompanied with animalistic dehumanization of outgroups, where the people are likened to animals (Haslam, 2006). Feelings of disgust led to the strongest tendencies of dehumanizing an arbitrary outgroup, compared to neutral and sad emotions (Buckels & Trapnell, 2013). Another study contrasted disgust with “cuteness”, and found that disgust led to higher degrees of dehumanization tendencies, while “cuteness” led to higher degrees of humanizing (Sherman & Haidt, 2011).

#### 4. Disgust as potential predictor of support of deportation

After the Jews, the Roma was the second largest ethnic group collectively deported and exterminated during the Second World War (Hiort, 2011). Feelings of disgust toward others have been associated with rejecting and neglecting the target outgroups (Cuddy et al., 2007; Neuberg & Cottrell, 2002). Thus, feeling disgust toward certain people is related to specific actions and goals. People are motivated to distance themselves from disgust-eliciting targets, and have an increased motivation to reject them (Roseman, Wiest & Swartz, 1994). A primary action tendency when feeling disgusted about someone is also isolating the target group or punishing it (Neuberg & Cottrell, 2002).

Because disgust is related to a tendency to isolate, and hold distance to outgroups, support of deportation may be a likely reaction to disgust. Indeed, discussions concerning deportation of the Roma are still highly salient today, as there is an ongoing debate of whether or not the Roma should be deported out of Norway, or even denied entrance into the country (Grønning, 2012; Marthinsen & Magerøy, 2012; Zaman & Falch-Olsen, 2013). For instance, a prominent Norwegian politician stated with regard to the Roma that the Norwegian government “should include a law for deportation” (as cited in Grønning, 2012, own translation). It could therefore be expected that feelings of disgust toward the Roma will lead to higher support of deporting them out of the country. There might be individual differences in the extent to how much people agree with statements of deportation of the Roma, and this could reflect differences in explicit prejudice toward the Roma.

#### 5. The present research

The present research was conducted to see whether disgust-eliciting media articles about the Roma would lead to more dehumanization and support of deportation of this outgroup. Study 1 validated a measure of dehumanization in a Norwegian context, which in turn was used as dependent variable in the experimental Study 2. In Study 2, we predicted that disgust-eliciting media portrayals would lead to higher tendencies to dehumanize the Roma and to support their deportation. Here, we tested three specific hypotheses:

**H1.** Individuals who are experimentally induced to feel disgust will dehumanize the Roma more than individuals who do not feel disgust. Thus, it is expected that participants in the disgust-eliciting condition will attribute more secondary emotions to Norwegians than to the Roma. This measure constitutes an implicit form of prejudice, because it is expected that people are unaware of the theory behind attribution of primary and secondary emotions.

**H2.** Participants who are experimentally induced to feel disgust toward the Roma will show a higher degree of support of deportation of the Roma, compared to participants who do not show high feelings of disgust. Because this is an explicit attitudinal measure of prejudice, it is expected that the link between the experimental condition and support of deportation will be mediated by the explicitly reported feeling of disgust, as measured by the manipulation check. Specifically, we predicted that the disgust manipulation will lead to feelings of disgust, which in turn will lead to stronger support of deportation of the Roma.

**H3.** Given that implicit types of bias often predict explicit attitudes (Nosek, Banaji, & Greenwald, 2002), we test whether the direct effect on implicit dehumanization as hypothesized in H1, may underlie the effect on support of deportation as hypothesized in H2. Hence, we expect that feelings of disgust will lead to higher degrees of dehumanization, which again will lead to higher degrees of support of deportation. Thus, dehumanization may mediate the experimental effects on support of deportation.

## 6. Study 1

Study 1 was conducted to validate the degree of humanness and desirability of different emotions in a Norwegian sample, and to form a basis for a dehumanization measure in Study 2. Humanness ratings of different emotions have been found to be quite similar across different countries and languages, and lay people seem to have a sense of distinction between primary and secondary emotions (Demoulin et al., 2004; Leyens et al., 2001). However, this distinction has not yet been validated in a Norwegian sample. There might be differences in the results due to linguistic variations, or culturally distinct perceptions of the humanness and valence of the emotions. The current study was therefore employed to investigate perceptions of different emotions in a sample of Norwegian participants, concerning two dimensions: Their degree of *humanness* (i.e., how exclusively human an emotion is) and their degree of *desirability* (i.e., their emotional valence). Although the humanness rating is of primary interest, it is important to address the valence of the emotions. The reason for this is that eight primary and eight secondary emotions will be selected for the dependent dehumanization measure in Study 2, and these should differ significantly in humanness ratings, but not differ with regards to valence. This is important because we are interested in dehumanization tendencies (i.e., differential attribution of primary and secondary emotions to the in- and out-group) rather than differential attribution of emotions due to their valence, which has been observed in earlier studies (Eyssele & Ribas, 2012; but see Leyens et al., 2000).

