

The Attribution of Primary and Secondary Emotions to the In-Group and to the Out-Group: The Case of Equal Status Countries

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ABSTRACT. We examined the attribution of primary and secondary emotions in the context of equal status groups with a non-conflictual relationship, that is, Germans and French. In Study 1 ($N = 169$), we found that in such an intergroup context, there was no differential attribution of secondary emotions but an over-attribution of primary emotions to the out-group. Only high identifiers tended to attribute more secondary emotions to the in-group than to the out-group. In Study 2 ($N = 423$), the role of the identification with the in-group and a superordinate group (Europe) in the process of infrahumanization was examined. Participants' national versus European identification was primed. The results did not differ between these two conditions. As in Study 1, an over-attribution of primary emotions to the out-group was observed. Concerning the secondary emotions, the classical infrahumanization effect occurred, that is, an over-attribution of secondary emotions to the in-group.

Keywords: primary and secondary emotions, infrahumanization, equal status groups, identification

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PEOPLE CATEGORIZE THEIR SOCIAL ENVIRONMENT into in-groups and out-groups and it has been shown in many different contexts that group members exhibit in-group favoritism biases or ethnocentrism (Leyens et al., 2000). Individuals naturally endow social groups with essences, thereby defining their very nature (Haslam, Rothschild, & Ernst, 2000). Recent research suggests that in intergroup contexts individuals tend to ascribe an essential humanness to their own group, and to deny the out-group this same essence (Leyens et al., 2000; Leyens et al., 2001; Leyens et al., 2003). This “emotional side of prejudice” has been labeled “infrahumanization” (Leyens et al., 2000). It would appear that this strategy is most effective when the in-group can or does perceive the out-group as fundamentally different, in status, in power, in race, for example, than they themselves. On the other hand, the tendency to derogate the out-group is quite ubiquitous (Brewer & Brown, 1998). Thus, even two groups who consider each other *not* to differ in a fundamental way – even two groups, for example, who cannot claim large differences in superiority or power – may show a related kind of bias. The present research was motivated by the belief that groups who consider themselves to be equal in superiority may still show intergroup biases in the manner in which they claim possession of and attribute essential features to the in-group and the out-group.

The aim of the present research was twofold: First, we wanted to investigate the attribution of primary and secondary emotions in the case of equal status countries with a non-conflictual relationship in order to establish possible limits to the effect. We took as equally superior groups the French and the Germans in the European Union. Secondly, we wanted to further analyze the role of group identification in the process of infrahumanization. More precisely, we are interested in the effects of identification with the in-group versus a common superordinate group.

HUMAN AND INFRAHUMAN ESSENCES

Leyens et al. (2001) propose that people will attribute themselves those characteristics that are considered uniquely human and that out-groups will in some cases be credited with less human characteristics than the in-group. Thus, the out-group receives an incomplete human essence or an *infra-human* essence. There are several uniquely human characteristics, including intelligence, reasoning, language, and the capacity to experience *sentiments* (Leyens et al., 2000). In the following, we focus on sentiments and elaborate the term more precisely, thereby differentiating it from the term *émotions*.

The word *sentiment* appears in French and other Roman languages, and can be distinguished from the word *émotion* (e.g., Demoulin et al., 2004a; Leyens et al., 2000; Leyens et al., 2001). The distinction between these words is similar to the distinction between primary and secondary emotions that is made in the anglophone-based psychology literature. The notion of *émotion* refers to immediate,

unbidden, and rapid hedonic reactions to observable eliciting stimuli or conditions. For example, rage and fright are *émotions*. Consistent with Damasio's (1994) definition of primary emotions, such reactions are basic, and built into the limbic system. They are thus also responses that are observed in animals. One might say that the capacity for experience *émotions* is one form of animal residue in humans. In contrast, *sentiments* are longer lasting states that involve "cognition, morality, evolution, memory and an active, rather than reactive, role of the person" (Leyens et al., 2000, p. 189). Admiration and contempt are examples of *sentiments*. Consistent with Damasio's (1994) definition of secondary emotions, such reactions involve also cerebral cortex processing. In folk theory at least, it is the experience of these states that is fundamental to being human and that differentiates us from animals (Leyens et al., 2000). In the present paper, the terms primary versus secondary emotions will be used. Since secondary emotions are considered to be a feature of the human essence, Leyens et al. (2000) reasoned that in intergroup settings, individuals should readily attribute the capacity to experience secondary emotions to their in-group. In contrast, they should in fact deny such a capacity to the out-group (i.e., the "infrahumanization hypothesis").

In an initial demonstration of this effect, experimental participants were faster at associating names reminiscent of their in-group (French or Spanish) than names associated with an out-group (North African or Flemish names) with a group of words denoting secondary emotions. At the same time, they more readily associated out-group than in-group names with primary emotions (Paladino et al., 2002). In order to investigate the assumption that the differences in response latencies observed in the initial study were due to the role of secondary emotions in characterizing the in-group, Leyens and colleagues (2001) conducted another series of studies in which they examined the relative attribution of secondary emotions to the in-group and the out-group. In the first study of this series, members of high- and low-status groups were instructed to select from a list of proposed positive primary and secondary emotions those that characterized the in-group or the out-group (target group was varied between-subjects; Leyens et al., 2001, Experiment 1). The high-status group consisted of students from mainland Spain (Peninsulars) and the low-status group of students from the Canary Islands (Canarians). As expected, both groups selected more secondary emotions as descriptive of the in-group than the out-group. Moreover, both groups attributed more primary emotions to the out-group than to the in-group. Because only positive items were used in this study, a second study was then conducted to generalize the effect to negative secondary emotions.

