Social Categorization and Fear Reactions to the September 11th Terrorist Attacks

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Two experiments were run in The Netherlands and Belgium 1 week after the terrorist attacks against the World Trade Center in New York on September 11, 2001. The aim was to investigate whether social categorization affected emotional reactions, behavioral tendencies, and actual behaviors. Results showed that focusing participants' attention on an identity that included American victims into a common ingroup led them to report more fear and stronger fear-related behavioral tendencies and to engage more often in fear-related behaviors than when victims were categorized as outgroup members. Results are discussed with respect to appraisal theories of emotion and E. R. Smith's model of group-based emotions.

Keywords: *self-categorization; social identity; emotions*

> On Tuesday morning, September 11, 2001, terrorists attacked America in a series of despicable acts of war. . . . Freedom and democracy are under attack. . . . This enemy attacked not just our people but all freedom-loving people everywhere in the world. . . . The freedom-loving nations of the world stand by our side. This will be a monumental struggle of good versus evil.

George W. Bush, president of the United States of America, pronounced these words during the press conferences (September 12, 2001; September 13, 2001) after two planes piloted by terrorists crashed into the Twin Towers of the World Trade Center in New York and another into the Pentagon in Washington. Similarly, Osama bin Laden, the suspected mastermind behind these acts, used a carefully selected series of words on a Qatar-based TV station: "Americans will never know safety again unless the United States changes its policies toward the Islamic world" (October 7, 2001).

Through the very words they used, both parties clearly attempted to rally as many people as possible to their respective cause. All *freedom-loving nations* were placed on one side and the *Islamic world* on the other. This rhetoric may not have made much of a difference for those who were directly affected by the events—Americans and Al-Qaïda's members—but it may have been important for anyone not unequivocally associated with one of these two groups. For instance, people living in countries such as The Netherlands or Belgium were not directly targeted by the attacks, and they do not belong to the Islamic world. They may, however, have seen the victims of the events that occurred in the United States as more or less close to themselves, depending on the specific social mapping they were led to adopt. The present studies were conducted simultaneously in Belgium and The Netherlands 1 week after the attacks. Building on our earlier work on group-based emotions

(Gordijn, Wigboldus, & Yzerbyt, 2001; Yzerbyt, Dumont, Wigboldus, & Gordijn, in press; for a review, see Yzerbyt, Dumont, Gordijn, & Wigboldus, 2002), we wanted to see whether the specific identity endorsed by our participants influences their emotional experience and, possibly, their behavioral reactions. A noteworthy feature of the present studies is that unlike our previous work that focused on anger, here, we investigated the impact of social categorization on the experience of fear. A second goal of our research was to gather evidence for the impact of the identity categorization on the emergence of behaviors and not only emotions. A third feature of the present endeavor is that we departed from the usual scenario methodology and relied instead on real events, namely, the infamous terrorist attack against the World Trade Center in New York on September 11, 2001.

Although it has largely been documented that membership in a given group influences the way individual group members think and behave (Tajfel, 1981; Turner, 1991), much less research has been devoted to its impact on emotional experience. According to appraisal theories of emotions (Frijda, Kuipers, & ter Schure, 1989; Roseman, 1984; Scherer, 1988; C. A. Smith & Ellsworth, 1985), specific situational configurations, as appraised by an individual, elicit specific emotions. The interpretation of the situation is thought to rest mainly on its perceived favorableness with regard to the individuals' goals and on the presence of coping resources. The resulting appraisals then elicit a specific emotion and corresponding behavioral tendencies and behaviors. E. R. Smith (1993, 1999) suggested that the individual's group being harmed or favored by the events triggers group-based emotions. Emotions can thus be elicited without people necessarily being *directly* concerned by the events. The social identity endorsed by the individuals is thus crucial. In line with appraisal theories of emotion, group-based emotions are not just diffused positive or negative moods but are assumed to be discrete states that result in specific intergroup behaviors. In a recent test of this model, Mackie, Devos, and Smith (2000) hypothesized and found that when the ingroup is hurt and enjoys sufficient collective support, group members feel angry and report offensive action tendencies but not fear and escape action tendencies. Other researchers focused on guilt as yet another group-based emotion. Doosje, Branscombe, Spears, and Manstead (1998) observed group-based guilt and concomitant compensatory behaviors after drawing participants' attention to reprehensible actions of ingroup members, despite the fact that they themselves were not responsible for the reprehensible acts. Studies such as these show the specificity of emotions and related action tendencies elicited in intergroup contexts.

As self-categorization theorists (Abrams, 1999; Oakes, Haslam, & Turner, 1994) have argued, social identity is inherently context dependent. Combining this aspect and Smith's ideas, we predicted that group-based emotions should be differentially elicited depending on the way people categorize themselves (Gordijn et al., 2001; Gordijn, Wigboldus, Hermsen, & Yzerbyt, 1999; Yzerbyt et al., in press; for a review, see Yzerbyt et al., 2002). When observers endorse an identity such that, for instance, victims of harmful behavior are categorized as ingroup rather than outgroup members, observers' emotions should likely resemble the emotions experienced by the victims themselves. To test this idea, Gordijn et al. (1999) told psychology students from the University of Amsterdam that they were taking part in a study that focused either on the opinions of students from different majors (e.g., psychology students vs. math students) or from different universities (e.g., Free University vs. University of Amsterdam). Participants then learned that psychology students from the Free University had been the victims of a harmful behavior perpetrated by math students from Free University. The victims were thus categorized either as ingroup members (when participants were led to think of themselves as psychology students) or as outgroup members (when participants were led to think of themselves as University of Amsterdam students). Because the behavior of the aggressor was unfair and the victims seemed in a position to fight back, one would expect the most likely emotion to be anger (Frijda et al., 1989; Roseman, 1984; C. A. Smith & Ellsworth, 1985).

