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BRIEF REPORT

Interpersonal Closeness and Morality Predict Feelings of Being Moved

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The emotion commonly labeled in English as being moved or touched is widely experienced but only tacitly defined, and has received little systematic attention. Based on a review of conceptualizations from various disciplines, we hypothesize that events appraised as an increase in interpersonal closeness, or as moral acts, when sufficiently intense, elicit a positive emotion typically labeled "being moved," and characterized by tears, goosebumps, and a feeling of warmth in the chest. We predicted this to be true for events a person participates in, as well as for events they observe. In Study 1, we elicited reports of recent episodes of weeping evoked by something positive, and also weeping because of something negative; we measured emotion terms, bodily sensations, and appraisals in a U.S. sample. We discovered that events of positive tears, rather than negative tears, were associated with self-reported being moved or touched, with goosebumps, with feelings of chest warmth, and with the appraisals of increased closeness and moral acts. These appraisals mediated the difference in being moved between positive and negative events. We further found that appraisal patterns for personally experienced events were similar to the patterns for observed events. Finally, the 2 appraisals were more closely associated with being moved than with other emotion labels. This was corroborated in Study 2 in the U.S. and Norway, where we induced being moved, sadness, anxiety, and happiness through videos and measured these emotions, plus the appraisals and sensations from Study 1.

Keywords: appraisal, tears, emotion, goosebumps, being moved

Supplemental materials: http://dx.doi.org/10.1037/emo0000271.supp

In *The Expression of Emotion in Man And Animals*, Charles Darwin remarked: "The feelings which are called tender . . . are remarkable . . . from so readily exciting the secretion of tears. Many a father and son have wept on meeting after a long separation, especially if the meeting has been unexpected" (Darwin, 1890, pp. 216–217). William James wrote: "In listening to poetry, drama, or heroic narrative we are often surprised at the cutaneous shiver which like a sudden wave flows over us, and at the heartswelling and the lachrymal effusion [tears] that unexpectedly catch us at intervals" (James, 1890, p. 457).

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These accounts have in common that they talk about tears shed because of something positive, rather than tears of sadness, anger, or frustration. More recent authors have echoed these ideas and called the feeling state *being moved* or *sentimentality*. Many of the suggested appraisals for being moved have a common theme of *increased interpersonal closeness*. These include solidarity, a communion of souls, or reconciliation (Claparède, 1930), love/acceptance (Panksepp, 1995), attachment concerns (Frijda, 1988), reunification (Tan & Frijda, 1999), love and forgiveness (Konečni, 2005), fulfilment of the phantasy of union (Neale, 1986), and reconciliatory moments (Menninghaus et al., 2015).

Other suggested elicitors of being moved can be summarized under the theme of *moral acts*: generous acts (Claparède, 1930), sacrifice and generosity (Konečni, 2005), prosocial acts (Hanich, Wagner, Shah, Jacobsen, & Menninghaus, 2014), and the emergence of positive core values held by a *moral community* from negative values (Cova & Deonna, 2014). Haidt and colleagues (Algoe & Haidt, 2009; Haidt, 2003) proposed that observing acts of purity, virtue, or moral beauty causes the emotion *elevation*, which they note is often called *being touched*, *moved*, or *inspired*.

About half the authors analyzing being moved or positive tears only write about this as an emotion in response to art or narratives, or witnessing others' actions (Algoe & Haidt, 2009; Frijda, 1988; James, 1890; Neale, 1986; Panksepp, 1995). The other half see this as an emotional response also to events in which the person herself directly engages or participates (Claparède, 1930; Cova & Deonna, 2014; Darwin, 1890; Hanich et al., 2014; Tan & Frijda, 1999). Thus, it is unclear at current whether the same or different appraisals underlie these two cases.

Regarding the sensations, there is a consensus that people who are moved have moist eyes, cry or weep, and feel choked up (Cova & Deonna, 2014; Miceli & Castelfranchi, 2003; Scherer & Zentner, 2001; Vingerhoets, 2013; Vingerhoets & Bylsma, 2015). In addition, being moved is thought to involve chills or goosebumps (Konečni, 2005; Wassiliwizky, Wagner, Jacobsen, & Menninghaus, 2015), which indeed have been measured with a camera (Benedek & Kaernbach, 2011). The third frequently mentioned symptom of being moved is a sense of warmth in the center of the chest (Cova & Deonna, 2014; Frijda, 1988; Schnall, Roper, & Fessler, 2010; Tan, 2009; Tan & Frijda, 1999).

