Supplementary Materials for

Hierarchical drift diffusion modeling uncovers differences of valenced self-evaluation

This document includes:

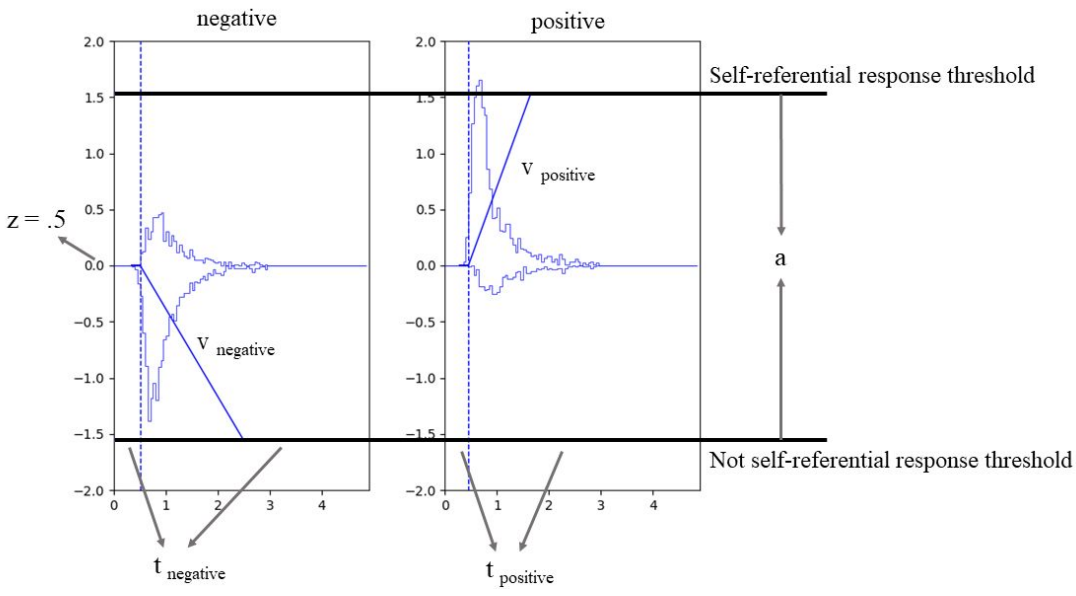

Figure S1. Visualization for the drift diffusion model

Information accumulation processes for negative and positive self-evaluations were drawn based on the data in Exp2.