Consistent with the existence of flexible categorization processes and specific group-based emotions, participants who categorized the victims in the same (another) group as themselves reported more (less) anger, despite the fact that they were not directly hurt by the aggressor. Yzerbyt et al. (in press) further showed that this pattern of group-based emotion emerged among high identifiers but not among low identifiers. Specifically, high identifiers who categorized the victims as ingroup members experienced more anger than either those who expressed a lower level of identification with this ingroup or participants led to categorize themselves in a different group than the victims, irrespective of their level of identification with this different group. Such a finding suggests that both contextual and individual factors combine to produce the effect.

Our previous work focused on anger-related contexts. Examining how social categorization affects a negative emotion close to anger, such as fear, would allow us to establish the generality of the phenomenon. There is little doubt that fear is a most important negative emotion in psychological life. Indeed, this emotion is studied precisely because of the obvious consequences it has for

people at a *personal* level. Therapists deal with patients' suffering of posttraumatic stress disorders, phobias, panic disorders, generalized anxiety, or obsessive-compulsive disorders, which are all psychological disorders having fear-related features (American Psychiatric Association, 1994). But there is rarely mention of fear being elicited because of people's group membership. Of interest, the only study we know that examines fear as a group-based emotion did not meet with success. Mackie et al. (2000) created a context in which participants' ingroup was hurt by an outgroup and enjoyed little collective support. Although the authors hypothesized that such appraisals would elicit group-based fear reactions, the data failed to support the predictions. Possibly, fear is an emotion that does not show up easily in the context of a scenario study. Indeed, the data collected in our own studies indicate that the levels of fear expressed by participants are moderate at best. One way to deal with this issue is to rely on spontaneous reactions to real-world events.

We took the real-life setting of the terrorist attacks perpetrated against the World Trade Center in New York on September 11, 2001, to address this question. To be sure, these specific events provided us with a complex situation that could be appraised in a variety of ways depending on whether one focused on the victims themselves, the attitude to be adopted, or the circumstances that led to the events; that is, at the same time that the vast majority of people saw the event as most tragic and negative indeed, specific aspects of the situation could have triggered specific feelings such as sadness, anger, and fear.

Sadness is triggered when aspects of the events appear unexpected, due to the situation or to another person's behavior, and there is a high level of certainty regarding the losses and harmfulness of the situation. In the context of September 11th, the fact that few people could have foreseen such a tragic succession of events along with the sureness that many people had died and suffered because of the attacks and the belief that little if anything could be done to ever repair the damage are all elements that should have given rise to sadness.

Anger is most likely felt when a situation is appraised as being unfair, due to another person's behavior, and when perceivers feel strong rather than weak. Clearly, the belief that one has the power to respond to the problem along with the belief of being morally right contribute to make anger a likely response to the situation. In the aftermath of the September 11th attacks, people certainly thought that, say, military action against the various countries hosting the terrorists was a possible line of action and that the United States was badly hurt but certainly not defeated. We would thus argue that anger was a probable response to be found among most people.

Fear emerges when an event is appraised as unexpected and caused by the situation or another person's behavior. Obviously, the uncontrollability and the uncertainty regarding future outcomes is a most important appraisal associated with fear. In other words, a key element that differentiates fear from all other negative emotions that were relevant in the context of September 11th is the extent to which people were uncertain about what would happen next and unsure of whether they would have the potential to cope with the evolution of things. Clearly, the September 11th attacks triggered a sense of being weak or threatened because of the possibility of other attacks or all sorts of undesirable events.

In sum, we would argue that the wide variety of aspects characterizing the September 11th terrorist attacks likely contributed to the emergence of several discrete emotions such as sadness, anger, or fear. This means that people who are seeing the American victims as closely related to themselves should experience all of these emotions at very high levels. Although one would certainly not expect outsiders to be impervious to these same emotional reactions, far from it, one would expect to see some discrepancy such that outsiders would be predicted to experience lower levels of sadness, anger, and fear than Americans or people who define themselves as being members of the same group. That is to say, although we would argue that most observers would be saddened, upset, and frightened, our former work on the role of categorization on the experience of group-based emotions leads us to expect that ingroup members would undergo more dramatic reactions than would outgroup members. Does the above reasoning mean that we should be able to observe a categorization effect on all three emotions? We do not think so. We saw one main reason for fear to be more sensitive than the other emotions to our manipulation of the identity categorization. The nature of the appraisals underlying the emotions, we thought, allows us to make differential predictions for sadness and anger on one hand and fear on the other. Specifically, we conjectured that the fundamental appraisals associated with fear, and especially the prevailing aspect of uncertainty, are most likely to be affected by an identity manipulation.

It may be useful to spell things out in a little bit more detail and come back to the conditions triggering people's emotional reactions. As for sadness, this emotion is triggered when the events appear unexpected, due to the situation or to another person's behavior, and when there is certainty regarding the losses and harmfulness of the situation. In fact, very few lay people could have foreseen the tragic events of September 11th. Europeans as well as Americans certainly considered the United States as being very unlikely to be attacked, both because of the assumed quality of its national security services

and because of the expected reaction that such an attack would likely provoke. The terrorist attacks thus came as a huge surprise for Europeans as surely as for Americans. Indeed, it was the first time that "acts of war" (G. W. Bush) had been committed directly on American soil. Moreover, European media did not miss the opportunity to mention that European lives were also lost because of the attacks; that is, the fact that many people, a huge number of Americans but also quite a few Europeans, had died and suffered because of the attacks was part of the appraisals that undoubtedly contributed to the emergence of sadness among Europeans. As a result, we expected no strong influence of our identity manipulation on the experience of sadness.