In sum, scholars from different disciplines have suggested that certain positive events evoke tears. There is no consensus about which events do so, but two themes emerge from these literatures: increased interpersonal closeness and moral acts. Surprisingly little empirical research has been conducted on these ideas. In particular, none of the authors discussed how their assumed elicitors could be operationalized, and no published studies have tested any theory of the elicitors of being moved. Furthermore, it is unclear whether the same appraisals lead to positive tears for events in which a person is directly involved, or only those that the person observes. Finally, there is a consensual claim, but hardly any data, on the subjective experience and bodily sensations that go along with experiences of being moved.

Our first study collected episodes of tears shed because of something positive from U.S. participants. To obtain discriminant validity, we also collected episodes of tears resulting from something negative. We predicted that events leading to positive tears compared with negative tears (a) evoke an emotion people call "moved" or "touched," (b) also evoke goosebumps and the perception of chest warmth, and (c) are appraised as involving an increase in interpersonal closeness and a moral act (our two focal appraisals). This prediction was based on prior conceptualizations as well as on our own qualitative research (Fiske, Schubert, & Seibt, in press). We also predicted (d) that the two appraisals mediate the difference in being moved across events, and (e) that they predict being moved both for episodes which participants observed and episodes in which they were actively involved. Finally, (f) we expected that being moved is a distinct emotion and therefore would be related to the two appraisals beyond its common variance with other emotion terms such as admiration or awe. To corroborate Hypothesis 6 we conducted a second study, this time with video stimuli that each induced one of four emotions: happiness, sadness, anxiety, or being moved. We now sampled from two cultures, Norway and the U.S., to broaden the generalizability of the findings. Norway has the lowest and the U.S. the highest heterogeneity of long-history migration (1 vs. 83 source countries, Putterman &

Weil, 2010; scored following Rychlowska et al., 2015). Norway also scores lower on individualism than the U.S. (69 vs. 91, Hofstede, 2001, p. 215) and higher on ingroup collectivism practices (GLOBE index 5.34 vs. 4.25, House, Hanges, Javidan, & Dorfman, 2004). These factors are important for norms guiding emotional expressivity (Rychlowska et al., 2015).

The Internal Review Board of the Department of Psychology, University of Oslo approved the studies. We publish all materials and quantitative data at https://osf.io/d4egu/, and provide the event descriptions on request.

Study 1

Method

Design. After providing informed consent participants described an episode in which they "got moist eyes or even shed a tear because of a positive [negative] feeling," Participants were instructed to write a short description (at least 300 characters) about a recent experience from the last three months, or else an earlier situation if they could not think of a recent episode. They then completed our measures. This sequence was repeated with the remaining instruction. Condition order was counterbalanced.

Participants. We retained 132 complete data sets from U.S. Americans participating on Amazon MTurk (62 women), aged 19 to 69 years (M = 35.20, SD = 11.32).

Measures. First, participants characterized the emotions they experienced during the episode on scales ranging from 1 (*not at all*) to 7 (*extremely*). Then they reported appraisals, sensations, and finally demographic information. The supplemental materials contain details on methods and analyses.

Results

Being moved index. First, we tested whether participants characterized their emotion more often as *moved* or *touched* in the positive than in the negative tear condition. In a repeated-measures ANOVA we compared the average of *moved* and *touched* for negative and positive tears. Supporting Hypothesis 1, intensity of being moved differed for condition, F(1, 131) = 136.68, P < .001, $P_p^2 = .51$, with ratings being higher in the positive tears condition (see Table 1).

Sensations. A 3 (sensation: weeping score vs. warm chest vs. chills/goosebumps) \times 2 (condition: positive vs. negative) repeated ANOVA revealed a significant main effect of condition, F(1, 128) = 22.44, p < .001, $\eta_p^2 = .15$, with higher means in the positive condition, a main effect of sensation, F(2, 256) = 74.13, p < .001, $\eta_p^2 = .37$, with highest means for weeping, followed by warm chest and chills/goosebumps, and an interaction, F(2, 256) = 30.03, p < .001, $\eta_p^2 = .19$. Supporting Hypothesis 2, ratings of warm chest and chills/goosebumps were higher for the episodes involving positive tears. Ratings for tears were higher for the episodes involving negative tears (see Table 1).

