A Appendix

Figure A1 shows the BIC-based posterior model probabilities for subjects split across blocks. In block 1, 19 people are best fit by the approximately optimal model, 2 by the generic hyperbolic model, and 2 by the fixed threshold model. In block 2, 18 people are best fit by the approximately optimal model, 3 by the generic hyperbolic model, and 2 by the fixed threshold model. The random-effects model selection favors the approximately optimal model in both blocks ($PXP_1 = 0.9897$, $PXP_2 = 0.8607$).

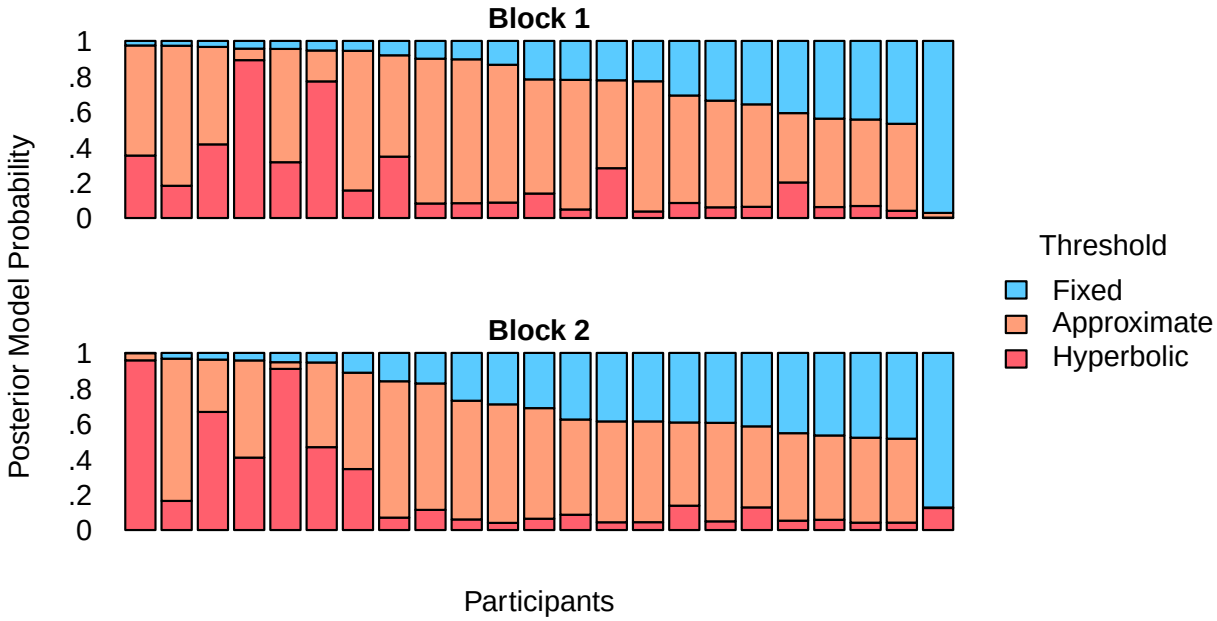
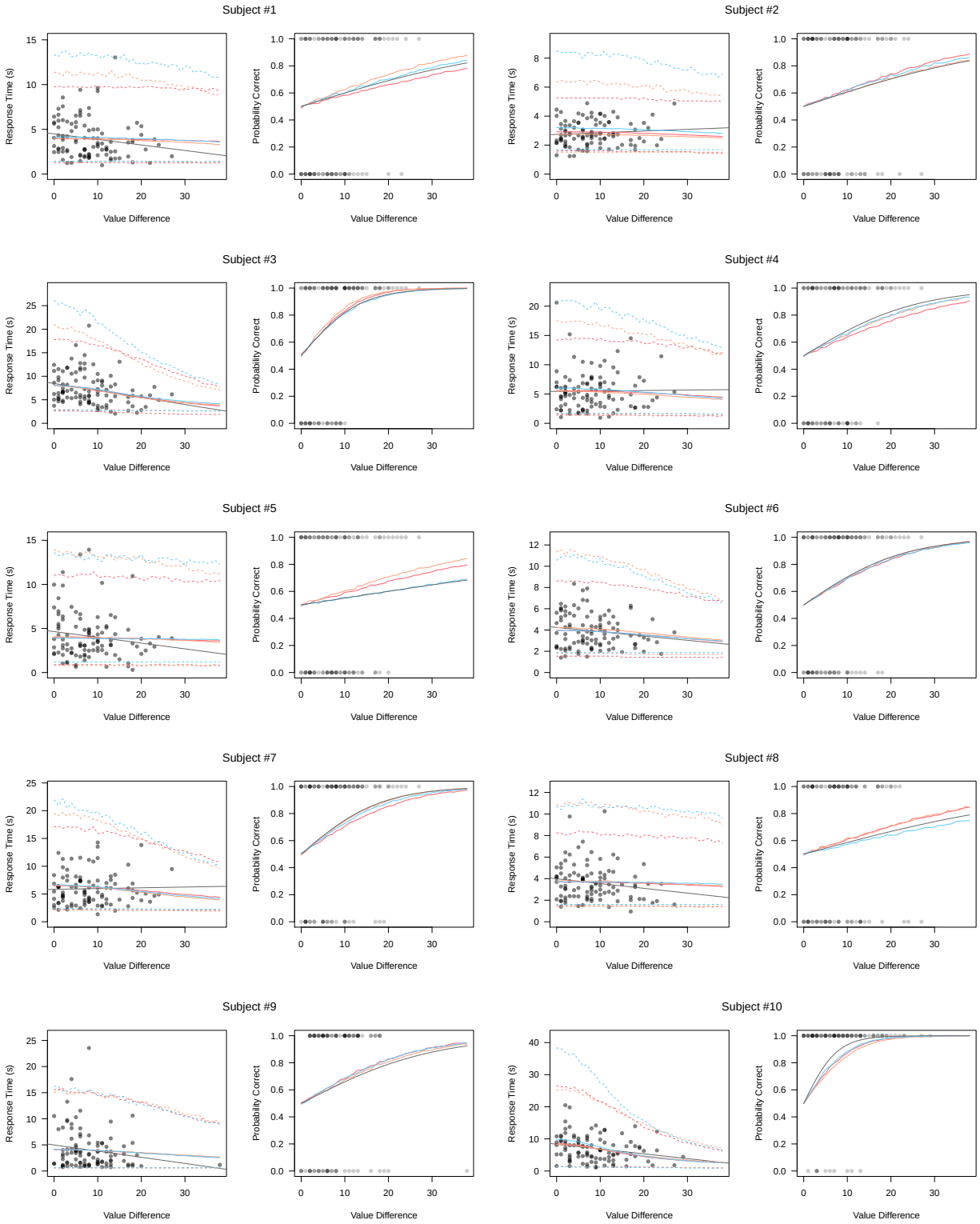
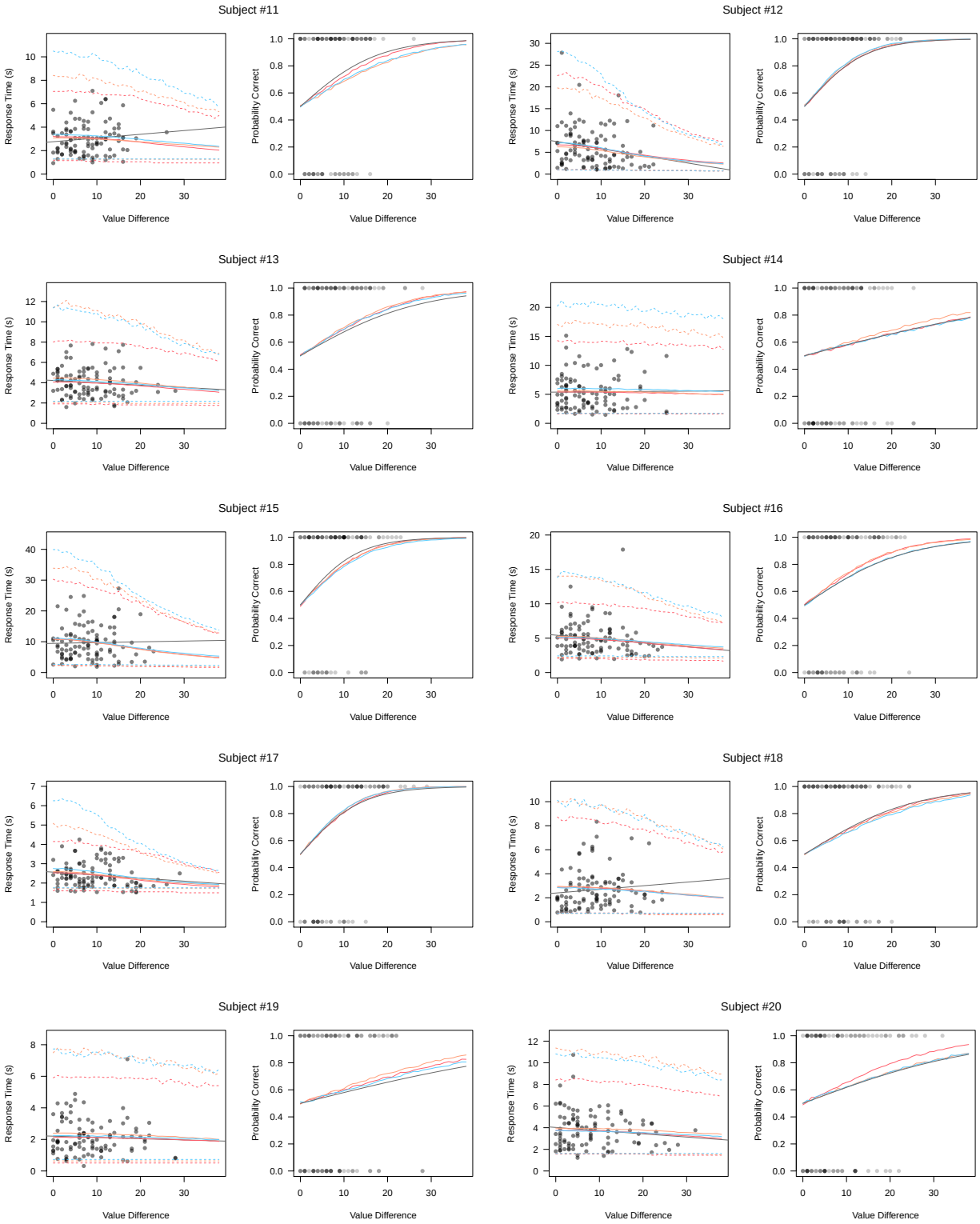