## 7. Method

### 7.1. Participants

In total 30 participants (females = 50%) were recruited mainly on a Norwegian university campus and through snowball sampling. The mean age of the participants was 33.7 years ( $SD = 15.89$  years).

### 7.2. Measure and procedure

Following the procedure of Demoulin et al. (2004), participants were given a list of 51 different emotions. All items were translated into Norwegian, using the forward-back method (Beaton, Bombardier, Guillemin, & Ferraz, 1998).

Participants were asked to indicate the degree to which they perceived the emotions as being exclusive to humans on a 7-point scale, with the end points 1 (*not at all exclusive to humans*) and 7 (*uniquely human*). They were also asked to indicate to which degree they perceived it as being desirable for a person to frequently experience the emotions on a 7-point scale, with the end points 1 (*very undesirable*) and 7 (*very desirable*).

## 8. Results and discussion

Emotions selected for the dehumanization measure can be seen in Table 1. The selection choice was made by two raters investigating the mean humanness and valence ratings for each of the 51 emotions. A total of 16 emotions were grouped into four pairs, which would be compared in the analysis. Four emotions which were high in humanity and high in valence (i.e., secondary positive), four emotions high in humanity and low in valence (i.e., secondary negative), four emotions low in humanity and high in valence (i.e., primary positive) and four emotions low in humanity and low in valence (i.e., primary negative) were therefore grouped together.

Paired samples *t*-tests indicated that the positive primary and secondary emotions differed significantly in humanness,  $t(27) = 12.256$ ,  $p < 0.001$ ,  $d^1 = -2.2$ , and did not differ significantly in valence,  $t(27) = 0.606$ ,  $p = 0.550$ . The same was found for the negative primary and secondary emotions, which differed significantly in humanness,  $t(27) = 11.913$ ,  $p < 0.001$ ,  $d = -2.3$ , but not in valence,  $t(29) = 0.000$ ,  $p = 1.00$ . Thus, these emotions could be used in the dehumanization measure in Study 2.

## 9. Study 2

After having validated the dehumanization measure in Study 1, the second study was conducted to investigate the main goals of the present paper—namely (1) whether media portrayals focusing on allegedly low hygienic standards among the Roma would result in feelings of disgust, (2) whether these feelings of disgust would lead to more dehumanization and

<sup>1</sup> Cohen's *d* for the paired samples *t*-tests were calculated using the means, standard deviations and the correlations between the two variables tested.

**Table 1**Means and standard deviations for humanness and valence ratings for the selected emotions in a Norwegian sample ( $n = 30$ ).

Emotion	Mean humanness	Standard deviation humanness	Mean valence	Standard deviation valence
Primary negative				
Pain	1.20	0.66	1.83	1.17
Suffering	1.70	1.55	1.37	0.76
Loneliness	1.73	1.33	1.77	1.33
Sorrow	2.00	1.25	1.93	1.46
Secondary negative				
Bitterness	5.70	1.62	1.77	1.07
Comfortless	4.73	1.98	1.40	0.81
Guilt	4.23	2.41	1.80	0.99
Remorse	4.23	2.34	1.93	1.41
Primary positive				
Pleasure	2.10	1.86	6.63	0.55
Surprise	2.20	1.82	4.37	1.40
Happiness	1.87	1.50	6.63	0.49
Calm	1.80	1.12	5.77	1.27
Secondary positive				
Optimism	4.80	2.23	6.37	0.92
Passion	4.07	2.19	6.33	0.60
Nostalgic	6.33	1.29	4.70	1.02
Fascination	4.77	2.16	5.63	1.60

Note: The higher the valence value was, the more the participants experienced it as being desirable.

support of deportation toward this outgroup, (3) and whether dehumanization mediates the link between disgust and support of deportation. Hence, we used two dependent measures of group bias; dehumanization measured as an implicit form of prejudice (Fazio & Olson, 2003; Leyens et al., 2000) and support of deportation which is an explicit and extreme form of prejudice.