As we indicated earlier, anger is most likely felt when a situation is appraised as unfair, due to another person's behavior, and when one feels strong rather than weak. Military action against the terrorists as well as against the countries hosting or supporting them was a possible line of action for Americans and for Westerners more generally. Obviously, Europeans consider the United States as being the nation with the greatest military power in the world: U.S. military forces often intervened into conflicts taking place on the European continent, and most Europeans also remember the military help coming from the United States during World War II. Within the context of NATO, American and European military forces undoubtedly would appear to have the means to engage in reprisals for the lives that had been taken. Clearly, Europeans' and Americans' appraisals regarding the presence of the necessary means to deal with the event should be quite similar. Furthermore, two *facts* likely led most observers to appraise the situation as unfair and due to another person's agency; that is, innocent European and American people had been killed and terrorists were clearly identified as being Muslim extremists. For these reasons, we predicted that our European participants would report comparable levels of anger regardless of whether the manipulation induced them to see themselves and the American victims as members of the same group.

In sum, it would seem as if appraisals underlying sadness and anger would be very unlikely to differ as a function of whether American victims end up being included in the perceivers' ingroup. Partly because of the knowledge Europeans have of America and Americans and partly because the victims of the attacks comprised a series of Europeans working in the World Trade Center, the events most likely were appraised by Europeans in a way that was likely to trigger high levels of sadness and anger. This should prevent us from observing divergent reactions of sadness and anger as a function of identity categorization.

In sharp contrast, we expected that appraisals underlying fear, in the context of September 11th, would be more likely to be influenced by the specific identity endorsed by observers. This is because although the victims of the attacks comprised a proportion of Europeans, it was also very clear that the perpetrator wanted primarily to hurt Americans and the United States of America. As we know, key appraisals of fear concern the uncontrollability and the uncertainty regarding one's *future* outcomes. Specifically, we think that making perceivers' Westerner identity salient will lead them to appraise the events as *targeting* both Americans and Europeans; therefore, they should appraise future outcomes as being more uncertain and feel more worried about what is going to happen next. Alternatively, having perceivers focus on their European identity should lead them to consider that they belong to a different group than the people mainly targeted by these attacks. As a consequence, perceivers led to include the victims of September 11th in their ingroup should experience greater fear because they may be scared for their ingroup, that is, Americans as well as Europeans. Both appraisals of being the target of possible future attacks and appraisals of greater uncertainty about one's future outcomes were thus expected to lead to higher levels of fear when the victims are included in the ingroup than when the victims are part of an outgroup.

One week after the terrorist attacks had been perpetrated against the World Trade Center and the Pentagon in the United States on September 11, 2001, we conducted two experiments to investigate the influence of identity categorization on emotions. The first experiment assessed the intensity with which several emotions were experienced when thinking about the events that occurred on September 11th. More fear was expected when people were concerned by the event of September 11th through their group membership, that is, when they endorsed a social identity that led to include the victims in the ingroup rather than when they endorsed a social identity that did not include the victims.

In the second experiment, we investigated the way emotion-related behavioral tendencies and, most importantly, actual behaviors were influenced by the identity categorization. Whereas previous work assessed behavioral intentions or broad action tendencies (Yzerbyt et al., in press), we investigated *actual* behavioral responses, which obviously comes as an even more crucial test with respect to the social significance of the present theorizing. This is important because even if behaviors are usually preceded by corresponding intentions, intentions do not always translate into behaviors. Both kinds of measures, behavioral tendencies and actual behaviors, were thus carefully examined in the context of the terrorist attacks of September 11th.

EXPERIMENT 1

Method

Participants and design. Thirty-seven participants recruited at the University of Amsterdam took part in the study (*M* age = 20.73, *SD* = 3.87). They were randomly assigned to one of two conditions of categorization.

Procedure and dependent variables. Between September 19 and 26, a paper-and-pencil questionnaire was presented to participants as part of an international study on emotional reactions to the recent terrorist attacks that took place in the United States. The categorization of participants was manipulated by means of one sentence mentioned on the first page of the questionnaire. The study was presented as comparing the reactions of Westerners and Arabs (leading participants to categorize the victims in the same group as themselves) versus Europeans and Americans (leading participants to categorize the victims in a different group than themselves).

Participants were then provided with a short reminder of the events, starting September 11, 2001, at 8:45 a.m. when a plane crashed into the Northern tower of the World Trade Center and ending with President Bush's press conference at 8:30 p.m. The information was objective and chronological, mentioning the number of people in the planes, U.S. authorities' declarations to the media, and the likely implications of the terrorists attacks. The name of the Saudi Arabian terrorist Osama Bin Laden also was provided.

After reading the information, participants were asked to report their feelings on a series of 9-point rating scales ranging from 1 (*absolutely not*) to 9 (*absolutely*). Two items assessed fear-related feelings (frightened, threatened), two anger-related feelings (angry, furious), two sadness-related feelings (sad, sorrowful), and two calmness-related feelings (calm, optimistic). The two latter items were added as controls.