Appraisals. We compared ratings on *closeness* and *morality* between conditions in a 2×2 repeated ANOVA. In line with

 $^{^{\}rm I}\,{\rm Three}$ further appraisals were assessed for exploratory reasons (see supplemental materials).

Table 1
Means and Standard Deviations (in Parentheses) for Being Moved Index, Sensations and Appraisals for Positive and Negative Tear Episodes

	M (SD)	Simple effects, all ps < .001 Mean difference, 95% CI*, η_p^2	
Predictor	Pos tears	Neg tears		
	Being mo			
Being moved	5.81 (1.38)	3.41 (2.12)	$2.40 [2.00, 2.80], \eta_p^2 = .51$	
•	Sensa	ations	- "	
Weeping score	3.67 (1.03)	4.01 (1.01)	$34[52,16], \eta_p^2 = .10$	
Warm chest	3.68 (1.26)	2.83 (1.58)	.85 [.54, 1.17], $\eta_p^2 = .19$	
Chills/goosebumps	3.05 (1.56)	2.24 (1.45)	.81 [.50, 1.11], $\eta_p^2 = .18$	
	Appr	aisals	2	
Closeness	1.85 (1.47)	02 (2.12)	$1.87 [1.45, 2.29], \eta_p^2 = .37$	
Moral	1.46 (1.56)	36 (1.96)	1.82 [1.42, 2.22], $\eta_p^2 = .38$	

Note. For each row, the simple effect of condition is given as the confidence interval of the mean difference and the partial eta square.

* When the 95% confidence interval of the mean difference does not include 0, the difference between conditions is significant at p < .05. The weeping score is the average of items on "Moist Eyes," "Feeling choked up (constriction of throat)," and "Tears," "Warm chest" and "Chills/goosebumps" were individual item measures $(1 = not \ at \ all \ to \ 5 = clearly)$. Morality "One or several of the people in the situation did something that was morally or ethically very right" and *Closeness* "All or some of the people in the situation felt closer to each other at the end (compared with at the beginning)" were rated on 7-point scales from $-3 = on \ the \ contrary$ to $3 = to \ a \ high \ degree$.

Hypothesis 3, both ratings were higher for positive than negative tears episodes, F(1, 130) = 99.44, p < .001, $\eta_p^2 = .43$. Their mean levels also differed, F(1, 130) = 11.19, p = .001, $\eta_p^2 = .08$, with closeness having the highest ratings. There was no interaction effect for type of appraisal with condition, F(1, 130) = .08, p = .78, $\eta_p^2 = .001$ (see Table 1).

Appraisals and being moved. Given that positive and negative tear episodes were appraised in different ways, we examined whether the two appraisals could explain why the positive tear episodes made participants more moved than the negative tear episodes. We tested whether the effect of condition (IV) on the being moved index (DV) was mediated by the appraisals of closeness and morality concurrently (MEMORE, Montoya & Hayes, 2015). The model indicated indirect effects of condition on being moved via both the closeness appraisal, B = .52, 95% CI [.22, .91] and the morality appraisal, B = .49 [.14, .82], the total effect being 1.00 [.67, .1.40], supporting Hypothesis 4.

Prediction of being moved across perspectives. To test whether these appraisals predict being moved for episodes which participants observed and for episodes where they were actively involved, two assistants coded the episodes for perspective (see supplemental materials). In an ANCOVA, we predicted being moved for positive tears by perspective (participating vs. witnessing), closeness, morality, and their interactions with perspective. Supporting Hypothesis 5, no significant interaction emerged, Fs(1,125) < 1.6, ps > .21. Only the main effect of closeness was significant, F(1, 125) = 29.71, p < .001, $\eta_p^2 = .19$. We therefore dropped perspective and its interactions from the equation and obtained an overall effect of closeness of B = .50, 95% CI [.32, .67], t(128) = 5.65, p < .001. When used as the sole predictor, being moved was also predicted by morality, B = .17, 95% CI [.02, .32], t(130) = 3.22, p = .028.

Other emotions. Does being moved relate to the appraisals over and above other emotions? As another test of discriminant

validity, we entered the emotion ratings of happiness, sadness, awe, admiration, anger, anxiety, and pride, along with the moved index, as predictors of the two appraisals in two MIXED models. Note that we reversed the regression direction. Closeness was only related to being moved, B = .36, 95% CI [.21, .51], t(249) = 4.68, p < .001. Morality was significantly related to both being moved, B = .27, 95% CI [.12, .41], t(244) = 3.64, p < .001, and admiration, B = .29, 95% CI [.16, .43], t(245) = 4.11, p < .001 (see supplemental materials). The significant regression weights for being moved support Hypothesis 6.

