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Supplementary Figures

Figure S1. Study 1: Brain regions correlating positively with participants' categorization-related shift in their PSEs towards “fear”, relative to their PSEs on the continuous judgment task. Activity corrected at the whole-brain level (FWER corrected, P < .05; voxel-level p < .02; k = 188).

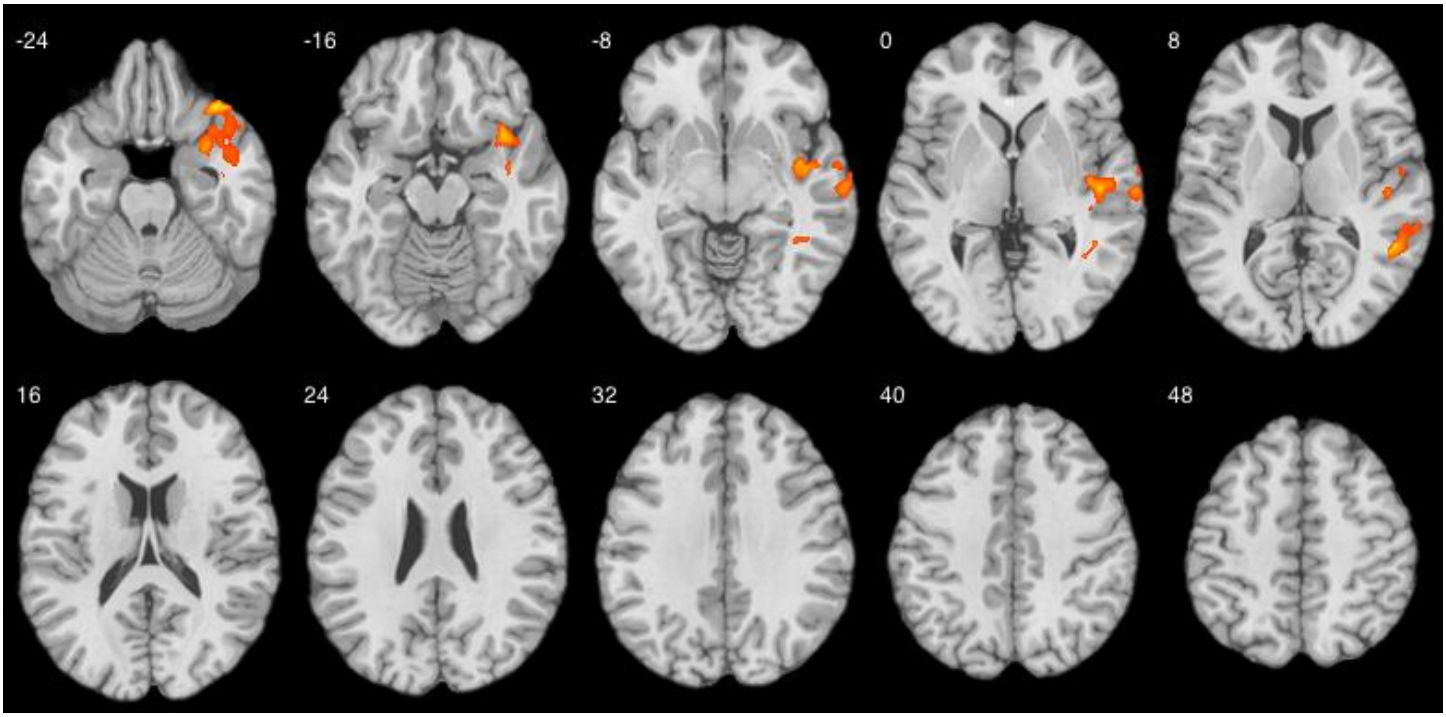

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Figure S2. Study 2: Brain regions correlating positively with participants' categorization-related shift in their PSEs towards “fear”, relative to their PSEs on the continuous judgment task. Activity corrected at the whole-brain level (FWER corrected, P < .05; voxel-level p < .02; k = 230).