Results

A principal components analysis was run on the emotional items to examine the structure of participants' emotional reactions. A four-factor solution was obtained, accounting for 81% of the variance. Factor loadings after varimax rotation showed that the two anger-related items loaded strongly on the first factor (> .90), the two calmness-related items loaded strongly on the second factor (> .77), the two sadness-related items loaded strongly on the third factor (> .81), and the two fear-related items loaded strongly on the fourth factor (> .72). The reliability for the fear-related questions (Cronbach's α = .69), for the anger-related questions (Cronbach's α = .90), for the sadness-related questions (Cronbach's α = .72), and for the calmness-

TABLE 1: Means and Standard Deviations for the Four Emotions Reported as a Function of Identity Categorization in Experiments 1 and 2

| | *Emotional Feelings* | | | |
	Fear	*Anger*	*Sadness*	*Calmness*
Experiment 1				
Westerners vs. Arabs	6.42*	6.87	6.74	2.97
	(1.50)	(2.04)	(1.69)	(1.09)
Europeans vs. Americans	5.14*	6.69	6.39	3.36
	(1.52)	(1.61)	(1.32)	(1.44)
Experiment 2				
Europeans vs. Arabs	5.90*	6.23	5.44	1.67
	(2.01)	(1.87)	(1.81)	(1.24)
Europeans vs. Americans	5.26*	6.3	5.35	1.78
	(2.01)	(1.95)	(1.76)	(1.41)

NOTE: An asterisk indicates a significant difference between conditions (one-tailed in the case of Experiment 2). Standard deviations are in parentheses.

related questions (Cronbach's α = .59) allowed us to compute a mean score for each emotion.

Direct comparisons between emotions revealed that anger and sadness were relevant feelings (*M* = 6.78, *SD* = 1.82; *M* = 6.57, *SD* = 1.51, respectively) and were reported with similar intensity, $F(1, 36) = 0.41$, $p > .52$. These emotions were experienced more strongly than fear, $F(1, 36) = 8.04$, $p < .008$, and $F(1, 36) = 6.60$, $p < .02$, for anger and sadness, respectively. Not surprisingly, fear was reported more (*M* = 5.80, *SD* = 1.63) than calmness (*M* = 3.16, *SD* = 1.27), $F(1, 36) = 45.16$, $p < .0001$.

More directly relevant to our hypotheses, simple ANOVAs with condition (Westerners/Arabs vs. Europeans/Americans) as the between-subjects factor were conducted for each emotion. As expected, the level of fear was significantly influenced by the manipulation, $F(1, 36) = 6.65$, $p < .02$ (see Table 1). Participants endorsing a Western identity reported more fear than when the European identity was made salient. Sadness, anger, and calmness were not affected by the identity manipulation (all *F*s < 1).

Discussion

In contrast to our previous studies in which participants were confronted with a scenario that was specifically constructed to provoke anger (Gordijn et al., 1999, 2001; Yzerbyt et al., in press), a direct reference to the terrorist attacks perpetrated against the World Trade Center in New York on September 11th generated a host of emotional reactions. Although we expected the various facets of the events to generate high levels of sadness, anger, and fear, we predicted that fear would likely be more sensitive to our categorization manipulation than the two other emotions.

Specifically, we expected appraisals underlying sadness and anger to be impervious to our identity manipulation. At the same time, the critical appraisals associated with fear, that is, the uncertainty attached to the future and to the possibility of possessing the required coping resources to face other events of similar nature, should be particularly prone to vary as a function of whether an ingroup or an outgroup is considered to be the target of the terrorist attacks. We hypothesized that those participants induced to view the victims as ingroup members would be more likely to appraise the uncertainty of future events and the difficulty of finding appropriate coping strategies and thus report higher levels of fear; that is, because perceivers more likely appraised the terrorist attacks as targeting the ingroup when addressed as Westerners rather than as Europeans, they should report higher levels of fear in the former than in the latter condition.

In line with these predictions, participants reported more fear when they were induced to endorse an identity that included the victims in the same group than when they were led to see the victims as belonging to an outgroup. By showing that the specific social landscape at work makes a difference in people's emotional experience, our results not only support E. R. Smith's (1993, 1999) model of group-based emotions but they extend our earlier work in that we were able to find evidence for group-based fear. Another remarkable feature of Experiment 1 is the demonstration that the influence of categorization on the experience of group-based emotions occurs in response to real-world events as well as it did in the case of the carefully designed scenarios of earlier studies.

EXPERIMENT 2

Appraisal theorists do not only propose the existence of a strong relation between specific appraisal configuration and emotional reactions (C. A. Smith & Ellsworth, 1985). A relation is also assumed to exist between the appraisal stage and action readiness (Frijda et al., 1989). Using again the context of the terrorist attacks, Experiment 2 was conducted to extend the results of Experiment 1 to action tendencies and, possibly, to actual behaviors.

A second feature of Experiment 2 is that we used an even subtler manipulation of identity. We wanted to see whether participants' European identity takes on different meanings as a function of the very outgroup made salient in the comparative context, that is, Arabs versus Americans. When the comparative outgroup excludes the victims (Arabs), participants should more likely categorize them as ingroup members. In contrast, when the comparative outgroup includes the victims (Americans), participants should categorize the victims as part

of the outgroup. To test this idea, Experiment 2 confronted participants with the European label in all conditions and changed the specific outgroup that was made salient in the comparative context.