In the second study, the participant groups were again Peninsulars and Canarians (Leyens et al., 2001, Experiment 2). This time, the list of possible descriptors that was provided to participants contained both positive and negative primary and secondary emotions. Participants selected the characteristics that described either the in-group or the out-group. In a replication of the result obtained in the first study, participants attributed more positive *and* negative

secondary emotions to the in-group than the out-group. There was no difference in the attribution of primary emotions.

In the meantime, the results of a number of studies using different paradigms converge to suggest that members of groups who perceive themselves as fundamentally different from an out-group spontaneously attribute more secondary emotions to their group than to the out-group (for a review see also Demoulin et al., 2004b). More inconsistent findings were obtained regarding the attribution of primary emotions. In some cases, no differences in the attribution of primary emotions have been found (e.g. Leyens et al., 2001, Experiment 2), but in other cases, an over-attribution of primary emotions to the out-group was reported (Leyens et al., 2001, Experiment 1).

Furthermore, in characterizing the conditions under which these effects occur, Leyens et al. (2000) stated that “[. . .] it is not our thesis that all out-groups are infrahumanized to the same extent by everybody at all times. For infrahumanization to occur, the members of the out-group have to be considered radically different from the discriminators and to be attributed a different essence. Conflict between groups may be a facilitating factor for infrahumanization, but it is neither necessary nor sufficient” (p. 194). Infrahumanization has also been observed for groups with a comparable status but with a conflictual relationship (British versus Germans; Viki, 2004). Moreover, it has been shown that infrahumanization occurs between groups with no conflict but a difference in status (Belgian Walloons versus French, Americans versus Mexicans; Demoulin et al., 2005). In the present research, we examine the extent to which the infrahumanization effect generalizes to equal status countries with no conflictual relationship.

IDENTIFICATION WITH THE IN-GROUP AND INFRAHUMANIZATION

Infrahumanization theory holds that people associate the best (i.e. the human) essence with their group because of the primacy of the in-group (Leyens et al., 2003). If people do not identify with their group, there is no need for infrahumanization as group members do not feel the need to perceive the in-group as essentially superior to the out-group. However, as Leyens et al. (2003) suggest, “[. . .] if the ingroup puts the people’s identity at stake, then it becomes important to explain the differences between the cherished ingroup and other groups” (p. 709). They report results that the choice of secondary emotions for the in-group increased with the level of identification but no infrahumanization occurred in the condition of low in-group identification. In a similar vein, Viki (2004) found that only high identifiers infrahumanized the out-group in a context of conflicting national groups (British and Germans). Thus, identification with the in-group can be considered as a crucial factor for infrahumanization. The more people identify with their in-group the more they should show infrahumanization.

OVERVIEW OF THE PRESENT STUDIES

In two studies – each of them conducted simultaneously in Germany and in France – the present questions were examined by using a procedure adopted by Leyens and colleagues (2001). Specifically, participants read a list of positive and negative primary and secondary emotions, as well as fillers related to competence, sociability, and intelligence and selected the items that characterized the target group under investigation in the questionnaire (Germans or French). Characteristics of the participants, such as the extent to which they identified with their own country and with the European Union, the extent to which they believed that the countries of France and Germany enjoyed equal status in the European Union, and their perception of the degree of conflict experienced between the two countries, were also measured. Furthermore, in Study 2, we analyzed the influence of identification with the in-group on the attribution of primary and secondary emotions. To do so we used a modified version of the procedure used by Mummendey, Klink and Brown (2001) in order to prime participants national versus European identification.

PRETESTS

In order to develop the list of positive and negative primary and secondary emotions, as well as lists of words related to competence and sociability, participants who did not take part in the main study completed pre-tests on the meanings of the words (French: $N = 71$; German: $N = 59$) as well as their valence.¹ The final list that was constructed on the basis of the pre-tests consisted of the four categories of words composed of 6 items each, and the words *intelligence* and *talent*. The four categories included primary emotions (positive: *joy, pleasure, surprise*; negative: *fright, pain, sadness*), secondary emotions (positive: *happiness, admiration, hope*; negative: *indignation, melancholy, contempt*), competence items (high competence: *sense of responsibility, creativity, efficiency*; low competence: *laziness, opportunism, negligence*), and sociability items (high sociability: *sociability, hospitality, generosity*; low sociability: *insecurity, shyness, naivete*) (see Appendix for the French and German translations of the words).

The participants in the pre-tests were asked to indicate on 8-point scales the degree to which the emotion words could be uniquely felt by human beings or could also be used to describe animals (0 = *can be applied to an animal*, 7 = *is exclusively human*). It was confirmed that the emotions that appeared in the questionnaire were distinguished as primary or secondary emotions to equal degrees in French and in German and that there were no differences across the two languages.