Figure A1: BIC-based approximation to posterior model probabilities in favor of the fixed, approximately optimal, and generic hyperbolic threshold models, split across blocks. Color represents the three models and columns represent individual subjects. Parameters for each subject are fit separately across blocks.

Figures A2 and A3 show trial-level response time and accuracy data along with the predictions from all three models to portray the descriptive features of each, similar to Figure 3. For all models, predicted mean response times and accuracies conditional on value difference are shown as colored solid lines, and the 1st and 99th response time percentiles are shown as dashed lines. The ordinary least squares regression line (for response time) and the logistic regression curve with intercept fixed at 0.5 (for accuracy) are shown in gray.

Figures A4 and A5 show heatmaps depicting the difference in predicted response time distributions (conditional on value difference) between the approximately optimal and fixed threshold models. Heatmap color reflects sign of difference (orange when approximately optimal model has higher predicted probability, blue in the opposite case), and heatmap transparency reflects magnitude of difference (darker means larger difference).


Subject #1
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #2
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #3
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #4
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #5
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #6
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #7
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #8
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #9
Response Time (s)
Value Difference
Probability Correct
Value Difference
Subject #10
Response Time (s)
Value Difference
Probability Correct
Value Difference


Subject #11
Subject #12
Subject #13
Subject #14
Subject #15
Subject #16
Subject #17
Subject #18
Subject #19
Subject #20
Response Time (s)
Probability Correct
Value Difference

