

# Supporting Information

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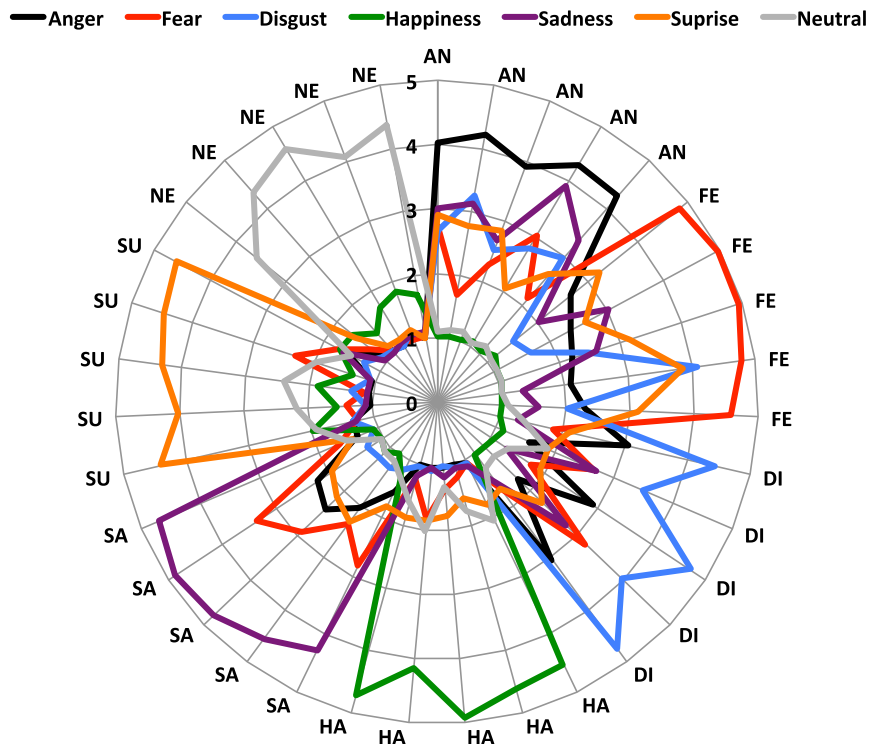


Fig. S1. Mean levels of experience (ranging from 1 to 5) of basic emotions while reading the stories used in experiment 2. Target emotions for each story are represented on the perimeter, different lines show experience of each emotion. AN, anger; FE, fear; DI, disgust; HA, happiness; SA, sadness; SU, surprise; NE, neutral.

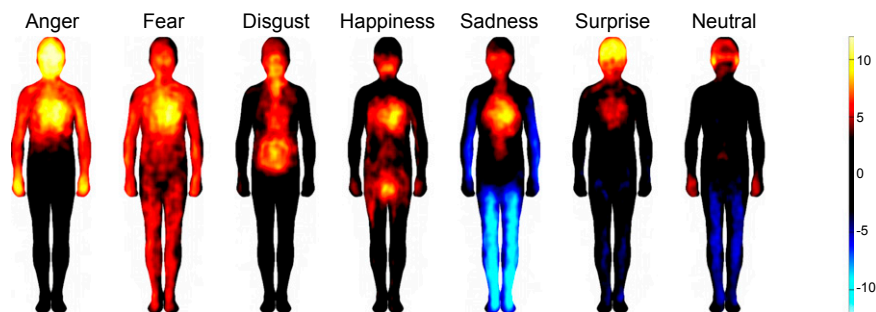
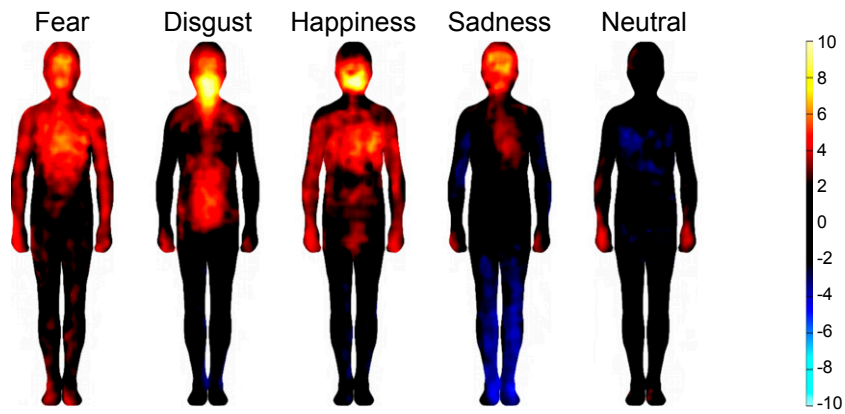
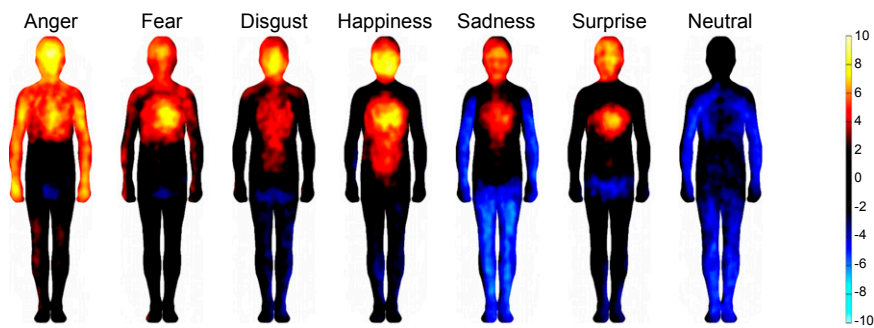


Fig. S2. Bodily topography of basic emotions triggered by emotional imagery guided by narratives. The body maps show regions whose activation increased (warm colors) or decreased (cool colors) when feeling each emotion ( $P < 0.05$  FDR corrected;  $t > 2.11$ ). The colorbar indicates the  $t$ -statistic range.



