Supplementary Method

Behavioural pilot experiment

A pilot experiment was completed that had a similar structure to the main experiment. This experiment was conducted to determine whether participants could reliably recognise the encoded bodies after a short retention period.

Method:

Participants

Thirty-one participants (24 females; mean ± SD age: 20.8 ± 6 years) were recruited from the Bangor community and received course credits for completing the pilot experiment. They gave informed consent according to the local ethics guidelines.

Design

The design was the same as the main experiment, except for the changes below. Participants were evenly divided into two teams (blue and yellow), given a t-shirt of their team's colour to wear, and the two teams completed the experiments in separate rooms. In these experiments, participants observed 128 bodies (64 female of which half were team Blue and half were team Yellow).

Retention period: Following the encoding phase, participants in the pilot experiment would take a short break (~10 min) during which they filled in a questionnaire. This was done to ensure that recency effects (performance on recognition is better for bodies that were presented last during encoding phase; Gershberg and Shimamura, 1994) did not influence the performance on the subsequent recognition test.

Recognition task: On each trial, participants were presented with two bodies (one Blue and one Yellow) and asked to select the body they thought had previously been paired with the simultaneously presented statement. Both of these bodies had previously been presented with positive, negative, or neutral statements. The analyses are the same as for the post-scanning recognition task.

Supplementary Results

Meta-analysis of behavioural data

To provide quantitative support for the pattern of results across both behavioural datasets, we performed a meta-analysis of the pilot and post-scanning data using Exploratory Software for Confidence Intervals (ESCI; Cumming 2012). ESCI weights the contribution of each study as a function of sample size and variability of the estimate to provide a global estimate. Therefore, studies with larger samples and smaller variability have a higher weighting than studies with smaller samples and larger variability.

We meta-analysed three effects of interest (Supplementary Figure 1). The first effect was the interaction term, which was calculated as the difference in recall for positive compared to negative trait information for in-group compared to out-group members. Two further effects comprised the difference in recall performance between positive and negative information for (2) in-group and (3) out-group members separately. We used a random effects model to estimate the size of the effect as recommended by Cumming (2012). Effects are estimated in original units (% accuracy) using 95% confidence intervals. The meta-analysed interaction effect shows that the difference in recall accuracy between positive and negative trait information for in-group members is greater than for out-group members (Supplementary Figure 1A). This interaction effect is formed by recall accuracy being greater when recalling positive compared to negative information about in-group members (Supplementary Figure 1B) and vice versa for out-group members (Supplementary Figure 1C). By comparing Supplementary Figures 1B and 1C, it is clear that the out-group bias for negative trait knowledge is smaller and less consistent than the in-group bias for positive trait knowledge.

Supplementary Table 1. Univariate results for the Valence by Group [(PosIn > PosOut) > (NegIn > NegOut)] contrast a) masked by the body-localiser, b) masked by the ToM-localiser.

Region	Number of voxels	*T*	*p value FWE corrected*	Montreal Neurological Institute coordinates		
				x	y	z
A) Masked by body-localiser (EBA and FBA)						
Thresholded at p<.005, k=0						
Right fusiform gyrus	5	3.19	.97	45	-37	-14
B) Masked by ToM-localiser						
Thresholded at p<.005, k=0						
Left temporal pole	7	3.69	.83	-42	8	-41
Left temporal pole	2	3.42	.91	-42	23	-20
Right temporal pole	2	3.42	.91	30	17	-29
Left temporal pole	3	2.90	.90	-30	14	-29
Right temporal pole	5	2.99	.86	36	14	-38
Left middle temporal gyrus / temporoparietal junction	1	2.97	.93	-63	-55	16
Right temporal pole	2	2.90	.91	39	17	-23

Supplementary Table 2. Details of individual subjects' overlap between social Valence by Group [(PosIn > PosOut) > (NegIn > NegOut)] contrast and the body and ToM localisers as well as the affective network mask.