Primary and secondary emotion words as well as all competence and sociability items were also pre-tested for valence. Participants indicated on 8-point scales how desirable it is in general to feel the emotions and possess the competence and sociability traits (0 = *not at all desirable*, 7 = *very desirable*). There

was no difference in valence between the primary ($M = 3.99$, $SD = .89$) and secondary ($M = 4.03$, $SD = .78$) emotions, $t(58) = -.38$, *ns*. As expected, the positive emotions ($M = 6.09$, $SD = .54$) were rated more positively than the negative ones ($M = 1.86$, $SD = 1.28$), $t(58) = 24.90$, $p < .001$. However, sociability terms were rated somewhat more positively ($M = 4.0$, $SD = .57$) than competence terms ($M = 3.81$, $SD = .54$), $t(129) = -2.92$, $p < .05$. As expected, the positive competence and sociability terms ($M = 6.17$, $SD = .63$) were rated more positively than the negative ones ($M = 1.67$, $SD = .77$), $t(129) = 45.26$, $p < .001$.

STUDY 1

In Study 1, adult non-students in Germany and France were asked to complete a questionnaire that inquired about the typical French person or the typical German person. Thus, in-group and out-group perceptions were assessed in a between-subjects design.

We predicted that participants would perceive France and Germany as having equal status in the European Union and would perceive low conflict in their intergroup relations. This prediction constituted a test of our assumption that we had indeed chosen countries without fundamental status differences and without intergroup conflict. If it was confirmed we could then ask if inhumanization occurs in such an intergroup context. Furthermore, we wanted to know if the attribution of primary and secondary emotions would be moderated by the level of identification with the country of origin and with the superordinate group "Europe".

Method

Participants

A total of 169 participants took part in the study, 90 in France and 79 in Germany. One participant in France indicated that his nationality was not French and so was excluded from analysis. Two other participants did not report their nationality, and were thus excluded from analysis as well. Of the remaining 166 participants, 64 were male and 101 female (one participant did not indicate his or her gender). The mean age of the participants was 29.29 years ($SD = 12.89$).

Design and Procedure

The study conformed to a 2 (participant group: German vs. French) \times 2 (target group: German vs. French) factorial design with both factors as between-subjects variables and the words chosen to describe the respective group as the dependent variable.

Participants were approached in public places (i.e., parks, cafés, and train stations) and were asked to take part in a study dealing with "the image that the

French (Germans) have of themselves and their images of other groups". In France, the nationality of the experimenter was French, and in Germany the experimenter was German. After they had agreed to participate in the study, the experimenter produced a questionnaire and pencil and said that the questionnaire consisted of three parts, and that they should read the instructions for each part carefully. Full anonymity was assured, and open and honest answers to the questions were encouraged. After they had filled in the questionnaires, participants were thanked and carefully debriefed.

The first part of the questionnaire contained a 6-item inventory measuring national identification following Leyens et al. (2001) (e.g., "I feel emotionally attached to other French/Germans."), and two items measuring intergroup conflict (e.g., "I think that the <in-group> are superior to <out-group> in many domains."). Participants expressed their agreement or disagreement with the statements on 7-point rating scales (1 = *do not agree at all*, 7 = *totally agree*). After having answered these questions, participants received a list of 26 words in one of two possible random orders. Participants were instructed to select from this list 10-12 words that described a member of the target group under consideration in their version of the questionnaire.

After having selected the 10-12 words that they thought best characterized the target group of interest in the questionnaire, participants completed a 6-item scale measuring European identification (e.g., "I feel emotionally attached to other Europeans."). They then filled out a 3-item scale measuring the perception of the status of the Germans and the French in the European Union (e.g., "When I think of the countries of the European Union, I think that France and Germany have a comparable political/economical/social status."). For both scales, participants expressed their agreement or disagreement on 7-point rating scales (1 = *do not agree at all*, 7 = *totally agree*). Finally, participants answered some demographic questions.

Results

Preliminary Analyses

The six items measuring *national identification*, and the six items measuring *European identification* were averaged to create a single score for each construct (Cronbach Alphas = .79 and .76, respectively). The national identification score was correlated slightly positively with the European identification score, $r(161) = .17, p < .05$.

The three items measuring *status equality* and the two items measuring *conflict* were also averaged to form single scores (Cronbach Alpha = .75 for the status variable, and the correlation between the conflict items was $r(164) = .45, p < .001$). There was a negative relationship between perceived status equality and perceived conflict, $r(163) = -.22, p < .01$

Perceived Status and Perceived Conflict

The mean for the status equality score was $M = 4.28$ ($SD = 1.24$), indicating that Germans and French perceive the two groups within the European Union as having a comparable political, economic, and social status. The mean for the conflict score was $M = 2.66$ ($SD = 1.48$) indicating the participants do not perceive the intergroup relation to be conflictual. In sum, according to the participants, and consistent with our guiding assumption, Germany and France are indeed countries without fundamental status differences and without a highly conflictual relationship. However, the agreement concerning the status equality was only slightly above the scale mid-point.

Attribution of Primary and Secondary Emotions

Participants selected a mean number of 9.68 words from the 26 words presented on the list to describe the respective group.