As was the case for Experiment 1, we expected fear to be sensitive to the manipulation. Because some room is left for the interpretation of the level of uncertainty of future events, and fear refers quite directly to people's personal integrity, we expected the identity manipulation to affect participants' emotional experience of fear and their actions in response to this emotion. In contrast, sadness and anger were not expected to be as sensitive to our manipulation because, in the specific context of the September 11th attacks, appraisals underlying such emotions should vary little among Europeans. The same reasoning was used to predict differential fear-related behavioral tendencies and actual behaviors as a function of the identity categorization.

Finally, appraisal theorists (Lazarus, 1991) hold that the critical event has to be *relevant* with regard to the individual's concerns to elicit emotions. E. R. Smith's (1993, 1999) model would suggest that this is the case, albeit via the intervening impact of group membership. We wanted to take the opportunity of the present study to start exploring this issue. We hypothesized that participants' feeling of being concerned by the event also would be influenced by our identity manipulation.

Method

Participants and design. One hundred thirty-one participants from the Catholic University of Louvain at Louvain-la-Neuve, Belgium, took part in the experiment and were randomly assigned to one of two categorization conditions. A manipulation check question at the end of the questionnaire revealed that 17 respondents failed to correctly report the labels of the two groups mentioned at the beginning of the questionnaire. These participants were not included in the analyses, leaving a total of 114 participants.

Procedure and dependent variables. Between September 17 and 19, a paper-and-pencil questionnaire was presented to participants as part of an international study on emotional reactions to the recent terrorist attacks that occurred in the United States. Participants' categorization was manipulated by means of one sentence on the first page of the questionnaire specifying that the research aimed at comparing the emotional reactions of Europeans and Americans (encouraging participants to see the victims in another category as themselves) versus Europeans and Arabs (leading participants to see the victims in the same category as themselves).

All participants received a picture of the Twin Towers on fire as a reminder of the event. After reading the instructions, reporting their level of identification with

Europeans, and viewing the picture mentioned above, participants rated their feelings with respect to the events on 9-point rating scales ranging from 1 (*absolutely not*) to 9 (*absolutely*). Four items assessed fear-related feelings (fearful, restless, apprehensive, anxious), four anger-related feelings (angry, indignant, irritated, insurgent), four sadness-related feelings (sad, distressed, demoralized, depressed), and four happiness-related feelings (happy, cheerful, amused, satisfied).

A series of questions was then presented to examine participants' action tendencies with respect to the events. We took care to include items that appeared meaningful with respect to the context of the terrorist attacks. Specifically, questions concerned demonstrations against terrorism and manifestations of mockery about the events but also criticisms regarding the United States. Although self-protection and escape tendencies are generally thought to be associated with the emotion of fear, such tendencies were in fact extremely difficult to assess in the present context. Instead, we included behavioral tendencies corresponding to possible reassuring lines of action aimed at reducing the level of uncertainty. Specifically, we included items related to the provision of moral support and help to the victims as well as items linked to the search for additional information about the event and its developments. The latter items were thought to be particularly important because people may be less worried if they collect additional information about the events (Philippot, Baeyens, Douilliez, & Francart, in press). Also, by manifesting their support to the victims or providing help, people may actually come under the impression that they can do something to cope with the situation. In sum, these tendencies are all associated with people's attempts to regain some control over the situation, which in turn, should help reduce the level of worry experienced. One additional item referred to participants' intention to rely on social sharing. Social sharing can be seen as a means to reassure oneself through communication with other people. At a minimum, greater social sharing would indicate the presence of more intense experience of emotion (see Rimé, Finkenauer, Luminet, Zech, & Philippot, 1998).

Next, we measured actual behaviors. More specifically, participants were provided with the possibility to personally acquire three kinds of information. All three items started with the following sentence: "I would like to receive more information about . . . ." After the sentence, participants could select either "Yes, I would like to receive such information" or "No, I don't want to receive such information." In the case of a positive answer, participants were asked to provide their e-mail address or telephone number for them to later receive the requested information. The proportion of participants giving their e-mail address or telephone number served as our dependant variable. The first question tapped participants' desire to get more precise information about terrorist networks, a behavior that is clearly related to the reduction of uncertainty and to the emotion of fear. The second question concerned information about means to concretely help or morally support victims of the attacks, another fear-related behavior, through its relation to uncontrollability appraisals. The third kind of information referred to demonstrations of support for an intervention of NATO, a reaction that we thought was associated to anger's offensive tendency.

To measure the influence of our identity manipulation on participants' feelings of being personally concerned with the events, we included a question tapping this issue. Finally, a manipulation check item asked participants to indicate the two groups targeted by the survey. Once all questions were answered, participants were debriefed and thanked.

Results

Identification with Europeans. A one-way ANOVA with condition (Europeans/Arabs vs. Europeans/Americans) as a between-subjects factor on the six identification questions (Cronbach's α = .87) revealed no impact of the manipulation, $F(1, 112) = 2.04$, $p > .15$.

Emotions. To study the structure of participants' emotional reactions, we first conducted a principal components analysis on the 16 emotional items specifying that factors with eigenvalues greater than 1 be retained. A four-factor solution accounted for 72% of the variance. Factor loadings after varimax rotation showed that the four fear-related items loaded strongly on the first factor (> .80, Cronbach's α = .88), the four happiness-related items loaded strongly on the second factor (> .78, Cronbach's α = .88), and the four anger-related items loaded strongly on the third factor (> .65, Cronbach's α = .83). Only two of the four sadness-related items (sad, distressed) loaded strongly on the fourth factor (> .85). The two other sadness-related items (demoralized, depressed) actually loaded on a fifth factor (> .67) for which the eigenvalue was .92. The reliability of the four sadness items reached a respectable value of .78. The five factors altogether accounted for 78% of the variance. On the basis of these findings, we decided to compute an index score for each of the four emotions using all four sadness items.

