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## **Social Sharing, Participation in Demonstrations, Emotional Climate, and Coping with Collective Violence After the March 11th Madrid Bombings<sup>1</sup>**

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*This study examined how social sharing and participating in secular political rituals regarding the March-Eleven (M-11) 2004 train bombings in Madrid, Spain, helps to cope with the wounds of trauma and enhances the reconstruction of a positive emotional climate. A questionnaire was completed by college students (63% of sample) and their relatives (37%) (N = 661) from five Spanish regions and eight universities at 1, 3, and 8 weeks after the bombing. Participating in demonstrations and experiencing a positive emotional climate, as reported a week after M-11, predicted the degree of social support and positive affect as well as the amount of posttraumatic growth reported at the 3-week period. Demonstrations (indirectly) and social sharing (directly) predict positive emotional climate 2 months after the attack. Participation in protest rituals or demonstrations, coupled with elections and changes in government office, helps overcome the effects of collective trauma and leads to an improvement of the emotional climate in the aftermath of a terrorist attack. Participating in ceremonies and rituals reinforces social cohesion and can be conceived of as a communal form of coping, which enhances a culture of peace.*

This study analyzes the effects of social sharing and communal coping, specifically participation in demonstrations against war and terrorism, on the

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development of a positive emotional climate. In the case of Spain, participating in secular political rituals helped to elect democratically an antiwar government rather than elect the previous prowar administration. UNESCO in its *Manifesto 2000* has stated that a peace culture must reject violence, whilst fostering community development within a democratic framework, encouraging new forms of solidarity and seeking to eradicate exclusion and political or economic oppression. Such ideals were embraced by those attending demonstrations and rallies after the Madrid bombings. In this sense, participation in demonstrations is an expression with political implications and can be conceived of as a process reinforcing a culture of peace—especially when the dominant context is antiwar, as was the case on March 11th in Spain.

On the morning of March 11, 2004, a series of bomb attacks on various commuter trains in Madrid, Spain, perpetrated by followers of Al-Qaeda took place. The death toll was nearly 200 people. These events triggered scenes of protest and socio-political turmoil. During the following days, and leading up to the general elections that took place on March 14, approximately 25% of the population participated in numerous and massive demonstrations against terrorism and participation in the Iraq war. An intensification of social sharing and social interaction were found on March 11th (M-11), as well as in September 11th attacks in the U.S. (S-11) (Collins, 2004). Emotional climates are clearly influenced by the social sharing of collective traumatic experiences and by collective forms of coping, such as demonstrations.

Social sharing involving the emotions related to a traumatic trauma fulfils psychosocial functions that are similar to those fulfilled by rituals. First of all, social sharing reinforces empathy, attraction, and social support or social integration. Secondly, it also reinforces and helps to reconstruct basic assumptions or social positive beliefs. Third, social sharing fosters the transmission of common feelings and the construction of a common emotional atmosphere and climate, by both verbal and nonverbal contagion of similar feelings. Finally, because of the reinforcement of social integration and positive beliefs, social sharing also helps to construct a positive emotional climate, emphasizing trust, hope and positive feelings (Rimé, 2005 and in this issue). Because social sharing and the intensification of social interactions are usually related to participation in rituals and other forms of coping, in this study we will test the specific effect of social sharing on social integration, reinforcement of positive social beliefs, and the construction of a positive emotional climate. Q1

Demonstrations can be defined as collective gatherings in a public space aimed toward transmitting a symbolic message to an audience involving both expressive (e.g., criticism toward a government) and instrumental goals (e.g., claims for political change). At the same time, they also represent a form of communication that stresses a “we–them” differentiation by reinforcing the collective identity of a group or a subgroup (McPhail & Wohlstein, 1983). Obviously, demonstrations

do not imply a total consensus or absence of conflict within the concerned group. In most cases, protest rituals constitute “sociodramas” that intensify value conflicts in a framework of struggle for power (McLeod, 1999). In the aftermath of the M-11 bombings, demonstrations expressed and accentuated political conflicts opposing left- and right-wing political ideologies in Spain. They also played a role in expressing dominant antiwar attitudes among the Spanish population.

Demonstrations function in various ways. First, they are supposed to reinforce social integration and positive affect. Rituals that gather people together are a major mechanism in restoring the strength of the individual (Rimé, 2005). In fact, people report more vitality in social activities than alone (Berscheid & Reis, 1998). Studies confirm that being with others decreases the impact of stress (Stroebe & Stroebe, 1995). Moreover, social support is negatively related to social loneliness, whilst social activities reinforce positive affect (Argyle, 1987).