A 2(participant group: French vs. German) \times 2(target group: French vs. German) \times 2(valence: positive vs. negative) \times 2(emotion type: primary vs. secondary) ANOVA with repeated measures on the last two variables was conducted on the number of primary and secondary emotions selected by the participants. This number could vary between 0 and 3.

The interaction of theoretical importance was the three-way interaction between participant group, target group, and type of emotion. This interaction was statistically significant, $F(1, 162) = 7.03$, $p < .01$, and it was not qualified by valence, $F < 1$, *ns*. The means of the attribution of primary and secondary emotions to in-group versus out-group members are presented in Figure 1. There was no reliable difference for the attribution of secondary emotions to in-group ($M = 1.10$, $SD = .59$) versus out-group members ($M = 1.00$, $SD = .63$), $t < 1$, *ns*.

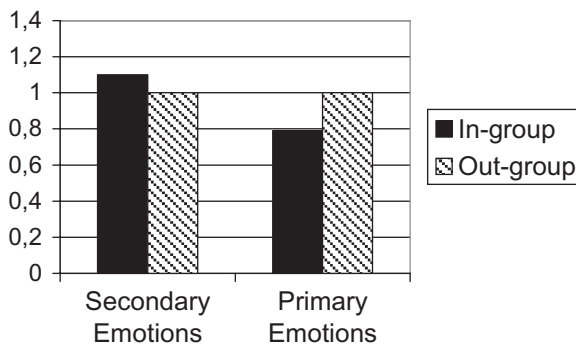


FIGURE 1. Mean number of primary and secondary emotions attributed to the in-group and to the out-group (Study 1).

However, more primary emotions were attributed to out-group ($M = 1.03$, $SD = .57$) than to in-group members ($M = .79$, $SD = .61$), $t(164) = -2.59$, $p < .05$.

Moderating Factors. In order to investigate if the reported interaction between participant group, target group, and type of emotion was moderated by *national identification*, a 2(participant group: French vs. German) \times 2(target group: French vs. German) \times 2(valence: positive vs. negative) \times 2(emotion type: primary vs. secondary) ANOVA with repeated measures on the last two factors and national identification as a continuous moderating factor was conducted on the number of primary and secondary emotions selected by the participants. The interaction of interest for our purposes was between participant group, target group, type of emotion, and national identification, and this interaction was marginally non-significant, $F(1, 157) = 2.90$, $p < .10$.

In order to further investigate the role of national identification in attributing primary and secondary emotions, we split up the participants in low ($N = 79$) and high ($N = 72$) national identifiers ($Mdn = 5.0$). Participants with low national identification attributed more primary emotions to the out-group ($M = .97$, $SD = .57$) than to the in-group ($M = .67$, $SD = .57$), $t(77) = -2.34$, $p < .05$ and made no difference in the attribution of secondary emotions to the in-group ($M = 1.19$, $SD = .60$) and the out-group ($M = 1.10$, $SD = .65$), $t(77) = .76$, *ns*. However, for those with high national identification, the difference in the attribution of primary emotions to the in-group ($M = .85$, $SD = .63$) and to the out-group ($M = 1.0$, $SD = .56$) was not statistically significant, $t(70) = -1.08$, *ns*, but there was a marginally significant effect such that more secondary emotions were attributed to in-group ($M = 1.10$, $SD = .54$) than to out-group ($M = .85$, $SD = .51$) members, $t(70) = 1.93$, $p < .07$.

The same 2(participant group: French vs. German) \times 2(target group: French vs. German) \times 2(valence: positive vs. negative) \times 2(emotion type: primary vs. secondary) ANOVA with repeated measures on the last two factors was conducted on the number of primary and secondary emotions selected by the participants and with *European identification* as a continuous moderating factor. The interaction between target group, participant group, and type of emotion was not qualified by European identification, $F < 1$, *ns*.

Discussion

In Study 1, we investigated the attribution of primary and secondary emotions in an intergroup setting with groups of equal status in a non-conflictual intergroup relation. Our assumption that the intergroup context of Germans and French is such a situation was confirmed. The tendency to differentially attribute essences to the in-group and the out-group was observed among groups who consider themselves to be equal in status and not fundamentally different from each other. However, we did not find the classical inhumanization effect. Among

equal status groups there was no differential attribution of human essence (i.e. secondary emotions) to in-group and out-group. Instead, greater attribution of primary emotions to the out-group was observed. Perhaps equal status groups acknowledge on the one hand their common human essences, but simultaneously on the other hand strive for differentiation from the out-group by over-attributing infrahuman essence to them. The strategy that we observed in this study is one that is, perhaps necessarily more subtle than the perception that the out-group does not have the humanness to experience secondary emotions. In the present intergroup context, it would be hard for Germans or French to deny secondary emotions to the out-group. On the other hand, these groups could, more subtly, attribute more primary emotions, such as rage, to the out-group thereby expressing that it is experiencing more emotions that are also experienced by animals and consequently not exclusively human as it is the case for secondary emotions. It has been shown that not only secondary emotions are more easily associated with human beings than with animals, but also primary emotions are more rapidly associated with animals than with humans (Demoulin et al., 2004a).