Study 2

Method

Design. After providing informed consent, participants watched four videos in random order, each followed by the same set of questions.

Participants. We retained 758 video impressions by 220 online participants (139 women; 108 Norwegian psychology undergraduates, 112 U.S. Amazon MTurk workers) aged 19 to 69 years (M = 31.71, SD = 12.39).

Materials. Four videos were selected to evoke *being moved*, *happiness*, *sadness*, and *anxiety*. After each video, participants were asked how *moved*, *touched*, *happy*, *sad*, or *anxious* the short clip made them feel $(1 = not \ at \ all \ to \ 7 = extremely)$. Then they rated the same five appraisals as in Study 1, this time from $1 = not \ at \ all \ to \ 5 = to \ a \ high \ degree$. Sensations were assessed with items on "tears/moist eyes" (*weeping*), "warm chest," and "chills/goosebumps" (*chills*) rated $1 = not \ at \ all \ to \ 5 = clearly$. Finally, participants provided demographic information. For details, see the supplemental materials.

Results

To test whether being moved has distinctive appraisals and sensations, *closeness, morality, weeping, warm chest*, and *chills* were regressed on country, being moved (average of moved and touched), sadness, happiness, anxiety, their interactions with country, and video in five separate mixed models. Perceiving increased closeness and morality were both uniquely predicted by being moved and video. Weeping was significantly predicted by being moved, to a lower degree by sadness, and by video. Experiencing a warm chest was best predicted by being moved, to a lower degree also by happiness and country (Norway > U.S.). Finally, chills was predicted by being moved, anxiety, video, and country (Norway > U.S.). Table 2 lists the corresponding estimates, their interactions with country and the estimates for video. The supplemental materials report the reliability of the moved index, the successful manipulation check, and all test statistics.

Discussion

Supporting hypotheses, participants felt more moved and reported more chills/goosebumps and chest warmth in episodes of positive tears than in episodes of negative tears. Appraisals of increased closeness and moral acts mediated the difference between the conditions in the being moved index, suggesting that situations evoking being moved often involve an increase in interpersonal closeness and acts judged as moral.

These results suggest that the main triggers of being moved are interpersonal closeness and morality. A theoretical framework that spans both themes is relational models theory (Fiske, 1992), claiming that four relational models structure our social life. One of them, *communal sharing*, is experienced as interpersonal closeness. Concurrently, each model is a different foundation of morality (Rai & Fiske, 2011). Communal sharing could therefore link the two themes, to the extent that the morality appraised was found to be specific to that model. Accordingly, our newly formulated *kama muta theory* posits that a sudden intensification in communal sharing elicits an emotion often labeled *being moved* (Fiske et al., in press).

For the positive episodes, we also coded the descriptions regarding whether the participant herself was involved or just observed or heard about the event. A majority of the events (74%) were coded as involving the person herself. The two perspectives did not differ in the level of being moved reported, nor did they moderate the pattern of appraisals. This confirms that being moved

Table 2
Study 2: Prediction of Closeness, Morality and Sensations by Moved or Touched, Happiness, Sadness, and Anxiety for American and Norwegian Participants Separately and Combined