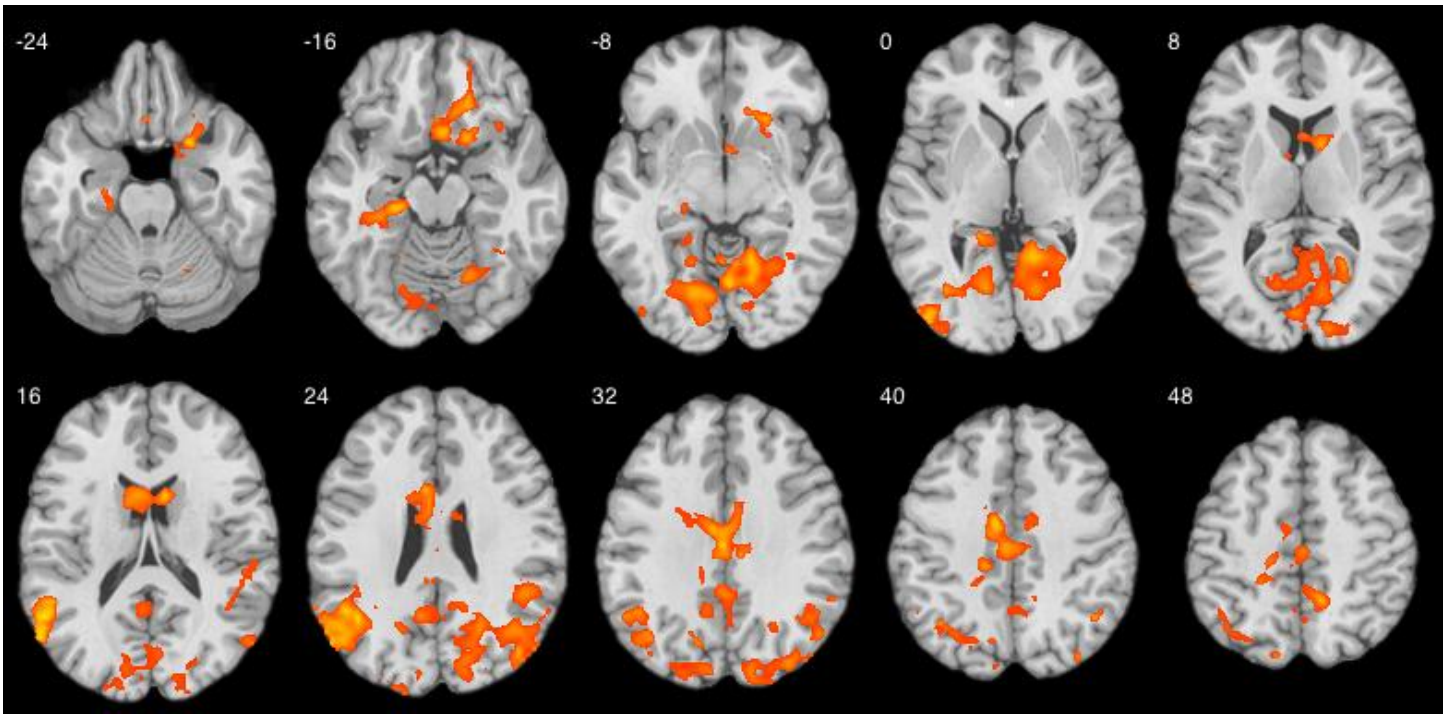

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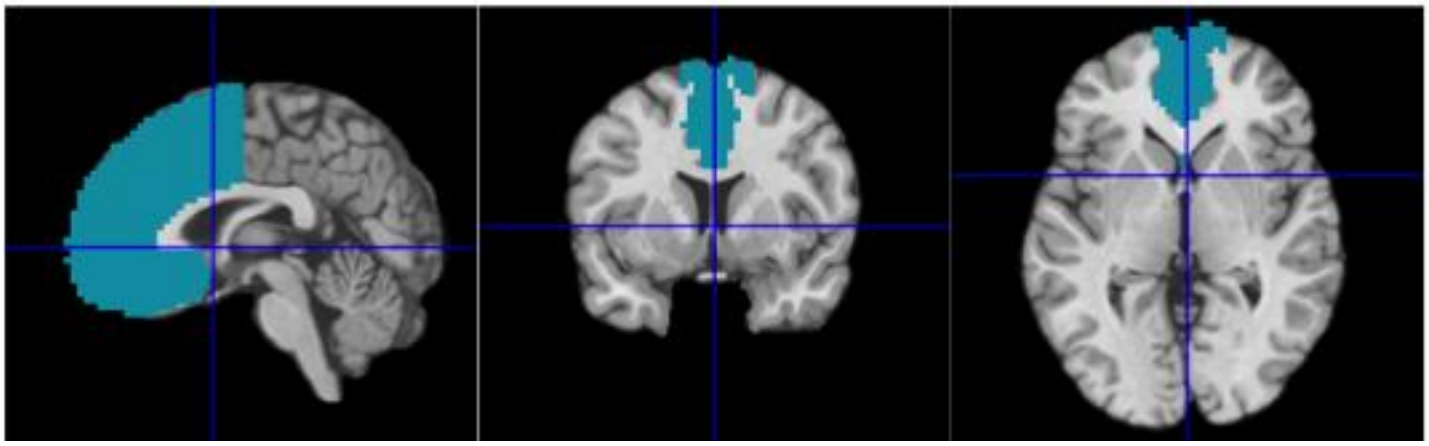
Figure S3. The medial prefrontal cortex mask used for PPI analyses. We hypothesized that the anterior MPFC would show greater PPI connectivity with amygdala and ventral anterior insula with greater influence of categorical thinking on the PSE (relative to the continuous condition). Prior work suggests that many subregions of the anterior MPFC exhibit connectivity with the amygdala and insula. Hence, a mask was used that encompassed the full anterior MPFC for the small volume correction based on the Harvard-Oxford cortical ("thr25") structural atlas. This mask allows for examining which portions of the anterior MPFC are involved, albeit requires a more stringent clustering threshold than selecting a more circumscribed area of the MPFC.



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Supplementary Results

Self-reported Naturalness, Difficulty, and Emotionality for making Categorical and Continuous Emotion Judgments

Outside the scanner, participants completed a packet of demographic, personality, and a post-task questionnaires. In the post-task questionnaire, subjects indicated which conditions were subjectively more "natural", "easier", and "emotional", by selecting on a three-choice judgment either the 'categorical task', the 'continuous task', or 'equal' options. For Study 1, we only have data from 12 out of 20 subjects due to data loss. However, the distributions of responses to these questions across both studies was very similar and so we combined them. For "natural", 17 participants (7 from Study 1) indicated that the categorical condition as more natural, 10 participants (4 from Study 1) that they were equally natural, and 5 participants (1 from Study 1) that the continuous condition was more natural. Judgments of "easier" showed a similar pattern. 