## 10. Method

### 10.1. Participants

In total, 244 participants took part in the experiment. Yet, 49 participants who identified themselves as having an ethnic minority background were excluded from the analyses. This was important as it ensured that the participants were in fact attributing emotions to an outgroup (i.e., the Roma) on the dehumanization measure and, most importantly, that their ingroup was ethnic Norwegians. Of the 195 participants with a native Norwegian background who were retained for analyses, age ranged from 18 to 59 years ( $M = 26.15$ ,  $SD = 7.5$ ), and 39% of the sample were male. The participants' educational background ranged from junior high to PhD level, with 41% of the participants having completed a bachelor's degree. Participants were recruited through social media, university mailing lists and snowball sampling. Data was collected on the online survey platform Qualtrics. As a financial incentive, participants were given the chance to enroll in a raffle ticket lottery with the chance to win a NOK 500 gift voucher.

### 10.2. Procedure

After reading the informed consent form, participants were randomly assigned to either a *disgust* ( $n = 108$ ) or *control* ( $n = 87$ ) condition. In both conditions, participants were presented with a short newspaper article about the Roma (see Fig. 1). Similar texts about a fictitious outgroup were used in the study by Hodson et al. (2013), where they successfully induced the feeling of disgust toward the outgroup. The articles were matched to the format of a renowned Norwegian newspaper. In the *disgust* condition the article text was as follows (translated to English):

#### 10.2.1. Unhygienic conditions

The anthropologist Halvard Eide recently published a study, which compared eating habits across different cultures. He highlights the Roma's eating habits as the most unhygienic he has witnessed in his career as a scientist. A number of families he observed in a long-term field study had a habit of putting used cutlery in a glass filled up with water, instead of washing it. The people used the exact same cutlery for their next meal.

#### 10.2.2. More bacteria than in public toilets

Eide refers to ATP measures he conducted around the dining table, which is a measure of the bacteria concentration on different surfaces. The results were appalling. "The recommended cut-off value for washed cutlery is 10, but we found

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## -Uhygieniske tilstander

**ANTROPOLOGEN** Halvard Eide publiserte nylig en studie som sammenligner matvaner på tvers av forskjellige kulturer. Han trekker frem romfolkets matvaner som blant de mest uhygieniske han har sett i sin karriere som forsker. Flere familier han observerte i en langvarig feltstudie hadde som vane å sette brukt bestikk i et glass fylt opp med vann i stedet for å vaske det. Ved neste måltid benyttet menneskene det samme bestikket om igjen.

**-FLERE BAKTERIER** enn på offentlig toalett. Eide viser til ATP målinger han gjennomførte rundt matbordet, som gjør det mulig å undersøke bakteriekonsentrasjonen på ulike overflater. Resultatene er skremmende. -Den anbefalte grenseverdien for vasket bestikk ligger på rundt 10, mens vi fant verdier som er langt over det som en finner på offentlige toaletter. Disse tilstandene er ikke bare helseskadelige men rett og slett ekle.



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nivå lavere enn det som godt er.

## -Normale tilstander

**ANTROPOLOGEN** Halvard Eide har nylig publisert en studie som sammenligner matvaner på tvers av forskjellige kulturer. Som en del av studien beskriver han romfolkets matvaner. I løpet av to måneder observerte han flere mennesker for å få et helhetlig inntrykk av vanene til gruppen.

**-HELT VANLIGE** hygieniske tilstander. Eide viser til ATP målinger han gjennomførte rundt matbordet, som gjør det mulig å undersøke bakteriekonsentrasjonen på ulike overflater. Resultatene er normale. -Den anbefalte grenseverdien på vasket bestikk ligger på rundt 10 og i alle våre målinger fant vi verdier som tilsvarer dette.



**Fig. 1.** Newspaper articles presented in the experimental condition. The first article was presented in the disgust condition, and the second article in the control condition. See text for translations.

values way above what you may normally find in public toilets. These conditions are not just a health haphazard, but simply disgusting.”