Second, participation in demonstrations reinforces positive social beliefs or shared positive beliefs regarding the group (Durkheim, 1912/1982; Rimé, 2005). Repetition of slogans and the validation of opinions through ceremonies support such a reinforcement of beliefs. The fact that many in a crowd share similar aims and claims elicits a sense of trust (Drury, Cocking, Beale, Hanson, & Rapley, 2005). Rituals thus act as catalyzers of commitment with values and beliefs. This may explain why participants in demonstrations and social movements even 20 years later report higher stability and agreement with ideological beliefs (Snow & Oliver, 1995). Participation in rituals also helps to emphasize positive aspects of the collective experience in the aftermath of a trauma. A traumatic event such as M-11 does indeed challenge one’s world views and set of assumptions (Janoff-Bulman, 2004). Traumatized subjects report more negative beliefs about the self and the social world. Nevertheless, people also describe positive life changes after a traumatic event, with personal growth, interpersonal benefits (receiving social support), and social benefits (enhancement of their community cohesion). Considering the positive aspects of traumatic events predicted a better adjustment to them (Nolen-Hoeksema & Davis, 2005; Tennen & Affleck, 2005). Actually, initial emotional upset might constitute a precondition for posttraumatic growth if one considers that people who failed to be distressed by the event, or whose world views failed to be shattered by it, may not be motivated to construct and experience positive changes. When does positive change occur? The mobilization of community support is necessary for the reconstruction of a positive world view (Armeli, Gunthert, & Cohen, 2001; Janoff-Bulman, 2004). On the other hand, mass media transmission, social sharing, focusing attention on helping behaviors, and communal forms of coping in which positive collective reactions are stressed also reinforce the perception of positive collective emotions such as hope and other positive facets of reactions to trauma (see Conejero & Etxebarria, this issue). Q2

Third, through contagion of affect, collective rituals are also instrumental in building a common emotional atmosphere that can be a precondition for social

cohesion and that influence the construction of emotional climate. Feeling similar emotions reinforces empathy and interpersonal attraction (Bateson, 1998). Taking part in demonstrations may also have positive effects in a more macrosocial sense by reinforcing not only interpersonal social support but also collective social cohesion and a positive social climate. When demonstrations promote solidarity with positive ideals rather than hatred toward an enemy, they promote societal support for the sort of environment that allows people to fulfill their basic needs and enhances the global culture of peace endorsed by the UN General Assembly and UNESCO (de Rivera, 2006; UNESCO, 2000). Demonstrations against war and terrorism that emphasize trust and solidarity, unity and institutional changes, increase confidence and the free communication that reinforce the features of a positive emotional climate.

The broadest available theoretical frame for understanding the effects of demonstrations as well as other forms of collective rituals was formulated by Durkheim in his classic work *The Elementary Forms of Religious Life* (1912/1982). This author viewed rituals as situations in which emotions are aroused in common among participants. They induce emotional contagion, feelings of empathy, and unity (see Rimé in this issue). Data confirms that participants in demonstrations experience feelings of solidarity, perceiving that people act and feel together, as well as reinforce shared beliefs (Drury et al., 2005). Durkheim posits three explanatory mechanisms for the functional role of demonstrations: (1) similarity in emotions and beliefs, (2) interpersonal attraction and social support, and (3) the reinforcement of positive social beliefs. These factors are supposed to be the processes explaining the positive effects of rituals and demonstrations. In this article, we will test the mediational role of reinforcement of social support and social beliefs on the effects of demonstrations on a positive emotional climate.

In this article, we will examine how participating in secular rituals fulfils the psychosocial functions of social integration, construction of positive shared social beliefs and reinforcement of societal cohesion, and in such ways helps to enhance a positive emotional climate (see Rimé in this issue).

Finally, positive emotionality is associated with resilience and predicted adjustment (Fredrickson, Tugade, Waugh, & Larkin, 2003). This may hold true for both the collective and the individual level because emotions perceived in the social milieu appear related to adaptive forms of coping (Conejero & Etxebarria, this issue). Perceived positive emotions and reactions in others could be conceived of as a communal form of resilience. We expected to find that a positive emotional climate during the first week could help overcome the impact of the Madrid bombings, thus reinforcing social integration and positive social beliefs. Positive emotionality is related to altruistic behavior and sociability (Fredrickson et al., 2003). These authors also found that personal positive emotions reinforced personal growth for resilient people and finding a positive meaning in reactions to

9/11. We expected to find that perceived positive emotions such as hope within the social milieu also help to instill posttraumatic growth at the interpersonal and social level.

