Supplemental Information

Neural correlates of biased social fear learning and interaction in an intergroup context
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Supplemental Figures

Figure S1. RFX Plot: Overall activity split in three time bins based on trial numbers. RFX Plot shows the contrast estimates plot in three time bins from the significant peak of activation in the left amygdala for the contrast (CR White > CR Black) during Acquisition stage. Time bin 1= trial 1-3, time bin 2= trial 4-6, time bin 3= trial 7-9.
Figure S2. SCR plot over Trials: Habituation. The amplitude of SCRs is shown in microsiemens. Fear elicited enhanced SCRs to CSs during Habituation on Trial 1 as compared to Trial 2. Error bars indicate standard deviation (SEM). There is a significant decrease in SCRs to CS regardless of race or future “to-be CS+” from Trial 1 to Trial 2 ($F(1, 19) = 27.70$, $p < .001$).

Figure S3. SCR plot over Trials: Acquisition. The amplitude of SCRs is shown in microsiemens for the SCRs to CSs during Acquisition across all 9 Trials. Error bars indicate standard deviation (SEM). A RM ANOVA with the factors CS (CS+, CS-), Race (Black, White), Trial (1-3, 4-6, 7-9) revealed a CS*Race*Trial interaction ($F(2, 38) = 4.97$, $p < .05$).
**Figure S4. SCR plot over Trials: Recall.** The amplitude of SCRs is shown in microsiemens. Fear elicited enhanced SCRs to CSs during Recall across all 6 Trials. Error bars indicate standard deviation (SEM). A RM ANOVA with the factors CS (CS+, CS-), Race (Black, White), Trial (1-2, 3-4, 5-6) revealed a significant effect of Trial ($F(2,38) = 43.12, p < .001$).

**Table S1. gPPI connectivity analysis**

| EXPERIMENTAL STAGE | Analysis (Contrast) | MNI x,y,z (mm) | peak $t$ | peak $p$(FWE-corr) | K |
|---------------------|---------------------|----------------|---------|---------------------|---|
| **ACQUISITION**     |                     |                |         |                     |   |
| (CR Black > CR White) |                    |                |         |                     |   |
| Left Fusiform       | -34 -12 -30         | 3.96           | <.001   | 6                   |   |
| Left Thalamus       | -12 -12 -5          | 3.94           | <.001   | 7                   |   |
| Left precentral     | -50 3 22            | 3.93           | <.001   | 9                   |   |
| (CR White > CR Black) |                    |                |         |                     |   |
| Right ParaHippocampal | 24 -42 -3     | 3.94           | <.001   | 3                   |   |
| Left vmPFC          | -12 42 1            | 3.91           | <.001   | 13                  | 13|
| Left Insula         | -26 20 -11          | 3.75           | 0.001   | 1                   |   |
| Right Lingual       | 21 -75 1            | 3.7            | 0.001   | 4                   |   |
| Right middle temporal gyrus | 51 -1 -17   | 3.69           | 0.001   | 1                   |   |
| Right Hippocampus   | 32 -42 1            | 3.67           | 0.001   | 5                   |   |
| (Black > White)     |                     |                |         |                     |   |
| Left Fusiform       | -34 -10 -27         | 4.81           | <.001   | 38                  |   |
| Cerebelum_9_L       | -12 -45 -35         | 4.07           | <.001   | 21                  |   |
| Left Thalamus       | -21 -16 6           | 4.22           | <.001   | 3                   |   |
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| Region                              | MNI Coordinates | T-Value | p-Value  |
|-------------------------------------|-----------------|---------|----------|
| Left superior frontal medial        | -12 60 21       | 3.94    | <.001    |
| **White > Black**                   |                 |         |          |
| Right Hippocampus                   | 27 -43 -2       | 4.97    | <.001    |
| Right Hippocampus                   | 32 -39 4        | 4.68    | <.001    |
| Right Insula                        | 40 -12 -6       | 4.44    | <.001    |
| Right Thalamus                      | 15 -6 -5        | 4.43    | <.001    |
| Right Lingual                       | 22 -84 -5       | 4.04    | <.001    |
| Right Caudate                       | 21 -24 22       | 3.89    | <.001    |
| Cerebelum_4_5_L                     | -6 -42 -8       | 3.67    | 0.001    |
| Cerebelum_4_5_L                     | -4 -45 -6       | 3.63    | 0.001    |
| **EXTINCTION**                      |                 |         |          |
| **CR Black > CR White**             |                 |         |          |
| Right Fusiform                      | 34 -9 -39       | 5.39    | 0.05*    |
| Right anterior cingulum             | 8 6 27          | 4.7     | <.001    |
| Left superior temporal gyrus        | -36 -37 7       | 4.55    | <.001    |
| Right putamen                       | 27 -3 16        | 4.5     | <.001    |
| Left inferior parietal              | -45 -52 58      | 4.38    | <.001    |
| Left inferior temporal gyrus        | -42 -10 -35     | 4.37    | <.001    |
| Right middle frontal                | 38 42 -2        | 4.2     | <.001    |
| Left anterior cingulum              | -9 12 24        | 3.93    | <.001    |
| Right Thalamus                      | 3 -15 0         | 3.87    | 0.001    |
| Right inferior parietal             | 39 -46 51       | 3.83    | 0.001    |
| Right middle frontal                | 51 44 1         | 3.73    | 0.001    |
| Right Thalamus                      | 20 -15 9        | 3.61    | 0.001    |
| **CR White > CR Black**             |                 |         |          |
| Right supplementary motor area      | 12 2 60         | 6.66    | <.001    |
| Left supplementary motor area       | -4 8 64         | 5.21    | <.001    |
| Left supplementary motor area       | 0 14 60         | 4.46    | <.001    |
| Left middle frontal                 | -27 45 24       | 4.36    | <.001    |
| Right middle cingulum               | 9 3 39          | 4.2     | <.001    |
| Cerebelum_4_5_R                     | 14 -48 -18      | 3.61    | 0.001    |
| **Black > White**                   |                 |         |          |
| Right middle frontal                | 54 33 22        | 5.69    | <.001    |
| Right inferior parietal             | 42 -49 51       | 4.32    | <.001    |
| Left frontal inferior triangularis  | -44 36 -0       | 4.28    | <.001    |
| Left inferior orbitofrontal         | -39 42 -5       | 3.87    | 0.001    |
| Right inferior orbitofrontal        | 57 36 3         | 4.19    | <.001    |
| Right middle temporal pole          | 38 16 36        | 4.13    | <.001    |
| Right Thalamus                      | 4 -12 0         | 4.01    | <.001    |
| Right frontal inferior triangularis | 46 44 -2        | 3.87    | 0.001    |
| Right frontal inferior triangularis | 58 33 0         | 3.61    | 0.001    |
| **White > Black**                   |                 |         |          |
| Right supplementary motor area      | 10 0 58         | 4.92    | <.001    |
| Left middle temporal gyrus          | -48 -45 -6      | 3.65    | 0.001    |

*p < 0.05, after SVC*