To evaluate whether the identity manipulation influenced each of the emotions, we conducted a one-way ANOVA with condition (Europeans/Arabs vs. Europeans/Americans) as the between-subjects factor for each emotion. Replicating the pattern of Experiment 1, the data showed that fear was influenced by the manipulation of identity, $F(1, 111) = 2.88$, $p < .05$ (one-tailed). Partici-

pants reported more fear when victims were categorized as ingroup members by virtue of their exclusion from the salient outgroup (Arabs) than when the salient outgroup led victims to be seen as outgroup members (Americans) (see Table 1). Sadness, anger, and happiness were not affected by the identity manipulation (all Fs < 1).

Direct comparisons between emotions revealed that sadness and anger were relevant feelings ($M = 6.27$, $SD = 1.91$; $M = 5.39$, $SD = 1.78$, respectively). This time, anger was reported with more intensity than was sadness, $F(1, 113) = 29.46$, $p < .0001$. Anger also was reported more strongly than fear, $F(1, 112) = 12.54$, $p < .0007$, which was nevertheless reported with high intensity ($M = 5.57$, $SD = 2.02$), as was the case for sadness ($M = 5.39$, $SD = 1.78$). Fear and sadness were reported with similar intensity, $F(1, 112) = 1.21$, $p = .27$. Fear was also more present than happiness ($M = 1.73$, $SD = 1.32$), $F(1, 111) = 249.22$, $p < .0001$.

Behavioral tendencies. The structure of participants' behavioral tendencies was examined by way of a principal components analysis on the 13 behavioral items. A five-factor solution accounted for 73% of the variance. Factor loadings after varimax rotation showed that four items related to moral support and helping loaded strongly on the first factor (> .70, Cronbach's α = .78), three items related to offensive actions toward terrorism loaded strongly on the second factor (> .84, Cronbach's α = .84), two items related to mockery about the events loaded strongly on the third factor (> .85, Cronbach's α = .71), and two items related to criticizing America loaded strongly on the fourth factor (> .84, Cronbach's α = .74). The last two items were related to information search and loaded strongly on the fifth factor (> .74, Cronbach's α = .60), for which the eigenvalue was .96. All other eigenvalues were greater than 1. An index score was computed for each group of behavioral tendencies. The tendency to engage in social sharing was measured by a single item.

We conducted a series of ANOVAs with condition (Europeans/Arabs vs. Europeans/Americans) as the between-subjects factor for each behavioral tendency (see Table 2). As expected, behavioral tendencies related to information search and to providing support and help to the victims were significantly influenced by the identity manipulation. Specifically, when Arabs were the salient outgroup, participants reported being more willing to search for information about the situation, $F(1, 112) = 6.93$, $p < .01$, and to be more willing to manifest support and help to the victims, $F(1, 112) = 11.38$, $p < .002$. The Europeans/Arabs condition (victims as ingroup members) also led to stronger social sharing tendencies than the Europeans/Americans condition (victims as outgroup members), $F(1, 112) = 4.29$, $p < .05$.

TABLE 2: Means and Standard Deviations for the Behavioral Tendencies Reported in Experiment 2 as a Function of Identity Categorization

Identity Categorization	Behavioral Tendencies		
	Information Search	Support-Helping	Offensive Tendencies
Europeans vs. Arabs	8.34*	6.71*	4.59
	(0.90)	(1.84)	(2.37)
Europeans vs. Americans	7.72*	5.46*	4.10
	(1.50)	(2.09)	(2.32)
	Mockery	Criticizing	Social Sharing
Europeans vs. Arabs	1.88	3.83	7.96*
	(1.62)	(2.52)	(1.57)
Europeans vs. Americans	2.07	3.63	7.30*
	(1.35)	(1.71)	(1.80)

NOTE: An asterisk indicates a significant difference between conditions. Standard deviations are in parentheses.

In sum, all behavioral tendencies associated with the emotion of fear were significantly affected by the identity manipulation. In contrast, offensive behavioral tendencies, $F(1, 111) = 1.21$, $p > .27$; mockery-related tendencies, $F(1, 112) = 0.45$, $p > .50$; and criticizing tendencies, $F(1, 112) = 0.25$, $p > .61$, did not differ across conditions. The impact of our identity manipulation thus appeared to be essentially restricted to appraisals associated to fear.

Actual behaviors. Next, we calculated the proportion of participants who provided personal information in order to receive information about (a) terrorist networks, (b) means to help or support the victims of the attacks, and (c) means to express support for NATO's intervention. As can be seen in Table 3, all three behaviors were significantly affected by our identity manipulation.

Feeling of being personally concerned. A one-way ANOVA with condition (Europeans/Arabs vs. Europeans/Americans) as a between-subjects factor revealed the presence of a significant effect of our manipulation on participants' feelings of being personally concerned by the attacks, $F(1, 112) = 7.13$, $p < .009$. Participants felt more strongly concerned with the events when compared to Arabs ($M = 7.82$, $SD = 1.60$) than to Americans ($M = 6.88$, $SD = 2.10$).