The aim of this study is to address five questions: First, does social sharing and participating in demonstrations at Time 1 (a week after the attacks) predict positive emotional climate changes after the terrorist attacks? Second, do social sharing and communal coping correlate and predict posttraumatic growth, social support, lower loneliness and positive affect at Time 2 (a month after the attacks)? Third, are direct effects of communal coping on emotional climate mediated by posttraumatic growth and social support? Fourth, although positive emotional climate at Time 1 will be used as a baseline for changes in positive emotional climate, will it also act as a form of communal resilience so that it is predictive of posttraumatic growth, social support, and positive affect in Time 2? Finally, is negative emotional arousal involved in posttraumatic growth?

## Method

### *Participants*

A total of 661 people (28% men) participated in all the data collection, with a mean age of 27.43 years. Of these, 63% were university students and 37% were nonstudent adults. Respondents were enrolled in nine Spanish universities or were members of their families in five regions including: Madrid and Castilla (33%, from four universities: Complutense, Autónoma, UNED and University of Burgos), Andalusia (32%, University of Granada and University of Malaga), the Basque Country (19% from the University of the Basque Country), Galicia (11% University of Santiago of Compostela), and Catalonia (6% Central University of Barcelona). Between 70% (Basque Country) and 100% (Burgos and Madrid) of respondents when hearing about the bomb attacks feared someone close to them could have suffered some harm or been injured. Of the total sample, 5.5% were directly affected by the attacks and 28% knew someone who was affected.

### *Variables and Instruments*

*Social sharing* was measured by a questionnaire asking about the frequency of social sharing of emotions based on the work of Rimé and colleagues (Rimé, 2005). The questionnaire includes questions such as “How frequently have you spoken about the events of M-11 during the last week?” and “How frequently have you heard people talk about the events of M-11 during the last week?” Responses were made on a seven-point Likert-type scale whose extremes were “not at all” (1) and “a great deal” (7). The scale has a moderate internal consistency,  $\alpha = .60$ .

*Emotional arousal* was measured with an adaptation of Izard's Differential Emotions Scale (DES) (Echebarría & Páez, 1989). The DES assesses, through nine items, the intensity with which the subject experiences his/her emotional responses to a stimulus. The version used in the present study omitted the item referring to surprise. Respondents were asked both in a self-reference and other-reference format to what extent they (or other people) felt the following emotions about the massacre (Joy/Happiness; Sadness/Grief; Disgust; Guilt; Anger; Fear/Anxiety; Shame, and Pride) ranging from "not at all" (1) to "a great deal" (7). A first factor combining the negative emotions has a Cronbach  $\alpha$  of .75. We used the total of this factor as an index of the intensity of emotional arousal.

*Communal coping* was measured by four of 16 items from the *Way of Coping Scale* (short version) (Folkman & Lazarus, 1985; Penley, Tomaka, & Wiebe, 2002) that was adapted to M-11. The four items loaded on a common factor and formed a scale with a Cronbach  $\alpha$  of .71. They asked about seeking social support by talking to someone with similar feelings and problems to find out more about the situation, asking for sympathy and understanding, expressing and discharging feelings and emotion, and learning from the experience by growing as a person. These questions were answered on a Likert-type response scale with four points, consisting of "never" (1), "sometimes" (2), "frequently or a lot of times" (3) to "always" (4).

*Participation in demonstrations* against terrorism was answered using the same four-point scale as *Communal coping*.

*Perceived social support* was measured by the Subjective Social Support Scale in a short version (Vaux et al., 1986). The SS-A scale assesses the perception of satisfactory social support. This short three-item version is made up of the statements with the greatest weight in the only factor of the Spanish version: (1) "I have a strong emotional bond with my friends," (2) "My friends and I are really important to one another," and (3) "I feel integrated within a group of people." Responses are made on a Likert-type response scale with four points, ranging from "totally disagree with the statement" (1) to "totally agree" (4). The scale has a satisfactory Cronbach  $\alpha$  of .86.