Participants in the *control* group read a text which was carefully matched in content, but did not include any disgust-eliciting information. The control text was as follows:

### 10.2.3. Normal conditions

The anthropologist Halvard Eide recently published a study, which compared eating habits across different cultures. As a part of the study he describes the Roma's eating habits. During a period of two months he observed many people to get an overall impression of the habits of this group.

### 10.2.4. Normal hygienic conditions

Eide refers to ATP measures he conducted around the dining table, which is a measure of the bacteria concentration on different surfaces. "The results are around 10 and in all our measures we found values which were similar to this."

For the disgust condition, there was a picture of dirty cutlery placed in a glass of water, while in the control condition there was a picture of clean cutlery in a container. In order to not directly prime participants with dehumanization, it was ensured that no animal-like information was included in the texts. The focus was therefore on the typical human cultural habit of washing dishes.

After reading the text, participants in both conditions had to fill out a manipulation check, followed by a deportation scale (explicit prejudice) and the dehumanization measure (implicit prejudice) developed in Study 1. To make sure that the emotions included in the dehumanization measure were perceived similarly in terms of the primary-secondary and valence continuum as in Study 1, a measure of this was included in the end. After completion of the study, all participants received a debriefing text about the true nature of the study, and a possibility to take part in the drawing of the gift voucher.

## 10.3. Measures

### 10.3.1. Manipulation check

A manipulation check was included to measure the degree to which participants perceived the newspaper texts about the Roma as disgusting. The manipulation check consisted of two items: "I think that the Roma in the text were disgusting" and "The Roma in the article acted in a disgusting manner". Participants were asked to rate their level of agreement on a 7-point Likert scale with the end points 1 (*highly disagree*) and 7 (*highly agree*). Cronbach's Alpha for the manipulation check was satisfactory ( $\alpha = 0.90$ ).

### 10.3.2. Dehumanization measure

We used the dehumanization measure validated in Study 1 to measure dehumanization of the Roma following the procedures of [Eysel and Ribas \(2012\)](#) and [Leyens et al. \(2001\)](#). Participants were asked to choose six to nine emotions from a list of total 16 emotions, which according to them were typical emotions experienced by the Roma and Norwegians. They did this in two separate blocks, one for the Roma and one for Norwegians. The list included the emotions selected in Study 1, and outgroup and ingroup ratings were presented in randomized order to prevent priming effects.

### 10.3.3. Deportation measure

While there are different scales measuring explicit prejudice toward immigrants and other outgroups (e.g., [Altemeyer, 1988](#); [Pettigrew & Meertens, 1995](#)), there is, to our knowledge, no scale measuring support of deportation that matched the context of this study. A scale measuring degree of support of deporting the Roma out of Norway was therefore developed for the purposes of the current study. In total, 13 items (e.g., "It is about time to send the Roma home" and "Criminal Roma should be deported out of Norway") were carefully selected to measure the concept based on our conceptualization of the construct, and following the guidelines of [DeVellis \(2012\)](#). Four of the 13 items were reversed to prevent response bias. Responses were rated on a 7-point Likert scale ranging from 1 (*highly disagree*) to 7 (*highly agree*). The total scale had satisfactory reliability ( $\alpha = 0.91$ ).

### 10.3.4. Ethical considerations

The present study was accepted by the Norwegian Social Science Data Services (NSD). All participants received an online informed consent form prior to beginning the experiment, giving a brief overview of the study. They were ensured that all data would remain anonymous and confidential, and that IP addresses would not be recorded. In order to avoid demand characteristics and bias, the true purpose of the study was masked. Participants were told the aim of the study was to measure general attitudes toward societal issues. In the end, all participants received a debriefing about the true nature of the experiment and were informed that the newspaper articles were fictitious. The debriefing form was also given to those who did not complete the entire experiment.

## 11. Results

### 11.1. Preliminary analyses

#### 11.1.1. Manipulation check

The disgust-eliciting article was rated as more disgusting ( $M = 4.54$ ,  $SD = 1.54$ ) than the control article ( $M = 1.81$ ,  $SD = 1.30$ ),  $t(193) = 13.194$ ,  $p < 0.001$ ,  $d = 1.9$ , indicating that the experimental manipulation succeeded in eliciting feelings of disgust.