Interestingly, degree of European identification had no influence on the attribution of primary and secondary emotions. However, we found a moderating role of national identification. Individuals with a low national identification attributed more primary emotions to the out-group than to the in-group but made no difference concerning the attribution of secondary emotions. High identifiers did not over-attribute primary emotions, but they did over-attribute secondary emotions to the in-group compared to the out-group. High identifiers are more concerned about the in-group and may thus feel a stronger need for differentiating in-group and out-group and therefore show the infrahumanization effect concerning secondary emotions. These results are consistent with previous research (Demoulin et al., 2009; Paladino, Vaes, Castano, Demoulin, & Leyens, 2004) and led us to further investigate the impact of the identification of ones group on infrahumanization. However, it should be noted that the median for national identification was relatively high, indicating that also participants belonging to the group of low identifiers are still identified with their country to a certain degree. For all participants in the present intergroup context, their social identity as a member of the national group seems to be important.

In sum, the mere intergroup context of Germans and French did not produce infrahumanization. Of course, in the present study, as well in studies by Rohmann (2003) using the same intergroup context, national and European identities were relatively strong, and the two kinds of identification were positively correlated. This observation suggests that individuals may represent this intergroup situation as involving two separate groups within one superordinate group (cf. Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). It has been shown that this leads to the most positive intergroup relations (Hornsey & Hogg, 1999, 2000a, 2000b). The representation of the intergroup context in this way could explain the fact that we did not observe the typical infrahumanization effect. Leyens et al. (2002)

report results supportive of this interpretation concerning men and women: For men and women from different academic departments an overattribution of secondary emotions to the in-group was observed. However, when male and female participants were classmates, which could be interpreted as being members of a superordinate inclusive group, infrahumanization did not occur.

Perhaps, then, Germany and France are spontaneously perceived as two groups within one group. In a second study, we attempted to create an “aggravated” intergroup context, that is, an intergroup situation in which the groups are still perceived as equal in status and as having a non-conflictual relationship, but with a higher salience of the identification with the respective group. This was done in order to further test the idea that identification with ones own group is a necessary condition for infrahumanization to occur – especially in the case of equal status countries.

Study 2

In Study 2, psychology students in Germany and France were asked to complete a questionnaire that inquired about the typical French person or the typical German person. Thus, in-group and out-group perceptions were assessed in a between-subjects design. Before they completed the same questionnaire used in Study 1, we manipulated participants’ positive national versus European identity following a modified version of the procedure used by Mummendey et al. (2001). For our purpose, it was important to assure that the priming of the national versus European identification does not change the perception of the intergroup situation as characterized by a low amount of conflict and the perception of Germany and France as equal status countries. The participants had to imagine that they should explain to someone why they preferred to live in their own country (Germany/France) rather than in the respective other country (France/Germany) or why they preferred to live in Europe rather than in North-America. After that, participants completed the same task as in Study 1 where they read a list of positive and negative primary and secondary emotions, as well as characteristics related to high and low competence and high and low sociability, and selected the items that characterized the target group under investigation in the questionnaire. Characteristics of the respondents, such as the extent to which they identified with their own country and with the European Union, the extent to which they believed that the countries France and Germany possessed an equal status in the European Union, and their perception of the degree of conflict experienced between the two countries, were also measured.

In the condition with high national identification, we expected the infrahumanization effect, that is, the attribution of more secondary emotions to the in-group than to the out-group. In the condition with a salient European identification, we did not expect a differential attribution of secondary emotions between in-group and out-group members. We had no assumption concerning the attribution of primary emotions.

Method

Participants

A total of 423 participants took part in the study, 199 in France and 224 in Germany. Seven participants in France indicated that their nationality was not French and were excluded from analysis. Three participants in Germany indicated that their nationality was not German and were excluded from analysis as well. Of the remaining 413 participants, 66 were male and 347 female. The mean age of the participants was 21.97 years ($SD = 4.13$).

Design and Procedure

The study conformed to a 2 (identity manipulation: national vs. European) \times 2 (participant group: German vs. French) \times 2 (target group: German vs. French) factorial design with all three factors as between-subjects variables and the words chosen to describe the respective group as the dependent variable.

Participants took part in psychology classes in Germany at the University of Münster and in France at the Universities of Clermont-Ferrand and Paris V and were asked to take part in a study dealing with “the image that the French (Germans) have of themselves and their images of other groups”. In France, the nationality of the experimenter was French, and in Germany the experimenter was German. After participants had agreed to take part in the study, the experimenter produced a questionnaire and pencil and said that the questionnaire consisted of four parts, and that they should read the instructions for each part carefully. Full anonymity was assured, and open and honest answers to the questions were encouraged. After they had filled in the questionnaires, participants were thanked and carefully debriefed.

The first part of the questionnaire consisted of the manipulation of a positive national versus European identity. The procedure was similar to the “intergroup comparison orientation” condition used by Mummendey et al. (2001). In the national identity condition of the present study, participants were asked to make a positive evaluation of their own nation (Germany/France) through intergroup comparison with the respective other group (France/Germany). In the European identity condition, they were asked to make a positive evaluation of Europe through intergroup comparison with North America. First, the participants were asked to generate reasons why they preferred to live in their home country (Europe) rather than in the respective other country (North-America). Following this, they were asked to generate more specific reasons concerning, social, cultural, and professional aspects.