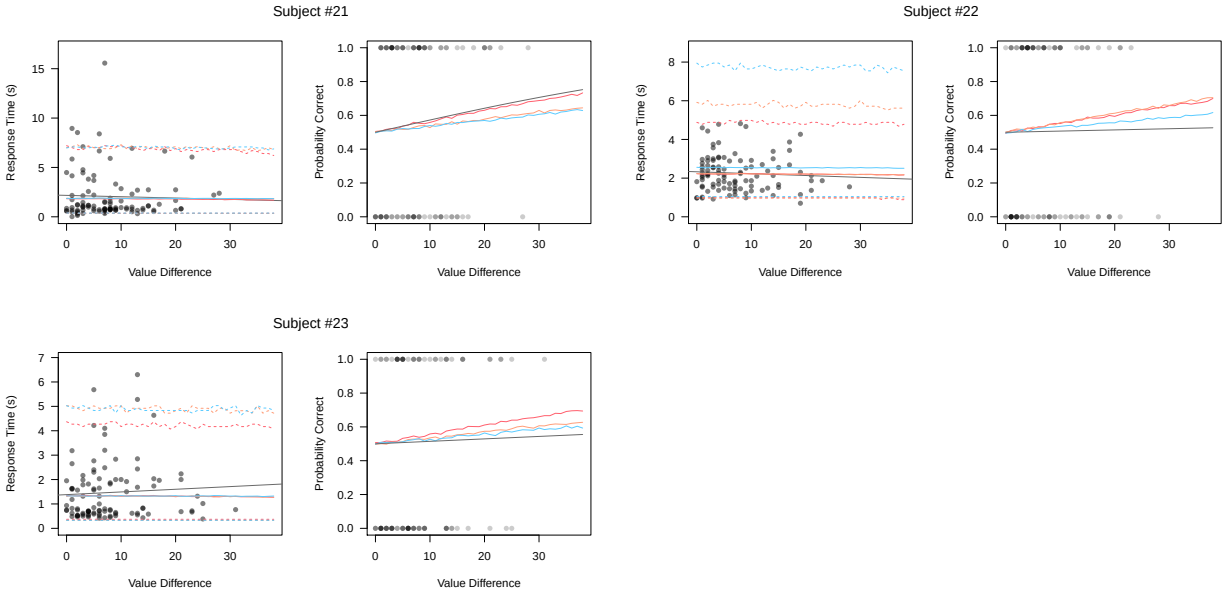
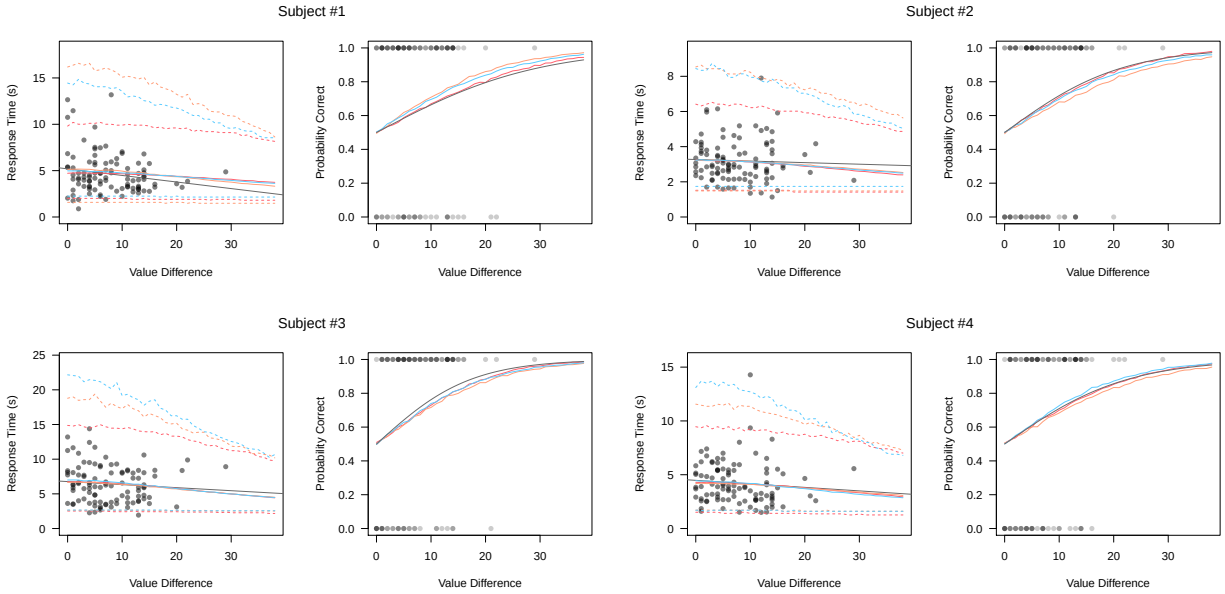