**Table 2**  
Descriptives and comparisons for all variables.

Emotions	Disgust condition		Control condition		Independent samples <i>t</i> -test		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Primary ingroup	3.00	1.00	3.09	1.01	0.56	193	0.57
Secondary ingroup	3.11	0.96	3.06	1.03	−0.29	193	0.77
Primary outgroup	3.51	1.24	3.27	1.10	−1.41	193	0.15
Secondary outgroup	2.33	1.10	2.74	1.07	2.68	193	0.008
Positive ingroup	3.82	1.19	4.00	1.3	1.11	193	0.26
Negative ingroup	2.29	1.08	2.13	1.20	−0.96	193	0.33
Positive outgroup	2.46	1.40	2.33	1.43	−0.63	193	0.52
Negative outgroup	3.38	1.59	3.68	1.45	1.35	193	0.17

Note: *N* = 195.

**Table 3**  
Estimated marginal means and standard deviations for primary and secondary emotions attributed to ingroup and outgroup, depending on experimental condition.

Emotions	Disgust condition		Control condition	
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Secondary ingroup	0.39	0.01	0.38	0.01
Secondary outgroup	0.29	0.01	0.34	0.01
Primary ingroup	0.37	0.01	0.39	0.01
Primary outgroup	0.43	0.01	0.41	0.02

### 11.1.2. Valence and humanness check

Replicating the findings of Study 1, there was a significant difference in humanness ratings between the primary and secondary emotions, which we had categorized as negative,  $t(183) = -27.47, p < 0.001, d = -2.1$ , while there was no significant difference in valence between them,  $t(183) = -0.440, p = 0.661, d = -0.01$ . As expected, the primary and secondary emotions we categorized as positive significantly differed in humanness,  $t(183) = -26.58, p < 0.001, d = -1.96$ . However, for the valence of the primary and secondary emotions there was a significant, albeit small, difference in the positive groupings,  $t(183) = 5.70, p < 0.001, d = 0.45$ . Inspecting the ratings, there was only a trivial difference between the valence of primary positive emotions ( $M = 6.13, SD = 0.70$ ), and the valence of secondary positive emotions ( $M = 5.92, SD = 0.72$ ). As the difference between the valence ratings was relatively small, it was not expected to play a large role in the outcomes of the study.

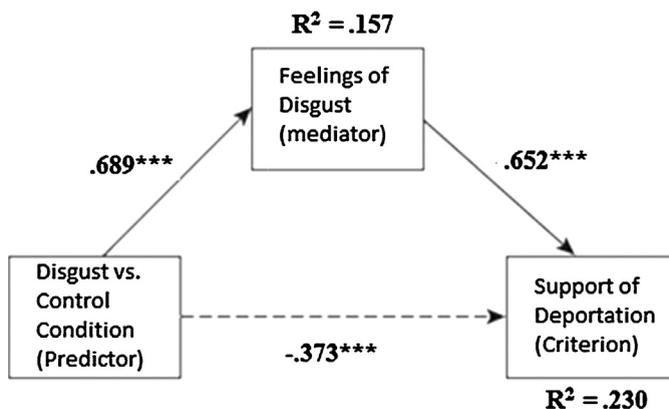
### 11.1.3. Number and valence of emotion attribution

More emotions in total were attributed to Norwegians ( $M = 6.13, SD = 1.10$ ) than to the Roma ( $M = 5.92, SD = 1.43$ ),  $t(194) = -2.25, p = 0.026, d = 0.16$ . Specifically, without taking the experimental manipulation into account, more positive emotions were attributed to Norwegians than to the Roma,  $t(194) = 12.45, p < 0.001, d = 0.89$ , and more negative emotions were attributed to the Roma than to Norwegians,  $t(194) = -9.83, p < 0.001, d = 0.70$ . Means and standard deviations for the disgust and control condition for all variables are presented in Table 2.

## 11.2. Dehumanization

To test for the experimental effects of the disgust (vs. control) condition on the attribution of primary and secondary emotions to the in- and outgroup, we ran a 2 (within: outgroup vs. ingroup)  $\times$  2 (between: control vs. experimental condition) ANOVA. Humanness and valence ratings were added as covariates. While the interaction between both factors had a marginally significant multivariate effect,  $F(2, 173) = 2.64, p = 0.074, \eta_p^2 = 0.030$ , it had a significant effect on attribution of secondary emotions,  $F(1, 174) = 4.97, p = 0.027, \eta_p^2 = 0.028$ . Follow-up analyses showed that participants in the experimental disgust condition attributed less secondary emotions to Roma than those in the control group ( $F(1, 193) = 2.69, p = 0.008, \eta_p^2 = 0.03$ ). No significant difference between the disgust and control group was found in the attribution of primary emotions to the ingroup versus outgroup,  $F(1, 174) = 3.02, p = 0.08, \eta_p^2 = 0.017$ . The estimated marginal means for each condition are presented in Table 3.

