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· (Regular Articles) ·

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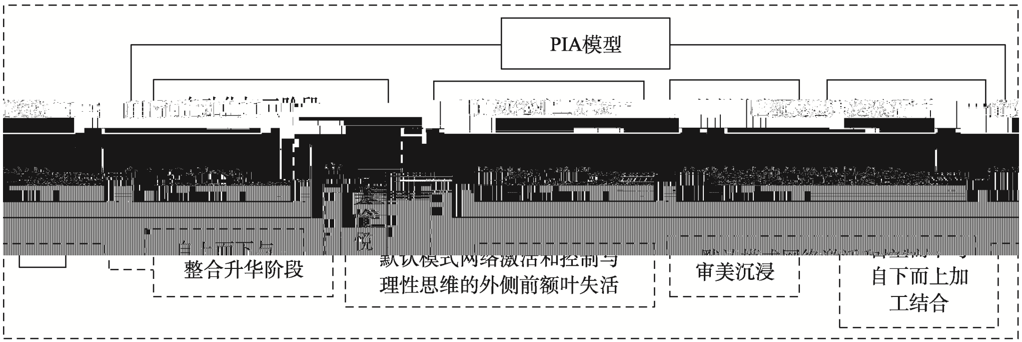

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The processing mechanism of aesthetic pleasure in the perspective of neuroaesthetics

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Abstract: The aesthetic objects arouse aesthetic pleasure that is specific and intense. The Pleasure-Interest of Aesthetic model (PIA) suggests that aesthetic processing is a dual-process including the automatic processing for sensory pleasure and the control processing for aesthetic interest pleasure. Here we review recent work on the neural substrates of aesthetic pleasure. A large body of studies demonstrate that the orbitofrontal cortex is automatically activated by aesthetic objects and different modes of connection with the striatum support different aspects of aesthetic processing. These results consistent with the PIA model. However, the default mode network (DMN) is activated and the lateral prefrontal cortex is deactivated when the aesthetic flow experience occurs, indicating that beyond the dual-process highlighted by the PIA model there is a higher level of aesthetic flow pleasure. We point out that the PIA model needs to be expanded to include this dimension of aesthetic processing and further studies should be conducted on how the aesthetic experience could impact upon creativity and to what extent different aesthetic experiences have the same or differential neural bases for giving rise to aesthetic pleasure.

Key words: neuroaesthetics, aesthetic pleasure, processing mechanisms, pleasure-interest aesthetic model