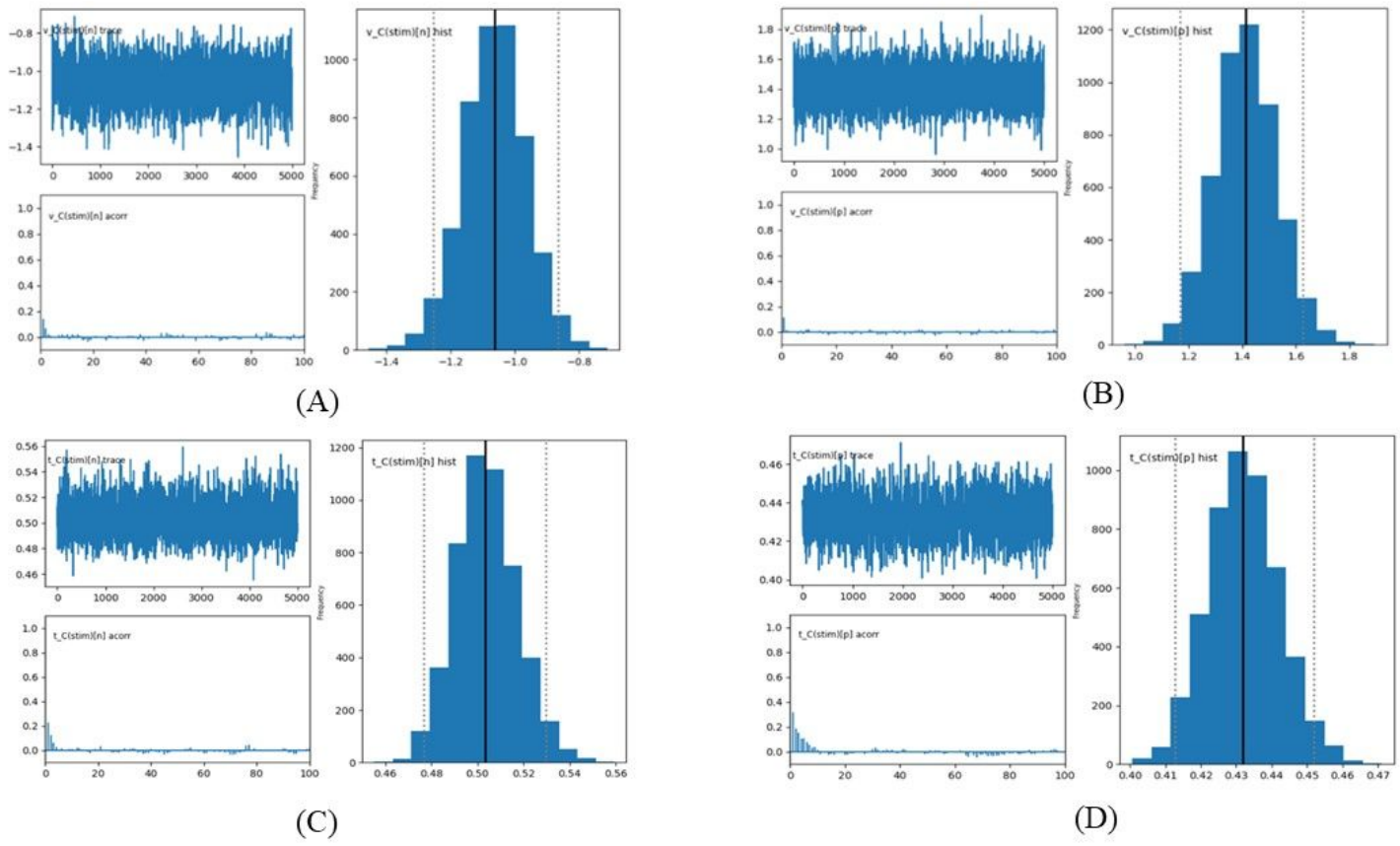

Figure S2. Visual inspection for the convergence of Model 5 in Exp 1

We plotted both parameters (drift rate and non-decisional time) for negative and positive conditions, including $v_{negative}$ (A), $v_{positive}$ (B), $t_{negative}$ (C), and $t_{positive}$ (D). In each panel, The trace in the left top corner is steady, and the auto-correlation in the left bottom is low which indicates samples were dependent. The distribution histogram of group means posteriors in the right part of the figure showed normal distribution. These four plots illustrated good convergence for Model 5 in Exp1.

Table S1. Results in Exp 1 (M±SD)

	positive	negative
ratio for accepting(%)	83.811	20.011
RT	1012.264±575.391	1119.048±582.154
v	1.142±0.118	-1.069±0.1
t	0.432±0.01	0.502±0.014

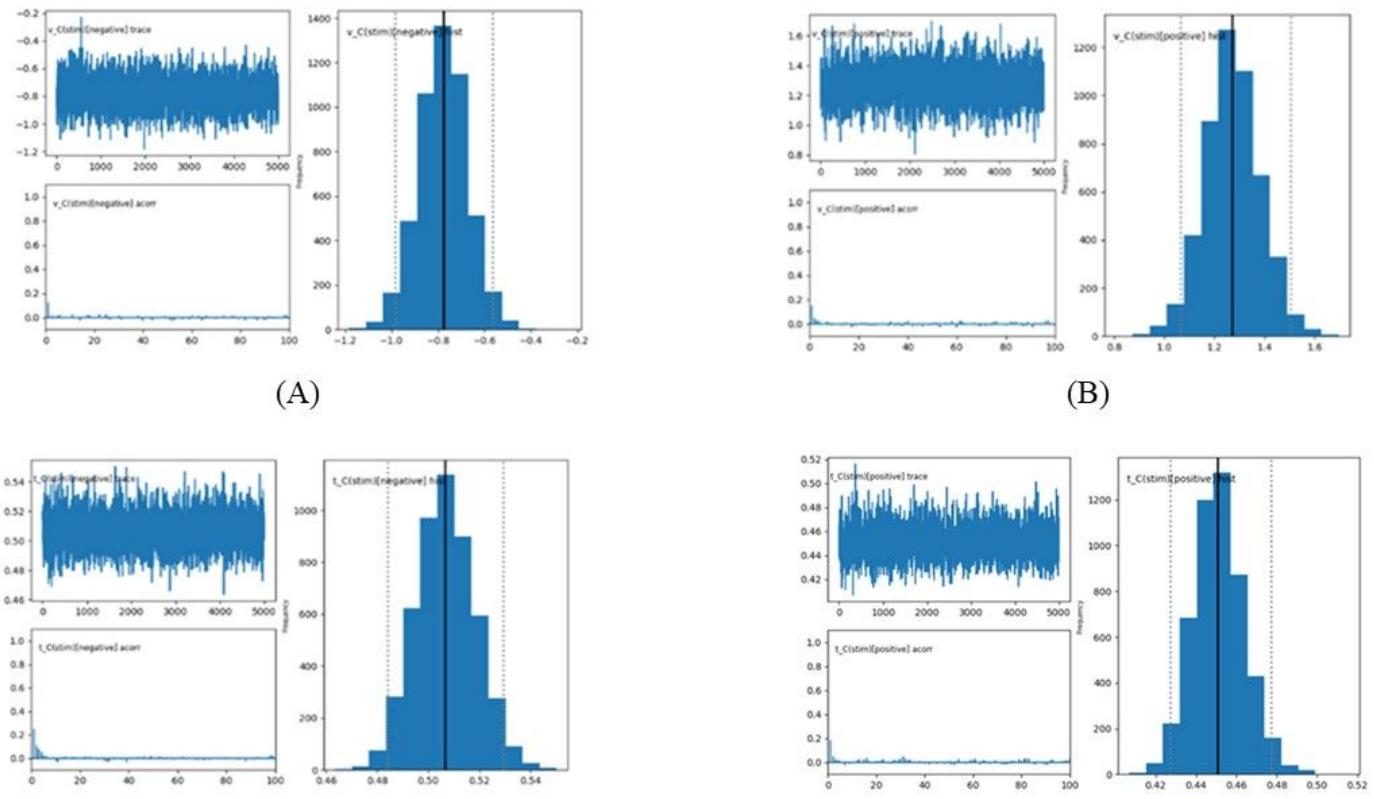

Figure S3. Visual inspection for the convergence of Model 5 in Exp 2

We plotted here for both parameters as well, including $v_{negative}$ (A), $v_{positive}$ (B), $t_{negative}$ (C), and $t_{positive}$ (D). These four plots also illustrated good convergence for Model 5 in Exp 2.

Table S2. Results in Exp 2 (M±SD)

		positive	negative
ratio for accepting(%)		75.319	25.319
RT		945.351±463.165	1019.611±430.131
v		1.273±0.111	-0.778±0.105
t		0.451±0.013	0.507±0.012
self-descriptiveness		5.130±0.786	2.815±0.904
emotional judgments	pride	3.776±1.332	2.836±1.390
	shame	1.674±0.837	1.904±0.926