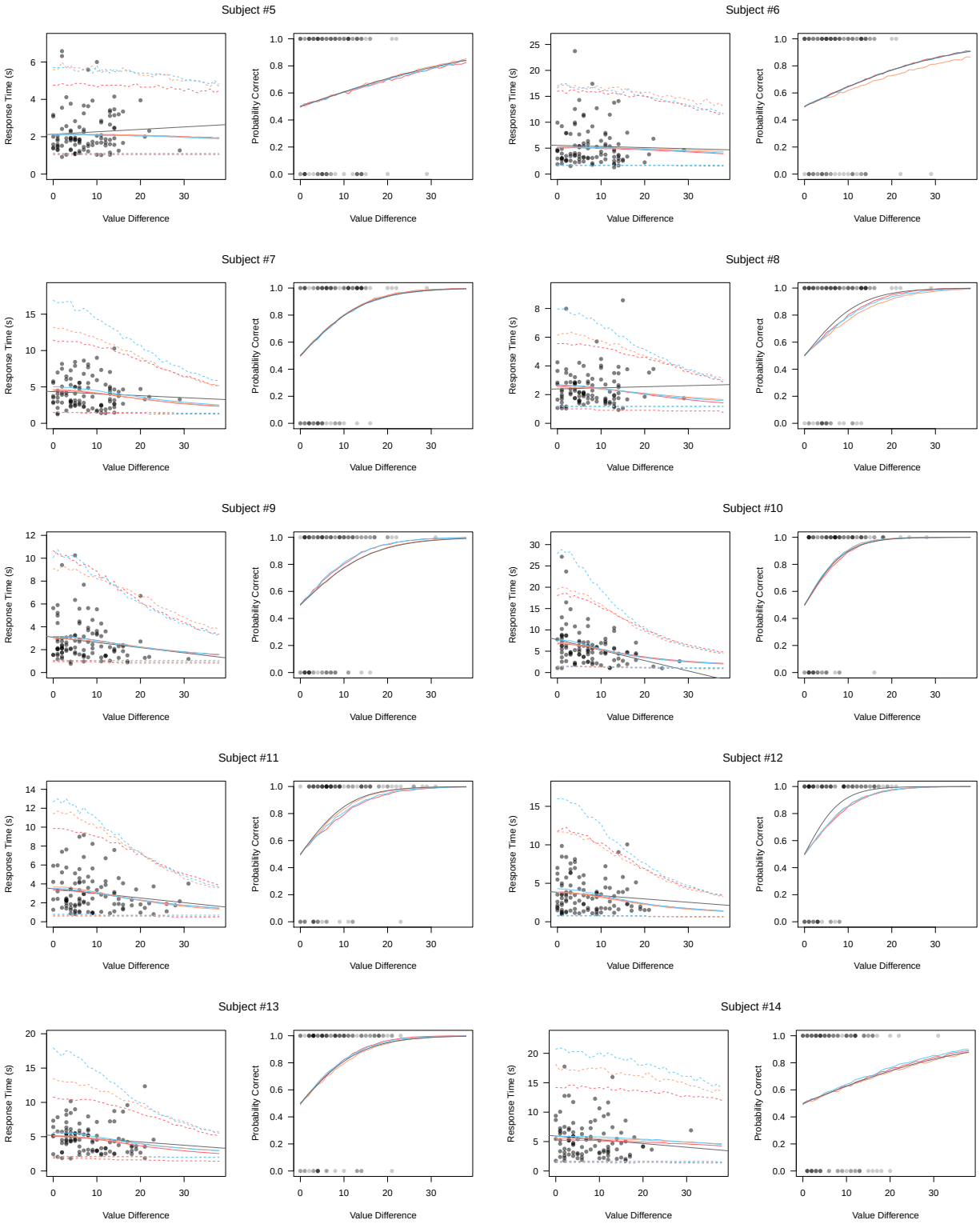