Discussion

Replicating the findings of Experiment 1 in a different country, using a different language as well as a different manipulation of identity categorization, the present experiment confirmed the specific influence of

TABLE 3:   Proportion of Participants Providing Personal E-Mail Address or Telephone Number to Be Personally Informed as a Function of Identity Categorization

Condition	Request for Information About		
	Terrorist Networks	Means to Help Victims	Means to Support NATO
Europeans vs. Arabs	0.54*	0.40*	0.18*
	(0.50)	(0.49)	(0.39)
Europeans vs. Americans	0.34*	0.22*	0.03*
	(0.48)	(0.42)	(0.18)
$\chi^2(1) =$	4.93,	4.32,	6.61,
	$p < .03$	$p < .04$	$p < .02$

NOTE: Standard deviations are in parentheses.

social identity on the experience of fear in the situation of the terrorist attacks perpetrated against the Word Trade Center in New York on September 11, 2001. Leading participants to categorize victims of the harmful behavior as ingroup members led them to report more fear than when they categorized the victims as outgroup members. Once again, sadness and anger appeared to be relevant emotions and were strongly reported by participants but were unaffected by the identity manipulation.

Although the emotion data turned out to be somewhat weaker in the present study, we found strong evidence that a subtle manipulation of the way participants defined the social landscape influences their behavioral tendencies. Compared with the condition in which participants were induced to see the victims as outgroup members, categorizing the victims as ingroup members by virtue of the Arab outgroup being made salient elicited stronger tendencies to seek information about the events and its developments, stronger tendencies to provide support and help to the victims, and stronger tendencies to talk about the events with other persons. In sharp contrast, behavioral tendencies such as mockery, criticizing America, and offensive tendencies were not influenced by our identity manipulation.

Of importance, these are the first data to show that a series of behaviors were more frequently performed when participants were led to categorize the victims closer to them. Indeed, when participants were induced to see the victims and themselves as members of the same group instead of members of different groups, about 20% more of them provided their personal e-mail address or telephone number to later receive additional information. Whether the behavior concerned a request to receive information about terrorist networks, about how to support and help the victims, or about demonstrating for NATO's intervention, all three behaviors proved significantly sensitive to the manipulation.

Although we clearly expected the identity manipulation to affect the first two behaviors because of their obvious relation to fear appraisals such as uncertainty and uncontrollability, we did not expect the behavior related to the expression of support for NATO's intervention to be influenced by the identity categorization. In fact, this behavior was initially thought of as being more tainted by offensive tendencies, likely to increase appraisals of powerfulness facing the event, and thus associated with the emotion of anger. We see three explanations for this unexpected finding.

A first possibility resides in the low social desirability of the behavior; that is, although participants may think it is recommended to express sadness and anger even when the victims are not especially close to them, this tendency is not so strong that it would lead them to acknowledge a strong desire to go and demonstrate against terrorism and in favor of NATO's intervention. As a result, only those seeing the victims as closely connected to themselves would admit experiencing such strong tendencies and possibly engage in such radical behaviors. Alternatively, we noticed that a related action tendency item, namely, the tendency to demonstrate against terrorism, unexpectedly loaded with the moral support items and was thus classified as such. In short, although we had considered this behavioral tendency and the behavior to show support for NATO's intervention as being related to anger on an a priori basis, they may likely relate to the expression of moral support instead. A third explanation would be that the expression of support for NATO's intervention, such as (preventive) military actions, is a most appropriate way indeed for Europeans to protect themselves of possible aggressions directed at European countries. In that sense, such behavior would then be highly related to the emotion of fear. That this takes place in the condition where our categorization manipulation had participants feel the victims closer to them is definitely in line with our other findings and the model of group-based emotions.

In the present study, we varied the salient outgroup and kept a single ingroup label constant. Despite the subtlety of the manipulation, participants categorized the victims of the event as an ingroup or as an outgroup depending on the specific comparative outgroup being made salient. Clearly, this suggests that a single ingroup label may take on different meanings. In turn, the meaning attached to the European identity shaped the appraisals and subsequent reactions of our participants. Of interest, the data showed that the level of identification with Europeans was not affected by the manipulation. This indicates that the very meaning taken on by the ingroup was more important than the intensity of identification with this particular group membership.

The comparison outgroup that was made salient influenced the cognitive meaning and not so much the affective intensity of identification with the label *Europeans.* One way to understand the effects of our manipulation is thus to consider that the specific comparative outgroup used in the context led perceivers to spontaneously think in terms of identities such as Westerners or non-Arabs even if it was their European identity that was being made salient. The level of fear experienced by our participants, fear-related tendencies, and their fear-related actual behaviors were influenced accordingly. This conjecture is totally in line with a number of efforts aimed at showing the fluidity of group stereotypes and their sensitivity to the larger comparative context (Oakes et al., 1994; Wyer, Sadler, & Judd, 2002).

In line with our expectations, the feeling of being personally concerned with the events was significantly affected by the identity manipulation. This finding is consistent with E. R. Smith's (1993, 1999) model of group-based emotions, which suggests that the relevance of an event for people's goals can be affected by their group membership. Given this encouraging finding, future research should be directed at better delineating the role of the feeling of being concerned in the unfolding of participants' reactions.