Seed-region	*Main task threshold at which overlap was found in individual subjects*								
	p<.001	p<.005	p<.01	p<.05	p<.1	p<.2	p<.3	p<.4	p<.5
Right FBA (n=16)	1	2	0	2	3	4	3	1	0
Left TPJ (n=19)	2	3	2	2	2	4	2	1	1
Left TP (n=23)	0	0	0	5	6	5	5	1	1
Right TP (n=18)	0	1	0	4	5	4	3	1	0
Left insula (n=19)	0	0	1	6	5	1	3	2	1

Supplementary Table 3. PPI results based on body-selective seed regions. Clusters revealed in the PsychoPhysiological Interaction (PPI) analysis for the Valence by Group [(PosIn > PosOut) > (NegIn > NegOut)] contrast using the body selective seed region defined by the univariate Valence by Group contrast (right FBA), a) masked by the ToM-localiser, and b) masked by the affective network.

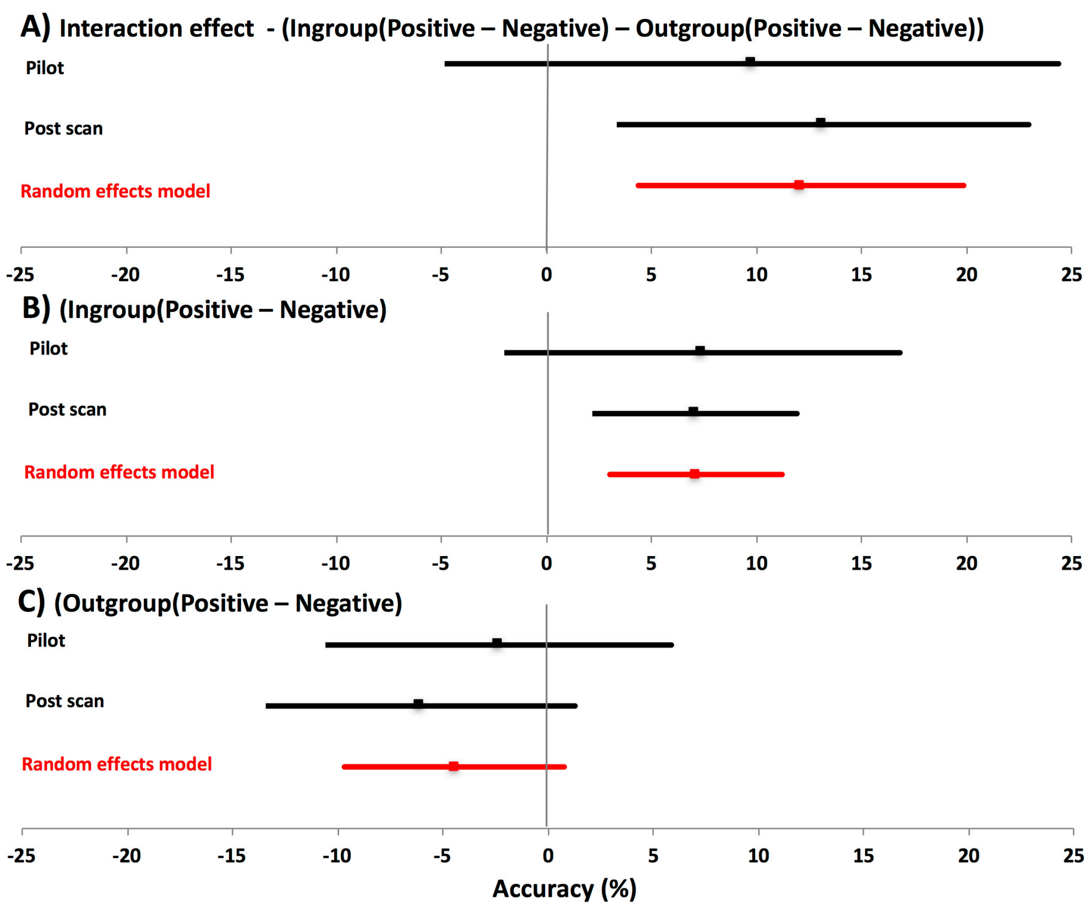
Region	Number of voxels	*T*	*p value FWE corrected*	Montreal Neurological Institute coordinates		
				x	y	z
a) Seed region: right FBA masked by ToM-localiser						
Right TPJ	13	4.23	.74	63	-46	37
b) Seed region: right FBA masked by affective network						
Left anterior insula	20	4.17	.65	-36	23	4
Left striatum/superior orbital gyrus	18	4.08	.68	-18	17	-14
Left hippocampus extending into amygdala	25	4.07	.57	-15	5	-26
Right middle orbital gyrus	22	3.66	.62	30	38	-14
		3.49		33	29	-17
Right amygdala	10	3.16	.81	15	11	-23
		3.06		18	2	-17