After having generated these reasons, participants received the same list of 26 words used in Study 1 in one of two possible random orders. Again, participants were instructed to select from the list 10-12 words that described a member

of the target group (German/French) under consideration in their version of the questionnaire. The four categories were primary emotions, secondary emotions, competence items, and sociability items and the words intelligence and talent (see the description of the pretest for more details concerning the selection of the words and see the appendix for the French and German translations).

After having selected the 10-12 words that they thought best characterized the target group of interest in the questionnaire, participants completed the 6-item scales measuring European and national identification used in Study 1. The order of these two measures was counter-balanced. They then filled out the 3-item scale measuring the perception of the status of the Germans and the French in the European Union and the 2-item scale measuring intergroup conflict used in Study 1. For all these scales, participants expressed their agreement or disagreement with the statements on 7-point rating scales (1 = *do not agree at all*, 7 = *totally agree*). Finally, participants answered some demographic questions.

Results

Preliminary Analyses

The six items measuring *national identification*, and the six items measuring *European identification* were averaged to create a single score for each construct (Cronbach Alphas = .83 and .79, respectively). The national identification score was correlated positively with the European identification score, $r(411) = .29, p < .05$.

The three items measuring *status equality* and the two items measuring *conflict* were also averaged to form single scores (Cronbach Alpha = .72 for the status variable, and the correlation between the conflict items was $r(410) = .41, p < .001$). There was a slight negative correlation between perceived status equality and perceived conflict, $r(412) = -.14, p < .01$.

Priming of Positive Identification

The mean number of arguments participants gave was $M = 10.17$ ($SD = 3.67$). Most arguments were given related to the general question ($M = 3.36, SD = .91$), followed by arguments related to social aspects ($M = 2.51, SD = 1.19$), to cultural aspects ($M = 2.31, SD = 1.28$), and to professional aspects ($M = 1.99, SD = 1.36$). There were no differences regarding the number of positive reasons given in the priming of a positive national identity ($M = 10.32, SD = 3.76$) and a positive European identity ($M = 10.02, SD = 3.58$), $t(411) < 1, ns$. The order of the mean number of arguments written down to the respective questions corresponds to the order in which the aspects were presented in the questionnaire. This may be due to the fact that the participants wrote down those arguments that came to mind in response to the general question first, and then filled in the remaining arguments while thinking about the concrete aspects they were asked for in the following questions.

A 2 (priming: national vs. European identity) \times 2 (nationality: German vs. French) ANOVA on *national identification* revealed that there was no difference in the degree of national identification in the two priming conditions, $F(1, 409) = 2.5$, *ns*. However, there was a difference in the degree of national identification depending on the nationality of the participant: The national identification in France ($M = 5.23$, $SD = 1.02$) was higher than in Germany ($M = 4.37$, $SD = 1.06$), $F(1, 409) = 69.61$, $p < .001$.

A 2 (priming: national vs. European identity) \times 2 (nationality: German vs. French) ANOVA on *European identification* resulted in a marginal significant main effect of the two priming conditions, $F(1, 407) = 3.69$, $p < .07$. The degree of European identification was higher in the European ($M = 5.10$, $SD = .99$) than in the national condition ($M = 4.92$, $SD = 1.04$). There was also a difference in the degree of European identification depending on the nationality of the participant: The European identification in Germany ($M = 5.23$, $SD = .91$) was higher than in France ($M = 4.76$, $SD = 1.09$), $F(1, 407) = 22.18$, $p < .001$.

Levels of national and European identification differed from the scale midpoint in both countries, $t_s > 5.26$, $p_s < .001$.

Perceived Status and Perceived Conflict

As in Study 1, the mean of the status equality score ($M = 4.22$, $SD = 1.18$) indicates that Germany and France were perceived as having a comparable political, economic, and social status within the European Union. In addition, average conflict score ($M = 3.0$, $SD = 1.34$) showed that the participants did not perceive the intergroup relation to be a conflictual one. Importantly for our purposes, this perception of the intergroup setting was not changed by our priming of the national or European identity.²

Attribution of Primary and Secondary Emotions

Participants selected a mean number of 9.73 words from the 26 words presented on the list to describe the respective group.

A 2 (priming: national vs. European) \times 2 (participant group: French vs. German) \times 2 (target group: French vs. German) \times 2 (valence: positive vs. negative) \times 2 (emotion type: primary vs. secondary) ANOVA with repeated measures on the last two variables was conducted on the number of primary and secondary emotions selected by the participants. This number could vary between 0 and 3.