17 participants (5 from Study 1) indicated that the categorical condition was easier, 10 participants (5 from Study 1) that they were equally easy, and 5 participants (2 from Study 1) that the continuous condition was easier. Taken together, participants found the categorical judgment condition to be more natural (Chi-Square = 6.83, $p = .033$) and easier (Chi-Square = 6.83, $p = .033$). For "emotionality", most participants perceived the conditions to be more equal in emotionality with 20 participants (6 from Study 1), whereas 5 participants (3 from Study 1) that the continuous condition was more emotional, and 7 participants (3 from Study 1) indicated that the categorical condition as more emotional (Chi-Square = 12.44, $p = .002$), suggesting that demand effects are unlikely to account for the findings.

To examine whether these differences related to neural activity in our ROIs, we conducted separate one-way ANOVAs by grouping participants on the basis of which task they believed to be more natural, easier, or

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emotional, and entering the neural activity in the left/right amygdala or left/right ventral anterior insula as the dependent variable. No significant relationships were observed between these judgments and neural activity (the strongest relationship was observed between condition emotionality and right insula activity, $F(2, 27) = 2.623$, $p = .091$, *ns*; all other *p*s > .35). Similarly, no significant relationships were observed between these judgments and their categorization-related shifts (the strongest relationship was observed with condition naturalness, $F(2, 27) = 2.78$, $p = .08$, *ns*; other *p*s > .70), suggesting that task demands are unlikely to account for the findings.