GENERAL DISCUSSION

We had three goals in the present article. First, extending our earlier work on group-based emotions (Gordijn et al., 2001; Yzerbyt et al., in press), we wanted to examine the consequences of the identity categorization on another negative emotion than anger. We selected fear as the focus of the present studies because previous attempts at demonstrating the emergence of group-based fear had been unsuccessful (Mackie et al., 2000). A second ambition of the present work concerned the possibility that the identity categorization not only affects people's emotional experience but also the behavioral tendencies as well as relevant behaviors. A third purpose of the present efforts was to study the impact of the identity categorization on group-based emotions in a setting that would involve reactions to real-life events rather than to a carefully designed scenario. Tragic as they may be, the terrorist attacks of September 11, 2001, provided us with a real-life setting that allowed examining the consequences of people being induced to endorse one social identity rather than another on the subsequent emotional reactions. Compared to a fictitious scenario, these terrible events enabled us to ensure a high level of ecological validity.

Two experiments were conducted with different manipulations of identity categorization. Whereas Experiment 1 used different labels for both the ingroup and the comparative outgroup in the two conditions,

Experiment 2 relied on the same ingroup label in both conditions and only modified the reference to the comparative outgroup. The general objective remained the same however, namely, to induce participants to see the victims in either the same or a different group than themselves. Although we suspected that the nature of the appraisals would drive all observers toward experiencing comparable levels of sadness and anger, we hoped to show that the endorsement of an identity that included the victims in the ingroup would alter the appraisals underlying fear and lead participants to experience and report greater levels of this emotion than when the contextually salient identity did not include the victims in the same group. As expected, participants experienced more fear when they saw the victims as an ingroup rather than as an outgroup. Experiment 2 went a step further and revealed the impact of the salient social identity on participants' behavioral tendencies and on actual behaviors. In sum, whereas our previous efforts demonstrated that anger is sensitive to the identity categorization for anger-relevant scenarios, the present work stresses the fact that a similar pattern can be obtained for the emotion of fear.

One alternative explanation for the findings rests on the specific groups that were made salient in the different conditions. Indeed, one could argue that the conditions in which participants were led to see American victims as the ingroup all mentioned the category Arabs; that is, we informed participants that we were interested in the reactions of Westerners and Arabs (Experiment 1) or Europeans and Arabs (Experiment 2). In contrast, the alleged focus was on a comparison between Europeans and Americans when we hoped to encourage participants to see the American victims as an outgroup. Possibly, then, participants' greater fear in the ingroup condition may have resulted from the fact that they were reminded of two conflicting groups, essentially due to the salience of the Arabic outgroup, which could have generated anxiety-provoking associated thoughts. Although this interpretation cannot be entirely dismissed, one important aspect of the procedure invites us to question its viability. As it happens, in both ingroup and outgroup conditions, the summary of the events that was presented to our participants made very explicit that the Saudi Arabian terrorist Osama Bin Laden was likely to be the mastermind behind the attacks. In other words, the category of Arabs, by means of one of their prominent exemplars, was made salient in all conditions. This common feature to all conditions did not prevent the emergence of different reactions in the ingroup as opposed to the outgroup condition.

It is interesting to note that our studies provide some evidence that fear-related behaviors can be seen in a somewhat different light than what is usually proposed.

Classically, behaviors that have been associated with fear refer to whatever is done vis-à-vis the threatening source, that is, to get away, to flight, to escape, to search for protection. This aspect is present here under the form of action tendencies and behaviors dealing with the search for additional information. We also focused on somewhat different fear-related behaviors referring instead to what people do vis-à-vis nonthreatening people, that is, to provide help and support to ingroup members and to engage in social sharing with them. We would indeed like to propose that these behaviors also contribute to the reduction of fear appraisals such as the uncertainty and the uncontrollability of the situation.

Appraisal theories (Lazarus, 1991) hold that an emotion is elicited only when the event is relevant for the individual's goals or concerns. As a matter of fact, by inducing some participants to categorize the victims and themselves as members of the same group, we found that the situation became more relevant for these individuals' concerns. Our findings pertaining to the feeling of being concerned are entirely compatible with E. R. Smith's (1993, 1999) model of group-based emotions. As such, they suggest some interesting avenues for future research. In particular, it would be most interesting to acquire a better understanding of the overlap between people's own concerns and those of ingroup members and the role of this factor in the emergence of group-based emotions.

Of course, the decision to study people's emotional reactions to such a dramatic event as the terrorist attacks that took place on September 11, 2001, in the United States has a number of distinct advantages and disadvantages. Although the use of a real-life setting undoubtedly helped examining fear, an emotion that does not show up easily in the context of scenario studies, naturally occurring events of this amplitude are very complex and simultaneously involve numerous appraisals and emotions. For that reason, further research will have to be directed at identifying more systematically how and when the inclusion of others in one's social identity affects the specific appraisals underlying emotional reactions and predicts when and which emotion will be most strongly affected.

To sum up, our two experiments demonstrated that our manipulation of the identity categorization, through its impact on the way participants associated with the victims, affected their reactions to such catastrophic events as the September 11th terrorist attacks perpetrated against the World Trade Center in New York. Experience of fear, fear-related action tendencies, and behaviors were more present when participants were led, albeit in a very subtle way, to see the victims as ingroup fellows. Specific behavioral tendencies regarding the provision of support and help to the victims, and the willingness to rely on social sharing as well as concrete behaviors involving the search for information, were all affected by the way people were led to map the social environment. Because emotions, action tendencies, and even more strikingly, actual behaviors were influenced in such a realistic context, we think that the present data nicely contribute to our understanding of people's emotions and behaviors in real-life settings. For quite some time, we have known that politicians are selecting the words they use in their speeches in an attempt to provide people with a specific way to categorize the world (Reicher, 1997). The present research efforts provide strong evidence that emotions play a nontrivial role in this process. For what we know, emotions and their associated actions indeed depend on the spectacles people wear!

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