We also looked at the experimental effects on a dehumanization index similar to another study on dehumanization (Eyssele & Ribas, 2012) that would allow us to use it in the mediation model tested in hypothesis 3. The index was computed using the following procedure: [Secondary emotions attributed to the ingroup − secondary emotions attributed to the outgroup]. Hence, a value of zero means that there was no difference in the attribution of secondary emotions between the ingroup and outgroup, while a positive number indicates dehumanization tendencies of the Roma (i.e., the outgroup). As hypothesized, there was a significant difference between the disgust and control condition on the measure,  $t(193) = -2.37, p = 0.018, d = 0.35$ , with more secondary emotions being attributed to Norwegians than to the Roma in the experimental condition ( $M = 3.11, SD = 0.96$ ) than in the control group ( $M = 2.33, SD = 1.10$ ).



**Fig. 2.** Standardized regression coefficients for the relationship between disgust (vs. control) condition and support of deportation as mediated by feelings of disgust are displayed. \*\*\*  $p < 0.001$ .

### 11.3. Support of deportation

We found no direct effect of the disgust manipulation on the deportation measure  $t(193) = -1.06$ ,  $p = 0.28$ . However, a mediation analysis following the steps of [Baron and Kenny \(1986\)](#), and using a bootstrapping procedure ([Preacher & Hayes, 2004](#)) indicated a substantial indirect effect which was mediated by the disgust manipulation check (see [Fig. 2](#)).

A regression analysis,  $F(1, 193) = 174.07$ ,  $p < 0.001$ , showed that the disgust condition predicted feelings of disgust, as measured by the manipulation check. Next, another regression,  $F(1, 193) = 35.816$ ,  $p < 0.001$ , showed that the mediator (i.e., feelings of disgust) was positively related to support of deportation. Last, a hierarchical regression analysis was used to assess the unique, as well as combined effects of the independent variables on support of deportation. The disgust (vs. control) condition was entered in block one, accounting for 0.6% of the variance in support of deportation,  $F(1, 193) = 1.134$ ,  $p = 0.28$ . Feeling of disgust was entered in block two, with the two variables now accounting for 23% of the variance in support of deportation, ( $R^2 = 0.23$ ,  $F(2, 192) = 28.6$ ,  $p < 0.001$ ). The effect of the disgust (vs. control) condition on support of deportation became significant after inclusion of the mediator variable (i.e., feelings of disgust),  $\beta = -0.373$ ,  $p < 0.001$ .

Application of [Preacher and Hayes' \(2004\)](#) bootstrapping procedure with a sample of 5000, showed that the experimental condition had an indirect, positive effect on deportation that was mediated by the disgust variable ( $B = 1.08$ ,  $SE = 0.17$ , 95% CI [0.75, 1.43]). The significance of the indirect effect was also tested with a Sobel test ([Sobel, 1982](#)), which confirmed that the indirect effect was significant, ( $z = 6.83$ ,  $p < 0.001$ ).

### 11.4. Dehumanization as a mediator

To assess whether the dehumanization measure mediated the link between the disgust condition and support of deportation, the same regression and bootstrapping procedure following [Preacher and Hayes \(2004\)](#) was conducted. The proposed mediation model included disgust vs. control condition as the independent variable, dehumanization as a mediator, and support of deportation as the outcome measure. However, dehumanization did not significantly mediate the link between the experimental condition and the deportation measure ( $B = 0.01$ ,  $SE = 0.03$ , 95% CI [-0.035, 0.11]).