*Loneliness* was measured by the UCLA loneliness scale. This scale is the most commonly used self-report loneliness instrument (Shaver & Brennan, 1991). The short four-item scale assesses individual differences in the experience of subjective social isolation and essentially taps social loneliness (Exposito & Moya, 1999). Respondents are required to indicate how frequently (on a scale of 1 "never" to 4 "always") they have certain loneliness feelings. The scale has a satisfactory Cronbach  $\alpha$  of .78.

*Positive affect* was measured with the *Watson's PANAS Scale*—positive affect dimension (Watson, Clark, & Tellegen, 1988). The PANAS scale (positive) evaluates, by means of 10 adjectives, on a five-point scale (1 = "slightly or not at all," 2 = "a little," 3 = "moderately," 4 = "quite a lot," and 5 = "a lot"), the extent in which the subject has experienced positive emotions during the previous

month. It has a Cronbach  $\alpha$  of .81. Its total is a “pure” indicator of positive affect, associated with reinforcement and social activities.

*Social support and positive affect* was measured with items from the above three scales (with a reversed score for loneliness items). The overall reliability coefficient was  $\alpha = .78$ .

*Posttraumatic growth*: Tedeschi’s PTGI Scale of Posttraumatic growth, and Park, Cohen, and Murch’s SRGS Stress Related Growth, were adapted to M-11 (Park, Cohen, & Murch, 1996; Tedeschi & Calhoun, 1996). The Spanish adaptation of these scales assesses positive outcomes or benefits reported by people who have experienced traumatic events. To avoid possible overburden, a short form was used. Respondents were asked “As a conclusion to be drawn from the events of March 11th, indicate the extent to which there have been positive consequences for you and others.” Sample items include: “reinforces political participation and engagement,” “reinforces sensibility towards human rights violations in this country,” “reinforces awareness of human rights violations in the world.” These items are indices of two of the main aspects of a peace culture as proposed by UNESCO: rejection of human rights violations and political participation. The posttraumatic growth scale reliability was very good, with an  $\alpha$  of .92.

*Positive emotional climate* was measured with items from the Emotional Climate Scale (Páez, Ruiz, Gailly, Kornblit, & Wiesenfeld, 1997). This scale uses 10 items to assess the perception of negative and positive emotional climate. In the version used in the present study, participants were asked to “Assess the current state of your country,” indicating their degree of agreement with a series of statements by means of a five-point scale ranging from “not at all” (1) to “very strongly” (5). An example of the statements is “The social environment or climate is one of Hope.” A first factor unified six items related to positive emotions (such as joy/contentment, hope, solidarity, and confidence,  $\alpha = .64$ , see Conejeros & Etxeberria in this issue), and the total score was used as an index of positive emotional climate.

### *Procedure*

Participants were asked to answer the scales either during their university courses or, in the case of parents and family members, through an interview with psychology students. The goal was to study the effects of participating in demonstrations a week after the March 11th bombings (Time 1 or around March 18th), 3 weeks later (Time 2, the end of March/beginning of April), and after 8 weeks (Time 3, the end of May). The Vaux Subjective Social Support, UCLA Loneliness, and Watson positive PANAS scales were applied in the 3- and 8-week intervals. The positive changes or benefits of trauma scale were applied after 3 weeks. The Páez et al. (1997) emotional climate and intensity of negative emotional arousal or DES scale was applied after 1 and 8 weeks.

## Results

### *Frequencies and Comparison Between Demonstrators and Nondemonstrators*

The mean for social sharing was 5.8, with 82.9% of the participants reporting higher scores than the theoretical mean (above 4 in the 1–7 scale). Twenty-two percent of the respondents reported not participating in demonstrations, 11% reported attending sometimes, 14.8% a lot of times, and 52.5% replied that they attended all demonstrations. This level of participation is higher than the observed actual participation but may be explained by the fact that our sample is of younger and educated people and also because people overreport desirable behaviors (see Collins, 2004 for similar results in the post-September 11th USA).

To have a descriptive profile, participants were dichotomized into nondemonstrators (score 1, “not at all participating in demonstrations”) and demonstrators (scores 2, 3, and 4). Mean comparisons were carried out to test if there were differences between these participants in outcomes.

Thirty percent of nondemonstrators reported posttraumatic growth scores higher than 4 (mean point in the scale) versus 41% of demonstrators. The means for posttraumatic growth at Time 2 were, on a five-point scale, 3.93 for nondemonstrators, and 4.55 for demonstrators ( $t_{(661)} = 5.3; p < .001$ ).