Supplementary Table 4. PPI results based on theory-of-mind seed regions. Clusters revealed in the PsychoPhysiological Interaction (PPI) analysis for the Valence by Group [(PosIn > PosOut) > (NegIn > NegOut)] contrast using ToM seed regions defined by the univariate Valence by Group contrast (bilateral temporal poles (TP) and left TPJ), a) masked by the body-localiser, and b) masked by the affective network.

Region	Number of voxels	*T*	*p value FWE corrected*	Montreal Neurological Institute coordinates		
				x	y	z
a) Masked by body-localiser (EBA and FBA)						
Seed regions: bilateral TP						
No suprathreshold clusters						
Seed region: left TPJ						
Right fusiform gyrus (FBA)	70	4.31	.33	48	-43	-14
b) Masked by affective network						
Seed region: right TP						
Right amygdala	10	3.92	.77	18	5	-14
Left amygdala extending into	12	3.33	.74	-24	-4	-14
hippocampus		3.14		-15	-7	-14
Seed region: left TP						
Left insula	31	3.50	.52	-33	8	4
Seed region: left TPJ						
No suprathreshold clusters						

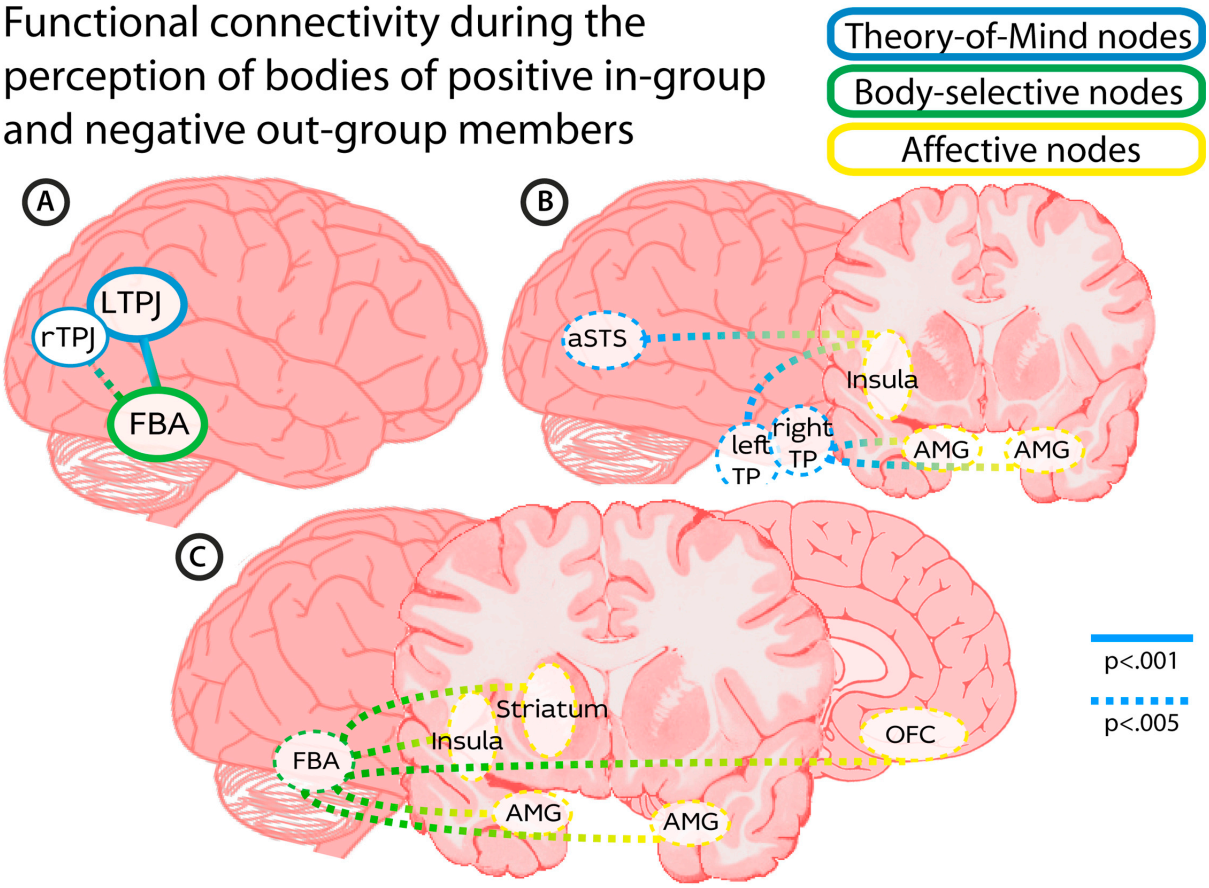
Supplementary Table 5. PPI results based on affective seed regions. Clusters revealed in the PsychoPhysiological Interaction (PPI) analysis for the Valence by Group [(PosIn > PosOut) > (NegIn > NegOut)] contrast using affective seed regions defined by the univariate Valence by Group contrast (left insula), a) masked by the body-localiser, and b) masked by the ToM-localiser.