	All			B [95	B [95% CI]		
Predictor	B [95% CI]	df	t	p	U.S.	Norway	Estimate
			Clo	oseness (Model	1)		
Moved	.24 [.18, .29]	738	7.99	<.001	.24 [.17, .32]	.22 [.13, .31]	3.85
Sad	.004[05, .05]	730	.14	.892	.01 [06, .08]	004[08,.07]	3.59*
Нарру	.04[01,.09]	738	1.43	.155	.05[02, .13]	.02[06, .10]	1.96*
Anxious	.005[04, .05]	721	.21	.836	.03[03,.09]	02[09,.05]	1.86*
			M	orality (Model 2	2)		
Moved	.21 [.15, .27]	738	7.16	<.001	.24 [.16, .31]	.16 [.08, .24]	4.32
Sad	002[05,.05]	726	06	.953	04[11,.03]	.05 [02, .12]	3.81*
Happy ^x	.01 [04, .06]	737	.39	.698	01[09,.06]	.03[05, .10]	2.41*
Anxious	.02[02,.07]	726	1.04	.299	.04[02, .10]	01[07,.06]	1.79*
			W	eeping (Model 3	3)		
Moved ^x	.35 [.29, .41]	739	11.07	<.001	.28 [.21, .36]	.43 [.33, .53]	2.41
Sad	.07 [.02, .13]	723	2.56	.011	.11 [.04, .19]	.03 [06, .11]	1.82*
Нарру	02[08,.04]	737	68	.498	01[08,.07]	02[11,.07]	1.72*
Anxious	.04 [01, .09]	732	1.52	.129	.08 [.01, .14]	003[08,.07]	1.68*
			(Chills (Model 4)			
Moved ^x	.22 [.15, .30]	726	5.72	<.001	.07 [02, .15]	.39 [.25, .52]	2.18
Sad	.01 [06, .08]	703	.27	.785	.06[02, .15]	04[15,.06]	2.35*
Happy	.04[03, .11]	722	1.03	.305	.11 [.02, .20]	07[18,.05]	2.21
Anxious ^x	.21 [.15, .27]	736	6.91	<.001	.28 [.20, .35]	.16 [.07, .26]	2.18
			War	m chest (Model	5)		
Moved ^x	.38 [.31, .44]	726	11.51	<.001	.29 [.22, .37]	.45 [.35, .56]	2.29
Sad	[-03, 08]	704	.88	.378	.06[01,.14]	01[10,.07]	1.67
Нарру	.14 [.08, .20]	723	4.50	<.001	.17 [.09, .24]	.10 [.01, .19]	2.00
Anxious	.05 [003, .10]	736	1.85	.065	.07 [.01, .14]	.02 [06, .10]	2.65

Note. All criteria were measured on scales from 1 to 5.

 $^{^{}x}$ Indicates a significant (p < .05) interaction of this predictor with country of residence. Separate mixed models were computed for the two samples combined and separately. Test statistics are reported only for the combined sample. Video intercepts indicate the value of the criterion for each of the four videos at the average of all other predictors, which were centered. Note that the row header in this case does not refer to the emotion measured but to the content of the video shown. Intercepts with an asterisk differ significantly from that of the moving video. This is additional evidence for the appraisals' role in being moved.

is the same emotion with the same appraisals both when actively involved and when observing an event.

The frequent reports of being moved experiences when actively involved challenges the characterizations of being moved by Hanich, Wagner, Shah, Jacobsen, and Menninghaus (2014), Tan (2009), and Tokaji (2003), who argue that the emotion is not related to agency, and assume it is generally experienced only passively by witnessing or observing an event. The present observations also challenge Haidt's (2003) implicit equation of being moved with elevation, where elevation is defined as an experience caused by witnessing others perform acts of moral virtue.

Finally, we tested whether the focal appraisals were better predicted by the other emotions assessed, such as awe and admiration. If that were the case, it would suggest that *being moved* is a term mainly used in conjunction with another of the emotion terms. However, in Study 1 we found that the being moved index was the strongest predictor of *increased closeness*, and predicted *morality* alongside admiration. This suggests that among the terms tested, *moved* and *touched* are the primary emotion terms Americans use for weeping because of increased closeness or moral acts. The finding for admiration is at odds with the models of Onu, Kessler, and Smith (2016) and Algoe and Haidt (2009), where moral behavior is seen as eliciting elevation, not admiration.

Inducing being moved, happiness, sadness, and anxiety through videos, Study 2 investigated the same question in Norway and the U.S.: Again, perceiving actions as morally right and people as coming closer together were uniquely predicted by being moved, and not by happiness, sadness, or anxiety. In addition, although different affective states were related to different sensations, being moved was the only emotion predicting all three: weeping, chills, and a warm feeling in the chest. This was especially the case for the Norwegian sample.

Some accounts propose that crying when being moved is similar to sadness-related crying because, for example, both are triggered by helplessness or powerlessness (Miceli & Castelfranchi, 2003; Vingerhoets & Bylsma, 2015). Efran and Spangler (1979) as well as Tokaji (2003) see the release of tension as the primary cause of the tears of being moved. These models would suggest that there is no pattern of appraisals or sensations specific to being moved. Yet we found in both studies specificity in appraisals and sensations, relative to the comparison emotions. These data support the view that being moved is a distinct emotion.

In sum, our studies present the first empirical evidence for the appraisals of being moved, as well as characterizing its phenomenology, albeit only subjectively. This paves the way for further inquiry into the nature and consequences of this emotion. As an emotional response to interpersonal closeness and moral acts, this emotion may play a key role in preventing conflict and bringing people together.

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