Forty-two percent of nondemonstrators reported social support and positive affect scores higher than the mean versus 54% of demonstrators. The mean for social support and positive affect at Time 2 was 8.9 for nondemonstrators versus 9.3 for demonstrators (on a scale ranging from 3 to 13) ( $t_{(661)} = 2.93; p < .001$ ).

Fifty-six percent of nondemonstrators reported no or an increased change in positive emotional climate between Times 1 and 3 versus 63% of demonstrators. The mean in positive emotional climate at Time 3 was 18.91 (range 6–30) for nondemonstrators versus 19.56 for demonstrators ( $t_{(661)} = 2.34; p < .02$ ). Although Time 1 and Time 3 means (18.91 and 19.03 respectively) for positive climate did not differ for nondemonstrators ( $t_{(142)} = .54; p < \text{n.s.}$ ), Time 3 positive emotional climate (mean = 19.5) was higher than Time 1 for demonstrators (mean = 19.1) ( $t_{(519)} = 2.18; p < .03$ ). The profile for higher versus lower scores in social sharing was similar (data not shown).

### *Correlations Between Participation in Demonstrations and Emotional Climate at Time 1 and Variables at Times 2 and 3*

To test the hypothesis that social sharing and participation in demonstrations has positive effects, correlations were performed between the amount of social sharing and level of participation in demonstrations reported a week after M-11 and the perceived social support and positive affect at Times 2 and 3, posttraumatic growth at Time 2, and positive emotional climate at Time 3. These correlations,

**Table 1.** Correlations Among Social Sharing, Participation in Demonstrations, Positive Emotional Climate, and Other Variables

	Social Sharing <sup>1</sup>	Participation in Demonstrations <sup>1</sup>	Positive Emotional Climate <sup>1</sup>	Positive Emotional Climate <sup>3</sup>
Communal coping	.06*	.15**	.03	.09*
Emotional arousal/DES <sup>1</sup>	.07*	.18**	.13**	.18**
Social support and positive affect <sup>2</sup>	.11*	.14***	.15***	.19***
Social support and positive affect <sup>3</sup>	.14**	.08*	.17***	.26***
Posttraumatic growth <sup>2</sup>	.14*	.21***	.25***	.26***
Positive emotional climate <sup>3</sup>	.15**	.09**	.50***	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

<sup>1</sup>Time 1 or first week, <sup>2</sup>Time 2 or 3 weeks; <sup>3</sup>Time 3 or 8 weeks.

DES = Differential Emotional Scale, index of negative emotional arousal.

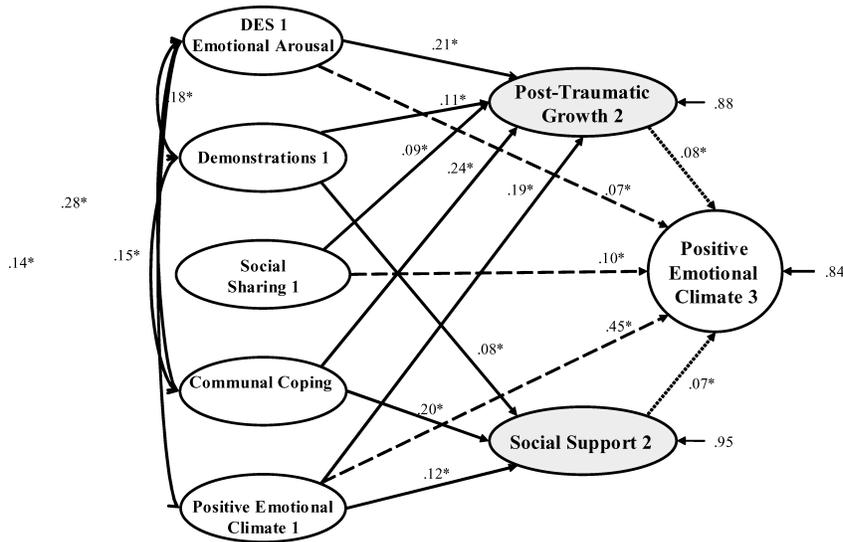
together with correlations with the amount of negative affect and the positive emotional climate at Time 1, are shown in Table 1.