## 12. General discussion

The present paper aimed to experimentally demonstrate the potentially detrimental effects of media portrayals for intergroup and intercultural relations. Results showed that exposing participants to a newspaper article focusing on the allegedly low hygienic standards of a minority group can lead to dehumanization tendencies of this group and even to the most extreme forms of bias, in this case deportation support. In contrast to previous studies on the relationship between disgust and prejudice (i.e., [Hodson et al., 2013](#)), the present study used a real rather than fictional outgroup—namely the Roma. Furthermore, by experimentally manipulating the feeling of disgust, the causality between feelings of media-induced disgust and different types of prejudice could be elucidated.

As prejudice toward the Roma is highly prevalent, and because dehumanization is related to a higher likelihood of discrimination ([Pereira, Vala, & Leyens, 2009](#)), it is of great value to get a better understanding of the reasons behind this prejudice. Even though the aim of this research was more on a theoretical level, with the psychological mechanisms being in focus, there are also certain practical implications of the findings. In order to reduce the discrimination and dehumanization tendencies toward outgroups, it is important to first address the emotional underpinnings which lead to dehumanization.

### 12.1. Disgust-eliciting media portrayals and dehumanization

The results from Study 2 indicated that those who were exposed to a media article presenting the Roma as having low hygienic standards, dehumanized this outgroup to a larger extent than those exposed to a neutral article about the same outgroup. Furthermore, the findings showed that even though it is highly likely that the participants had been exposed to negative media articles about the Roma previously, there still was an experimental effect of media exposure on their prejudice tendencies. These findings demonstrate how media portrayals of outgroups can have serious implications, being that dehumanization is considered an extreme form of prejudice (Haslam & Loughnan, 2012). The dehumanization measure used in the current study constitutes an implicit measure of prejudice, because participants are expected to be unaware of this method of attributing emotions (Fazio & Olson, 2003; Leyens et al., 2000). Thus, the findings therefore suggest that implicit forms of prejudice also can be affected by feelings of disgust.

Although there was a significant effect on the relationship between feelings of disgust and dehumanization tendencies toward the Roma, the effect size of this relationship was quite small ( $d = 0.35$ ). This indicates that the condition did not have a large impact on dehumanization tendencies. A reason for this could be that the manipulation itself was not strong enough to induce a large difference between the control and experimental group. Real media portrayals of the Roma often liken them to animals and associate them with filth (Eggesvik, 2013; Rostad, 2013; Rud, 2011). Therefore, the articles used in the current study might have been less extreme leading to weaker effects. Even though the results from the manipulation check showed that the disgust-eliciting article was highly effective in inducing feelings of disgust, this effect could have been more temporary and bound to the Roma presented in the article without generalizing to the entire outgroup. Last, the preconceived attitudes and feelings about the Roma could have clouded the difference between the participants in the disgust and control condition, and therefore could have made it more difficult to find a strong effect. Test-retest designs could here provide more robust evidence in future studies.

The attribution of primary emotions to the ingroup and outgroup was also investigated to see if it was in line with previous research. More primary emotions were attributed to the Roma than to Norwegians across the experimental conditions. This was unexpected, because primary emotions are considered equally common for animals and humans and should therefore be equally attributed to ingroups and outgroups (Leyens et al., 2000, 2001). A reason for this might be that the participants found the primary emotions to fit better with their perception of the Romas than of Norwegians. For instance, the negative primary emotions “pain,” “suffering,” “loneliness,” and “sorrow” were attributed more to the Roma, which could be due to their poor living conditions rather than dehumanization. In addition, Eysel and Ribas (2012) also found that more primary emotions were attributed to the Roma than to the ingroup, a finding which is in line with the present study.

### 12.2. Feelings of disgust and support of deportation

The experimental manipulation had an indirect effect on support of deportation, with the disgust-eliciting media portrayal indirectly leading to substantially stronger support to deport the Roma out of Norway. This shows the impact media portrayals can have on strong forms of bias, influencing extreme political views. The fact that the effect was fully mediated by the feeling of disgust is in line with the study by Hodson et al. (2013), who observed a similar indirect relation regarding attitudes toward a fictitious outgroup. However, the previous study looked at negative attitudes in general as a dependent measure. The present study extended the previous findings by looking specifically at support of deportation as a contextually relevant dependent measure. As questions regarding deportation of the Roma are part of contemporary political debate (Brekke, 2013; Eggesvik, 2013; Rostad, 2013; Rud, 2011), it was interesting to see how the disgust-eliciting media articles indeed could influence the attitudes toward deportation out of Norway. Based on our results and as the Roma are portrayed in a highly negative manner in many Norwegian media articles (Eggesvik, 2013; Rostad, 2013; Rud, 2011), it is therefore not unlikely that these portrayals in daily newspapers may influence people’s views on whether the Roma should be deported or not.

