Table S1. For the best model in each family, the table represents the negative log-model evidence $(-\log P(D|M))$ for each model, the number of free parameters of each model (df), the free parameters of each model, and the family of each model. The table also represents a pseudo-r statistic $(\text{p-}r^2)$, which is a normalized measure of the variance accounted for in comparison to a model with random choices (averaged over subjects). '*' indicated the model with the best model evidence.

model family	free-parameters	p-r^2	df	$-\log p(D|M)$
H-MB*	$\beta_1,\ \eta_1,\ k_2,\ \phi\ (I=0)$	0.207	4	1172.357
H	$\beta_1,\ \eta_1,\ k_2,\ \phi,\ I$	0.207	5	1185.274
MF	$\beta_1,\ \beta_2,\ \alpha_1,\ \lambda$	0.175	4	1219.87
MB	$\beta_1,\ \beta_2,\ \eta,\ k$	0.175	4	1222.57
MB-MF	$\beta_1,\ \beta_2,\ \alpha_1,\ \lambda,\ w$	0.180	5	1223.515
H-MF	$\beta_1,\ \alpha_1,\ k_2,\ \phi$	0.204	4	1179.717
H-MB-MF	$\beta_1,\ \alpha_1,\ w,\ \phi,\ k_2$	0.211	5	1178.339