Correlations show that participation in demonstrations and positive emotional climate at Time 1 significantly predict social support and positive affect at Times 2 and 3, but with only a small effect size. Participation has a larger effect on posttraumatic growth, and both sharing and participation have small but significant correlations with positive climate at Time 3.

### Structural Relations

Bentler's EQS Structural Equations Program (Hu & Bentler, 1995) was used to contrast different theoretical models testing the structural relations between Participation in Demonstrations, Intensity of Emotional Arousal, Social Sharing, Coping, Social Support, Posttraumatic Growth, and Positive Emotional Climate. Because of the medium sample size, observed variables were used for the analyses. A model stressing the direct effect of Time 1 variables on Time 3, and a mediational model were compared against each other. EQS yielded a final model (Figure 1) with the best fit for the data,  $\chi^2(8, N = 661) = 39.93, p < .001, CFI .948, AASR = .02$ . CFI values above .90 are acceptable.

In this model, the strongest path is between positive emotional climate at Time 1 and Positive Emotional Climate at Time 3, as expected. There are also significant low medium size paths between social sharing at Time 1, posttraumatic growth at Time 2, perceived social support/positive affect at Time 2, and positive emotional climate. The indirect path between Demonstrations and Positive Emotional Climate was significant and mediated by posttraumatic growth and perceived social support/positive affect. The indirect path of social sharing was also significant and mediated by posttraumatic growth. Communal coping showed



**Fig. 1.** Structural relation among emotional arousal, demonstrtraion, social sharing, communal coping, post-traumatic growth, social support, and positive emotional climate.

a significant indirect path with positive emotional climate, mediated by reinforcement of social support and positive affect. The path between negative emotional arousal and positive emotional climate was significant but moderate, and the indirect path between negative emotional arousal and positive climate was mediated by reinforcement of positive beliefs or posttraumatic growth. Covariances were significant between negative emotional arousal and demonstration, coping by seeking social support and positive emotional climate at Time 1. Demonstrations, but not social sharing, covariates with coping by seeking social support.

### Discussion

Results support the idea that social sharing at Time 1 (a week after the attacks) predicts higher emotional climate after the terrorist attacks. Talking about a shared emotional event can clearly reinforce and help build an emotional atmosphere (see Conejero & Etxebarria, this issue). Some doubts can be entertained about the role of social sharing in changing the more stable emotions involved in emotional climate. However, this study shows that social sharing, talking about a collective trauma, can reinforce perceptions of a positive emotional climate rather than simply only affecting a transient emotional atmosphere. This effect of social sharing

was independent of communal coping, thus confirming that it is a spontaneous process that is different from a voluntary form of coping. Social sharing also indirectly influences positive emotional climate by strengthening posttraumatic growth (See also Rimé, 2005 and this issue). The results suggest that in the case of collective trauma, social sharing may help to reinforce positive emotional climate by improving cognitive resources more than by social integration.

Results also confirm the positive indirect effects of participating in demonstrations and communal coping on a positive emotional climate. Both participation in demonstrations and communal coping correlate and predict positive emotional climate 2 months after the attacks, although the effects are nonsignificant when other factors were taken into account. Our study suggests that participation in demonstrations and communal coping indirectly reinforced a positive emotional climate (perceived hope, solidarity, and trust) 2 months later by (1) reinforcing the perception of social integration (perceived social support and positive affect) at the three-week period; and (2) reinforcing beliefs regarding positive life changes in response to trauma (posttraumatic growth). Because social trust is a central aspect of a positive emotional climate that is strongly related to a culture of peace (UNESCO, 2000), and because political participation and sensibility toward human rights violations are important aspects of a culture of peace, we can assert that successful demonstrations against war and terrorism help to reinforce a peaceful political culture.

The results show the direct effects that communal coping and participation in demonstrations have on posttraumatic growth and social support. As in the model presented by Fredrickson et al. (2003), these behaviors reinforce social support and positive affect, and they broaden the cognitive resources involved in posttraumatic growth. The results of the EQS suggest that posttraumatic growth and perceived social support were significant mediators between the effects that both participation in demonstrations and communal coping had on positive emotional climate. It would appear that social sharing and communal forms of coping, including participating in demonstrations, reinforce adjustment and social cohesion by way of improving of cognitive resources more than by reinforcing social resources.