**Fig. S3.** Bodily topography of basic emotions triggered by watching emotional movies. The body maps show regions whose activation increased (warm colors) or decreased (cool colors) when feeling each emotion ( $P < 0.05$  FDR corrected;  $t > 2.11$ ). The colorbar indicates the  $t$ -statistic range.



**Fig. S4.** Bodily topography of basic emotions inferred from others' emotional expressions. The body maps show regions whose activation participants evaluated as increased (warm colors) or decreased (cool colors) in the person displaying each facial expression. ( $P < 0.05$  FDR corrected;  $t > 2.09$ ). The colorbar indicates the  $t$ -statistic range.

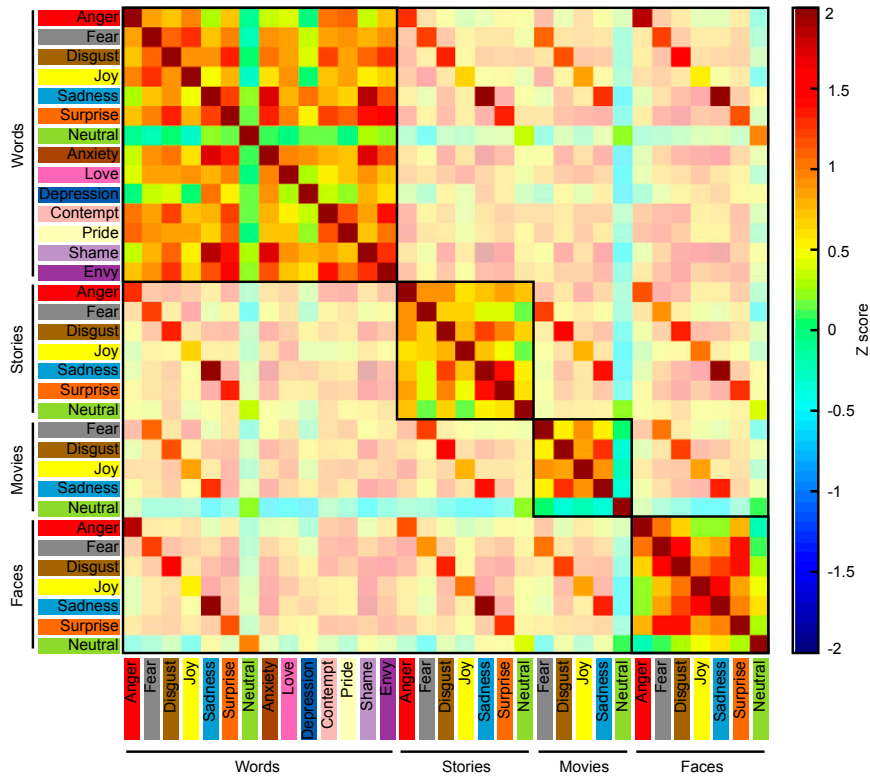


Fig. S5. Similarity matrix of bodily sensations associated with emotions across experiments 1–4. Colorbar shows the z-transformed Spearman correlation across emotion pairs. Note that nonmatching emotion pairs across experiments have been toned down slightly to improve readability.

**Table S1. Means and SDs of classification accuracy (in %) with one-out and complete classification schemes**

Emotion	Words		Stories		Movies		Faces	
	M	SD	M	SD	M	SD	M	SD
<b>One-out classification</b>								
Anger	78	0.18	78	0.36			76	0.33
Fear	70	0.25	81	0.28	72	0.50	63	0.60
Disgust	70	0.23	79	0.33	86	0.25	64	0.55
Happiness	76	0.17	84	0.26	77	0.37	76	0.41
Neutral	76	0.22	81	0.31	70	0.42	68	0.48
Sadness	64	0.31	72	0.42	70	0.54	64	0.55
Surprise	70	0.16	74	0.33			74	0.39
Mean	72		78		75		69	
<b>Complete classification</b>								
Anger	42	0.61	43	0.83			32	1.32
Fear	32	0.71	45	1.06	57	0.93	20	1.33
Disgust	22	0.68	40	0.96	35	1.28	14	1.50
Happiness	40	0.57	50	1.14	52	1.02	38	1.02
Neutral	74	0.41	76	0.93	72	1.03	71	1.15
Sadness	30	0.63	42	1.23	34	1.42	24	1.19
Surprise	24	0.49	47	1.49			15	1.09
Mean	38		49		50		30	

The experiments used word (Exp 1a), story (Exp 2), movie (Exp 3), and face (Exp 4) stimuli.

**Table S2. Mean similarities for emotion topographies across experiments**

Mean similarity ( $r_s$ )	Anger	Fear	Disgust	Happiness	Sadness	Surprise	Neutral
With same emotion across experiments	0.90	0.82	0.87	0.59	0.93	0.85	0.44
With different emotions across experiments	0.49	0.50	0.60	0.57	0.55	0.41	0.23

All differences between correlations in both rows except for happiness are significant at  $P < 0.001$  in Meng's test.

**Table S3. Classification accuracy (in %) when using independent experiments as training (rows) and test (columns) sets**

Experiment	Words	Stories	Movies	Faces
Words	56	66	72	69
Stories	62	41	69	69
Movies	63	62	38	61
Faces	70	72	73	57

Diagonal shows classification accuracies for the within-experiment 50-fold cross-validation in the full dataset. Note that these values differ slightly from those using data from single experiments, as the dimensionality reduction was performed for the whole dataset with a larger number of principal components (50 vs. 30) to account for differences between experiments.