The interaction of theoretical importance was the four-way interaction between priming, participant group, target group, and type of emotion, and it was not statistically significant, $F < 1$, *ns*. However, the three-way interaction between participant group, target group, and type of emotion was statistically significant, $F(1, 405) = 50.60$, $p < .001$, and it was not qualified by valence, $F < 1$, *ns*. The means for the attribution of primary and secondary emotions to in-group

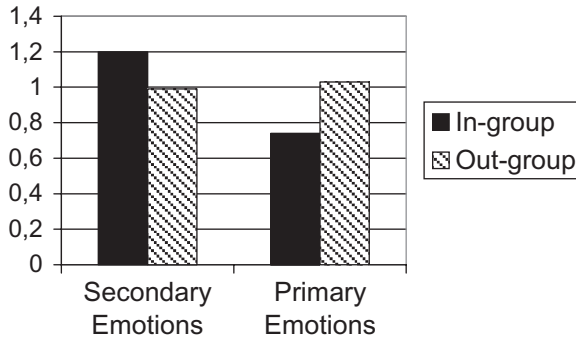


FIGURE 2. Mean number of primary and secondary emotions attributed to the in-group and to the out-group (Study 2).

versus out-group members are presented in Figure 2. As can be seen, more secondary emotions were attributed to in-group ($M = 1.20$, $SD = .49$) than to out-group members ($M = .99$, $SD = .53$), $t(411) = 4.14$, $p < .001$. Also, as in Study 1, more primary emotions were attributed to out-group ($M = 1.03$, $SD = .49$) than to in-group members ($M = .74$, $SD = .49$), $t(411) = -6.04$, $p < .001$.

Moderating Factors. The reported interaction between participant group, target group, and type of emotion is neither moderated by national identification, nor by European identification, $F_s < 1$, *ns*.

Discussion

In Study 2, we investigated the role of national and European identification in the process of attributing primary and secondary emotions to the in-group and an out-group. Importantly for our purposes, and despite the manipulation of national or European identity, the situation of Germans and French in the European Union was still perceived as an intergroup context with equal status non-conflicting groups.

Concerning the attribution of primary emotions, we observed the same pattern of results as in Study 1. More primary emotions were attributed to the out-group compared to the in-group. However, a different pattern of results appeared with regard to the attribution of secondary emotions: here, we found the classical inhumanization effect, that is, an overattribution of secondary emotions to the in-group compared to the out-group.

The manipulation of national versus European identification did not lead to different levels of identification in the two conditions. In the studies reported by Mummendey et al. (2001), in-group identification and in-group evaluation showed a stronger correlation with out-group derogation when participants were

primed with an intergroup comparison orientation compared to temporal and control conditions. However, there were no differences in the means of identification between the conditions. "What seems crucial here is that the very nature of intergroup comparisons implies a negative interdependence between positive evaluation of own group and devaluation of the other group." (Mummendey et al., p. 168).

In our study, we used the intergroup comparison manipulation in order to prime either national or European identity. It is possible, that by this intergroup comparison the respective identities were activated, leading to infrahumanization in both conditions. That is, perhaps regardless of the group to which we compare ourselves, we are more essentially human than the out-group after an intergroup comparison. It may be that in the European identity condition, European identity was salient (as the means indicate), but then the intergroup comparison activated a need for out-group derogation (which we did not measure) and infrahumanization. If the participants in the European identity condition had had the opportunity to attribute emotions to Europeans versus North-Americans, perhaps there would have been no infrahumanization on the level "Germans versus French" but on the higher level, that is, "Europeans versus North-Americans". Also it is possible that the European identity makes not only a common (European) identity salient but also the need for distinctiveness from other European countries.

GENERAL DISCUSSION

The present studies showed that Germans and French as equal status groups with no conflictual relationship do not differentiate between themselves on the basis of secondary emotions when the identification with the in-group is low and when no intergroup comparison between the groups is activated. In Study 1, the over-attribution of primary emotions to the out-group compared to the in-group appeared as a more subtle way of discriminating members of an equal status group. Only high-identifiers showed an over-attribution of secondary emotions to the in-group. In Study 2, we observed again an over-attribution of primary emotions to the out-group but also an over-attribution of typically human emotions to the in-group (infrahumanization). After group members made an intergroup comparison with a positive outcome for their own group (priming of a positive in-group identity including an intergroup comparison), infrahumanization on the basis of an over-attribution of secondary emotions to the in-group was observed. There was no difference between the conditions with national versus European identity, that is, the intergroup comparison *per se* led to infrahumanization.

One reason for the fact that in Study 1 we observed no infrahumanization on the basis of secondary emotions might be that the Germans and French saw themselves as two groups within one group (Europe). The fact that Germany and France

could be considered as prototypical European countries may lead to this perception. This representation is described in the framework of the Common-Ingroup Identity Model (Gaertner et al., 1993) as follows: “[. . .] equal status, cooperative interaction, interpersonal interaction, and supportive norms reduce bias because they alter members’ cognitive representations of the memberships from ‘us’ and ‘them’ to more inclusive ‘we’.” (Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1994, p. 226). We argue that in this kind of situation, the bias expressed by denying human essence to the out-group is reduced or eliminated, but on the dimension of the primary emotion attribution discrimination occurs because groups strive for distinctiveness and because of in-group positivity (Hewstone, 1996; Hewstone & Brown, 1986). Future research should examine the effect of the cognitive representation of the intergroup situation on infrahumanization more closely. However, high-identifiers attributed more secondary emotions to the in-group compared to the out-group.