Region	Number of voxels	*T*	*p value FWE corrected*	Montreal Neurological Institute coordinates		
				x	y	z
Affective network seed region: left insula						
a) Masked by body-localiser (EBA and FBA)						
No suprathreshold clusters						
b) Masked by ToM-localiser						
Left anterior superior temporal sulcus	10	3.96	.78	-57	-16	-5
Left anterior superior temporal sulcus	13	3.55	.74	-66	-34	1



Supplementary Figure S1. Results from a meta-analysis of the pilot and post-scanning behavioural data. Bars represent point estimates and 95% confidence intervals for the effect of interest from each study in the meta-analysis, as well as the combined random effects model. A) The interaction effect (difference in recall for positive compared to negative trait information for in-group compared to out-group members) shows that the difference in recall accuracy between positive and negative trait information for in-group members is greater than for out-group members. This interaction effect is formed by recall accuracy being greater when recalling positive compared to negative information about B) in-group members and vice versa for C) out-group members. A comparison of B) and C) reveals that the out-group bias for negative trait knowledge is smaller and less consistent than the in-group bias for positive trait knowledge.

Functional connectivity during the perception of bodies of positive in-group and negative out-group members



Supplementary Figure S2. Summary of the functional connectivity between neural networks involved in body perception (green), Theory of Mind (ToM; blue), and affective processing (yellow) when observing group-members that cued the recall of social knowledge that fit the stereotype (positive in-group and negative out-group members) compared to when it didn't fit the stereotype (negative in-group and positive out-group members). 1) Functional integration of body and ToM networks: right Fusiform Body Area (FBA) is functionally coupled with bilateral TemporoParietal Junction (TPJ). 2) Nodes in the ToM-network couple with the affective network: left temporal pole (TP) couples with left anterior insula, while right temporal pole connects with bilateral amygdala (AMG). Additionally, left posterior insula couples with left anterior Superior Temporal Sulcus (aSTS). 3) Node in the body network couples with the affective network: right FBA couples with bilateral amygdala, left striatum, left amygdala, and the orbitofrontal cortex (OFC). Full line: $p < .001$; Dashed line: $p < .005$.