The study also confirms the importance of perceiving positive emotions of hope, solidarity, and trust in the social climate as a form of overcoming the impact of a collective trauma. This does not refer only to the effects of personal positive emotions (Fredrickson et al., 2003). Rather, perceptions of a positive emotional climate during the first week were associated with posttraumatic growth, and with social support and positive affect 3 weeks after the bombing, and of course predicted higher positive emotional climate 2 months later. This suggests that positive collective emotions, such as hope perceived in the social milieu, help to broaden cognitive processes, and build interpersonal and societal resources in the same manner that Fredrickson argues positive personal emotions do. In a

related vein, the study suggests that communal coping, along with participation in demonstrations, and perceptions of solidarity, trust and hope in the social milieu, broadens ideas and actions that help secure posttraumatic growth and overcome collective trauma. Communal coping also has relational repercussions, reinforcing the interpersonal relationships and social cohesion involved in later perceptions of social support and positive affect.

Finally, results also confirm the role of negative emotional arousal on posttraumatic growth. Personal negative affect was important for posttraumatic growth as shown by the significant path between DES Times 1 and posttraumatic growth in Figure 1, confirming, as in previous studies, that some level of arousal is a necessary condition for growth when it is combined with social support (Armeli et al., 2001). Negative emotional arousal covariates with participation in demonstrations, communal coping and perception of solidarity, trust and hope in the social milieu (positive emotional climate) at Time 1 and posttraumatic growth 3 weeks later. This pattern of results confirms that emotional upset as well as perception of and participation in community support are necessary preconditions for posttraumatic growth. Past studies have shown that adaptive forms of coping, such as the seeking of social support involved in communal coping, have a positive influence on the perception of social support, positive affect, and posttraumatic growth (Penley et al., 2002). It suggests that active coping simultaneously broaden cognitive resources (e.g., the positive beliefs involved in posttraumatic growth) and build interpersonal relationships (e.g., social support and positive affect).

#### *Limitations and Potential of the Study*

An important caveat regarding our conclusions is that the demonstrations clearly influenced national elections and governmental policy and thus we cannot be sure of the effects on participants when demonstrations fail to alter national policy. Another limitation is that this study uses self-report measures and a nonrandom sample. Although our sample is not random, which limits its representative status, we should point out that nearly 40% of the participants are nonstudents. Self-reports and short forms of scales were used in order to avoid burdening participants. Baseline levels of dependent variables were, in general, controlled, and the emotional event was a collective trauma that had a great impact on the entire Spanish population. For all these reasons, we believe that the study contributes valid and relevant evidence in helping to solve the paradox of participating in rituals. Although such participation involves negative emotional arousal, and data not shown in this article shows that participation in demonstrations predicts higher negative emotions 3 weeks after, it has positive effects on social support, reinforcing positive social beliefs and creating a more cohesive social climate (also see Kayangara et al., in this issue).

*General Conclusion*

Results fit well within a social functionalist framework of understanding participation in ceremonies and rituals. In the aftermath of a collective trauma, recovery is aided by public demonstrations, social sharing, and communal coping that reinforce feelings of collective solidarity in a secular equivalent of the aboriginal rites described by Durkheim. Participation is associated with the perception of a more positive emotional climate 8 weeks later, even when initial perceptions and affect are controlled. Social sharing and collective coping are functional because they reinforce the social cohesion involved in a positive emotional climate, contribute to social support, and aid posttraumatic growth. Collective coping with emotional episodes is functional because it reinforces a search for positive meaning and contributes to social support. A positive perception of emotional climate is functional because it reinforces social support supports posttraumatic growth and reinforces the perception of a positive emotional climate in the future. The longitudinal study on the events of March 11th supports such a functional account.