It should be noted that a suppressor effect was present, as the effect of the independent variable (disgust condition) on the dependent variable (support of deportation) only became statistically significant after the inclusion of the mediator (feelings of disgust). Crucially, it turned from being positive to being negative. This somewhat unexpected finding suggests that controlling for the explicit disgust reaction to the article may have revealed empathic feelings toward the Roma which the experimental manipulation also elicited.

### 12.3. Dehumanization as a mediator

We did not find support for the hypothesis that dehumanization mediated the link between the experimental condition and support of deportation. The experimental condition did not have a significant direct effect on support of deportation, and it was only through the feeling of disgust (as measured by the manipulation check), that this effect was apparent. This lack of mediation might be due to the fact that effect of the experimental condition was more short-lasting, which made it difficult to observe a strong effect on the dehumanization and support of deportation measure.

#### 12.4. Limitations

Certain limitations of this study have to be noted. First, the dependent measure of support of deportation was based on a scale developed for the purposes of this research. The scale was developed because, to our knowledge, no other scale measuring support of deportation within the context of the current study exists. Thus, the scale had not been previously validated. In addition, the scale was not correlated with the implicit dehumanization measure of prejudice which could have been an indicator of validity. However, this might not be of concern, as many implicit and explicit measures of prejudice in fact show low correlations (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997) and often predict different types of behavior (Dovidio, Gaertner, & Kawakami, 2002). Indeed, the scale showed high reliability in this study and may therefore be considered an adequate measure for the present purposes.

The second limitation concerns the representativeness of the samples used. As the samples were not drawn randomly from the population, this lack of representativeness may be an issue. There are differences in the Norwegian population regarding views on immigrants, which probably also includes views on the Roma as an ethnic minority. In general, elderly have been found to show more prejudice against immigrants, than younger people (Stewart, Hippel, & Radvansky, 2009). In addition, it is highly plausible that views on immigrants also differ depending on where in Norway you live, and if you have encountered people from the Roma minority or not. Because the participants in the current study were mainly students, and more highly educated, it is likely that their attitudes differed from the general Norwegian population. Future research on this topic should therefore take measures to ensure that a broader spectrum of participants from different age groups and geographical locations are included in the studies like this.

Another limitation is that it was not possible to discern the specific emotion elicited by the newspaper article. Although levels of disgust were measured, we did not control for the possibility of other emotions such as anger or sadness having similar or even opposing effects. In other words, the present study cannot show whether the observed effects are exclusive to feelings of disgust. Future research should therefore investigate the role of other media-induced emotions on dehumanization and support of deportation.

#### 12.5. Ethical considerations

The present study used fictitious newspaper articles about the Roma, designed to elicit feelings of disgust. In contrast to previous studies on the link between disgust and prejudice which focused on fictitious outgroups, the present study used a real outgroup. This could be ethically problematic because we manipulated a feeling of disgust toward the Roma as a group. The articles used in the current study focused on cultural habits to evoke feelings of disgust, and did not include animal-like connotations as is common in Norwegian media portrayals of the Roma. Therefore, we believe it is likely that the newspaper articles about the Roma used in this study are less disgust-eliciting than the usual articles written about them in the public media, which often include references to feces and animal-like connotations (Eggesvik, 2013; Rud, 2011). As the experimental effect was quite small, this might indicate that the disgust-eliciting effect indeed was short-lived. Furthermore, the debriefing was made so that all participants, also those who discontinued at any point, receive a message that the articles were fictitious and the stories fabricated.

### 13. Conclusion

The present study highlights the potentially destructive effects negative media-portrayals can have on intergroup relations in multicultural societies. As demonstrated in this research, depictions of low hygienic standards among minority groups can lead to feelings of disgust, which in turn can lead individuals into showing implicit and explicit forms of negative outgroup bias. Against the background of these findings, we argue that the way media portrays outgroups can influence bias toward them. Last, the present research extended previous studies on the relation between disgust and prejudice by demonstrating such effects are ecologically valid as they can be also observed not only toward fictional, but also toward real outgroups.

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