In answer to the question regarding the extent to which infrahumanization is a general effect that takes place also in the case of equal status countries, the results of the present studies suggest that an intergroup comparison, as induced in Study 2, seems to be necessary to change the perception of the intergroup context to one in which infrahumanization takes place. Thus, in the case of equal status countries, it seems difficult to deny the out-group typical human characteristics, and aggravated conditions such as, for example, an intergroup comparison seem to be necessary for an occurrence of infrahumanization. Other factors that could lead to infrahumanization of equal status countries would be to induce a competing relationship between the groups or to make difference (for example in values) between the groups salient. In-group identification seems to be a necessary factor for infrahumanization (c.f. Demoulin et al., 2009). In the case of equal status non-conflicting groups as Germans and French in the European Union, another necessary factor seems to be an intergroup comparison with a positive outcome for the in-group. Laboratory studies in which such factors can be varied better than in the context of natural groups seem to be necessary to investigate these questions.

In the present studies, we found that groups differentiate themselves on the basis of secondary emotions as well as on the basis of primary emotions. Future research should investigate further the conditions for the occurrence of these two forms of biases, taking into account the moderating role of the status relation of the involved groups. Research in intergroup relations has shown that status as a socio-structural variable is an important predictor of intergroup phenomena, influencing affect, perception and behavior of individuals (Ellemers & Baretto, 2001). In order to answer the question if the observed effects are stronger depending on the status of the group, other designs involving more than two groups are required (Brauer, 2001; Brauer & Judd, 2000).

The present research also underscores that the kind of discrimination that occurs could vary in a very subtle way depending on the definition of the “we”

and the relationship between “we” and “them.” Infracommunication on the basis of emotions has also behavioral consequences. As Vaes, Paladino, Castelli, Leyens, and Giovanazzi (2003) show, the expression of secondary emotions by in-group and out-group members induced differential reactions among perceiver, such that the expression of secondary emotions results in a more favorable treatment of the in-group compared to an out-group member.

One might ask how infracommunication can be reduced. The present research suggests that it may be a way to create an intergroup context in which two groups are perceived as two groups within a common superordinate group. This was indeed our interpretation of the finding of no classic infracommunication effect in Study 1. Moreover, infracommunication does not occur when the out-group target is adequately individualized and the members of a group are perceived as specific human beings and no longer in terms of their group-membership. This process of individualization was realized in experiments by identifying a stranger by his/her first name and last name or by asking participants to take the perspective of an out-group member (Leyens et al., 2003). Applied to natural groups, this could be realized by a more individualized presentation of a group, mentioning names and individual characteristics of group-members. However, it is important to note that the individuation of an out-group member is not automatically generalized to the whole out-group (Brewer & Brown, 1998; Gaertner & Dovidio, 2000).

Intergroup comparison seems to foster the infracommunication effect. As Mummendey et al. (2001) showed, temporal comparisons did not lead to correlations between in-group identification and out-group derogation. For example in political contexts, a nation could be motivated through temporal comparisons without intergroup comparisons and this would lead to less negative intergroup relations and less infracommunication of the respective out-groups (*temporal comparison*: “The economic situation is much better than 10 years ago and we should strive to achieve an even better situation in the next years” instead of *intergroup comparison*: “We should strive at being better than other European countries concerning our economic situation”).

Finally, future research should investigate how far the results obtained in the current intergroup context can be generalized to populations in different geographic regions or different cultures.

NOTES

1. The ratings for the primary and secondary emotions in French were adapted from a study conducted by Demoulin et al. (2004a).

2. Neither the means for the status measure nor those for the conflict measure differed between the two conditions. For status the means were $M = 4.14$ ($SD = 1.23$) for “national identification” and $M = 4.31$ ($SD = 1.12$) for “European identification”, $t(410) = -1.49$, *ns*. For conflict the means were $M = 2.95$ ($SD = 1.35$) for “national identification” and $M = 3.10$ ($SD = 1.32$) for “European identification”, $t(411) = -1.12$, *ns*.

AUTHOR NOTES

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APPENDIX
German and French Words Used in the Two Studies

Type of Emotion	French	German
Primary positive		
Joy	Joie	Freude
Pleasure	Plaisir	Vergnügen
Surprise	Surprise	Überraschung
Primary negative		
Fright	Frayeur	Schrecken
Pain	Douleur	Schmerz
Sadness	Tristesse	Traurigkeit
Secondary positive		
Happiness	Bonheur	Glück
Admiration	Admiration	Bewunderung
Hope	Espérance	Hoffnung
Secondary negative		
Indignation	Indignation	Empörung
Melancholy	Mélancolie	Melancholie
Contempt	Mépris	Verachtung
Type of Word		
High competence		
Sense of responsibility	Sens de la responsabilité	Verantwortungsbewusstsein
Creativity	Créativité	Kreativität
Efficiency	Efficacité	Effizienz
Low competence		
Laziness	Paresse	Faulheit
Opportunism	Opportunisme	Opportunismus
Negligence	Négligence	Nachlässigkeit
High sociability		
Sociability	Sociabilité	Kontaktfreudigkeit
Hospitality	Hospitalité	Gastfreundlichkeit
Generosity	Générosité	Großzügigkeit
Low sociability		
Insecurity	Manque d'assurance	Unsicherheit
Shyness	Timidité	Schüchternheit
Naïvety	Naïveté	Naivität
Intelligence	Intelligence	Intelligenz
Talent	Talent	Talent