**References**

- Argyle, M. (1987). *The psychology of happiness*. London: Methuen & Co.
- Armeli, S., Gunther, K. C., & Cohen, L. H. (2001). Stressors appraisals, coping and post-events outcomes. *Journal of Social and Clinical Psychology, 20*, 366–395.
- Bateson, C. D. (1998). Altruism and prosocial behaviour. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology*, (Vol. 2, pp. 282–316). Boston: McGraw Hill.
- Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, pp. 193–281). Boston: McGraw Hill.
- CIS. (2003a). Report number 2481. Retrieved from <http://www.cis.es> on September 18, 2006. **Q4**
- CIS. (2003b). Report number 2508. Retrieved from <http://www.cis.es> on September 18, 2006.
- Collins, R. (2004). Rituals of solidarity in the wake of terrorist attack. *Sociological Theory, 22*, 53–87.
- de Rivera, J. (1992). Emotional climate: Social structure and emotional dynamics. *International Review of Studies on Emotion, 2*, 197–218.
- de Rivera, J. (2006). *Implications for social policies of current research on emotional climate*. Unpublished manuscript, Clark University, Worcester, MA. **Q5**
- Durkheim, E. (1982). *Las formas elementales de la vida religiosa* [The Elementary Forms of Religious Life]. Madrid: Akal (Original work published 1912).
- Drury, J., Cocking, C., Beale, J., Hanson, C., & Rapley, F. (2005). The phenomenology of empowerment in collective action. *British Journal of Social Psychology, 44*, 309–328.
- Echebarría, A., & Páez, D. (1989). *Emociones: Perspectivas psico-sociales* [Emotions: Psychosocial perspectives]. Madrid: Fundamentos.
- Exposito, F., & Moya, M. (1999). Soledad y Apoyo Social [Social Support and Loneliness]. *Revista de Psicología Social, 14*, 297–316.
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48*, 150–170.
- Fredrickson, B. I., Tugade, M., Waugh, C., & Larkin, G. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the USA on September 11th, 2001. *Journal of Personality and Social Psychology, 84*, 237–258.
- Hu, L., & Bentler, P. (1995). *Structural equations modelling*. Newbury Park: Sage.

- Janoff-Bulman, R. (2004). Posttraumatic growth: Three explanatory models. *Psychological Inquiry*, *15*, 30–34.
- McLeod, J. R. (1999). The sociodrama of presidential politics. *American Anthropologist*, *101*, 359–373.
- McPhail, P., & Wohlstein, R. T. (1983). Individual and collective behaviour within gatherings, demonstrations and riots. *Annual Review of Sociology*, *9*, 579–600.
- Nolen-Hoeksema, S., & Davis, C. G. (2005). Positive responses to loss: Perceiving benefits and growth. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 598–603). Oxford: Oxford University Press.
- Páez, D., Ruiz, J. I., Gailly, O., Kornblit, A. L., & Wiesenfeld, E. (1997). Clima emocional: su concepto y medición mediante una investigación transcultural [Emotional climate: Construct and cross-cultural validity]. *Revista de Psicología Social*, *12*, 79–98.
- Park, C., Cohen, L., & Murch, R. (1996). Assessment and predictions of stress related growth. *Journal of Personality*, *64*, 71–105.
- Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of Behavioral Medicine*, *25*, 551–603.
- Rimé, B. (2005). *Le partage social des émotions* [Social sharing of emotions]. Paris: PUF.
- Shaver, P. R., & Brennan, K. A. (1991). Measures of depression and loneliness. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 195–290). New York: Academic Press.
- Snow, D. A., & Oliver, P. E. (1995). Social movements and collective behavior. In K. S. Cook, G. A. Fine, & J. S. House (Eds.), *Sociological perspectives in social psychology*. Boston: Allyn and Bacon.
- Stroebe, W., & Stroebe, M. S. (1995). *Social psychology and health*. Buckingham: Open University Press.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, *9*, 455–471.
- Tennen, H., & Affleck, G. (2005). Benefit-finding and benefit-reminding. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 584–597). Oxford: Oxford University Press.
- UNESCO. (2000). *Manifiesto 2000*. Retrieved on 3 October 2006 from <http://www3.unesco.org/manifiesto2000>.
- Vaux, A., Philipp, J., Holly, C., Thompson, B., Williams, D., & Stewart, D. (1986). The social support appraisals (SS-A) scale: Studies of reliability and validity. *American Journal of Community Psychology*, *14*, 195–219.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scale. *Journal of Personality and Social Psychology*, *54*, 1063–1070.

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### Queries

- Q1** Author: Please note that “Rimé, in this issue” is not given in the reference list. Kindly provide details of the same.
- Q2** Author: Please note that “Conejero and Etxebarria, this issue” is not given in the reference list. Kindly provide details of the same.
- Q3** Author: Please note that “Kayangara et al., this issue” is not given in the reference list. Kindly provide details of the same.
- Q4** Author: Please note that “CIS, 2003a,” “CIS, 2003b,” and “de Rivera, 2006” are not cited in the text. Kindly insert their citations at appropriate places in the text.
- Q5** Author: Kindly update “de Rivera, 2006” if possible.