Figure A2: Trial-level response time and accuracy data along with model predictions for all subjects in block 1, similar to Figure 3.




Subject #5
Subject #6
Subject #7
Subject #8
Subject #9
Subject #10
Subject #11
Subject #12
Subject #13
Subject #14
Response Time (s)
Probability Correct
Value Difference

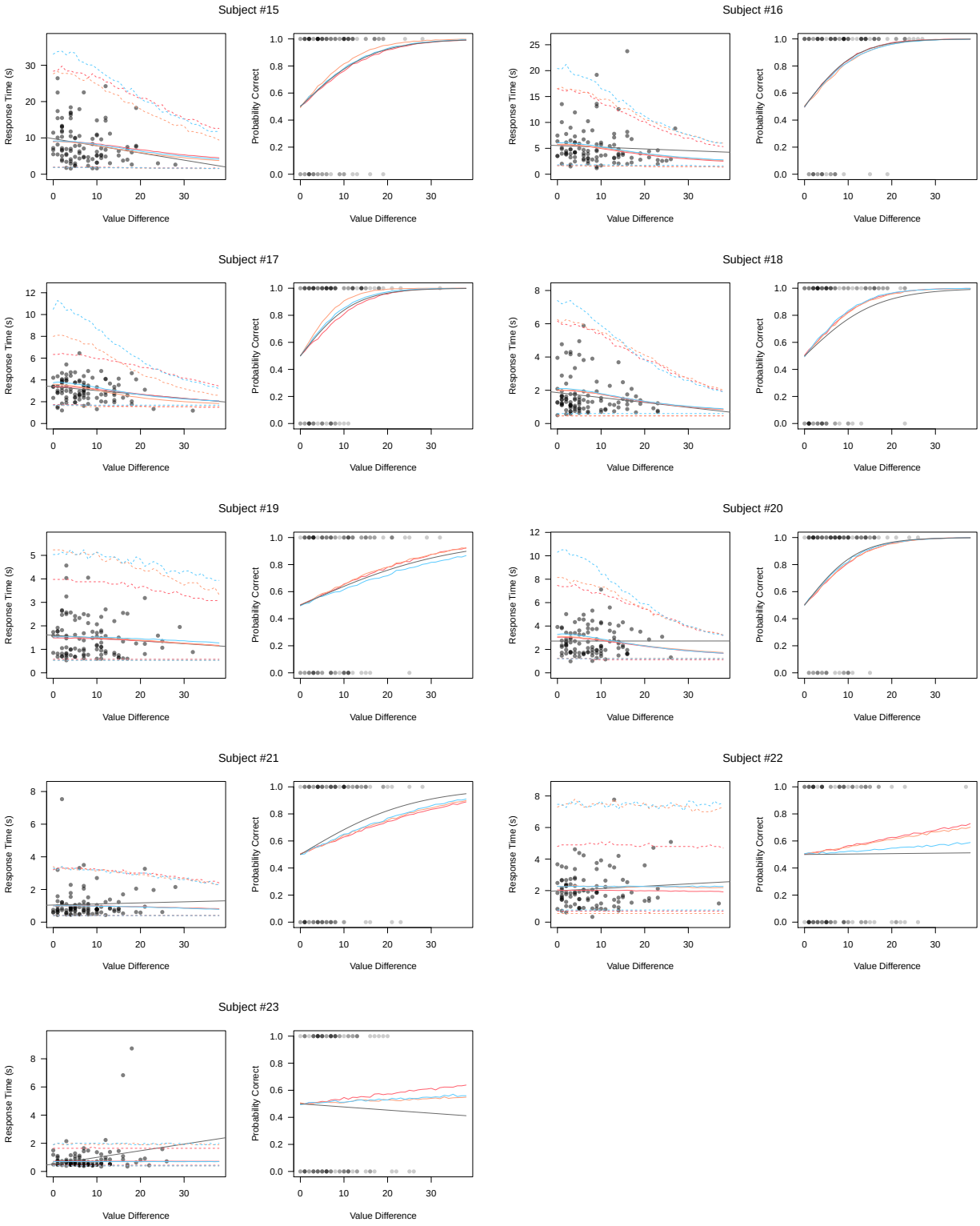
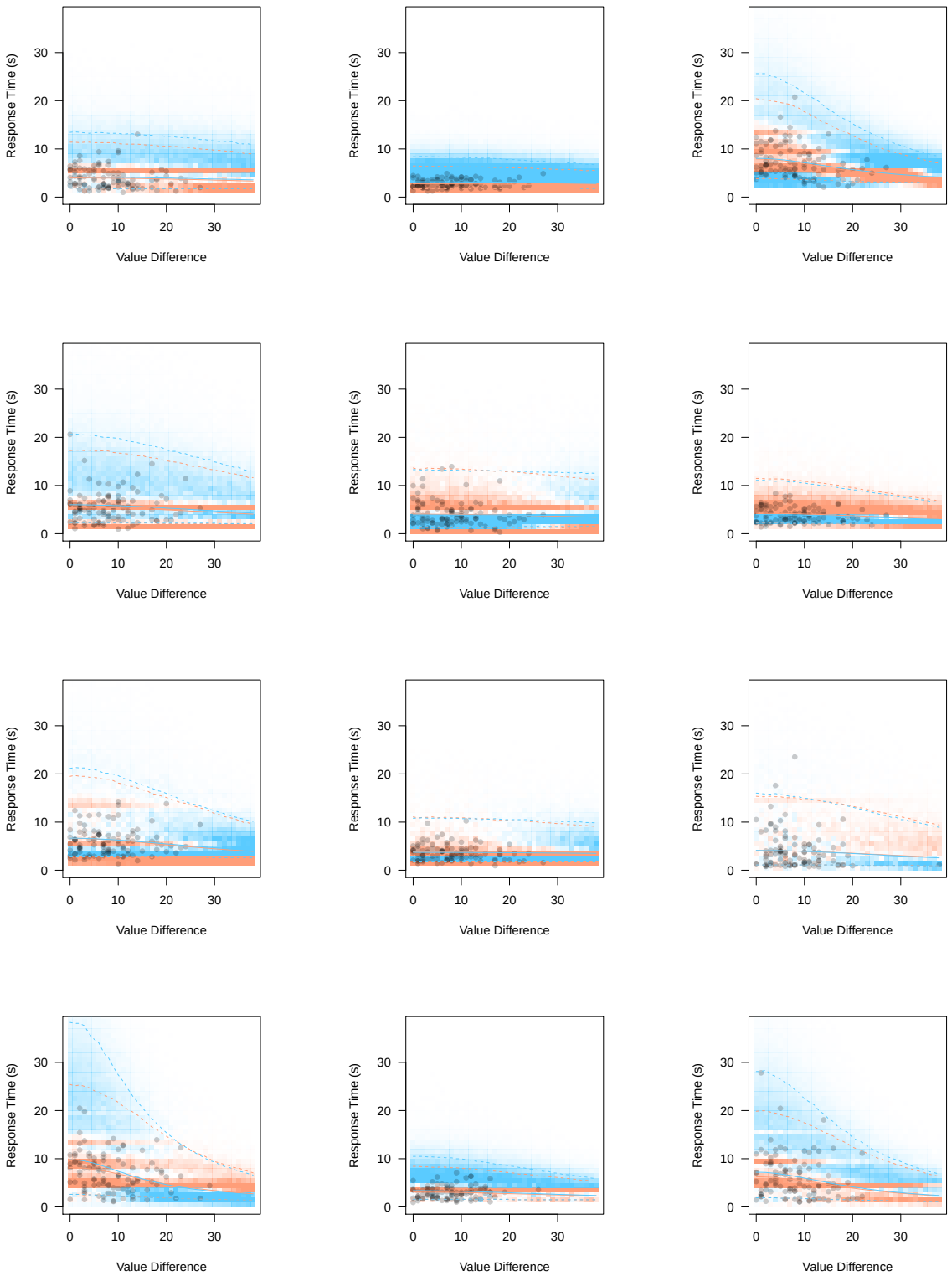


Figure A3: Trial-level response time and accuracy data along with model predictions for all subjects in block 2, similar to Figure 3.


Response Time (s)
Value Difference
0
10
20
30

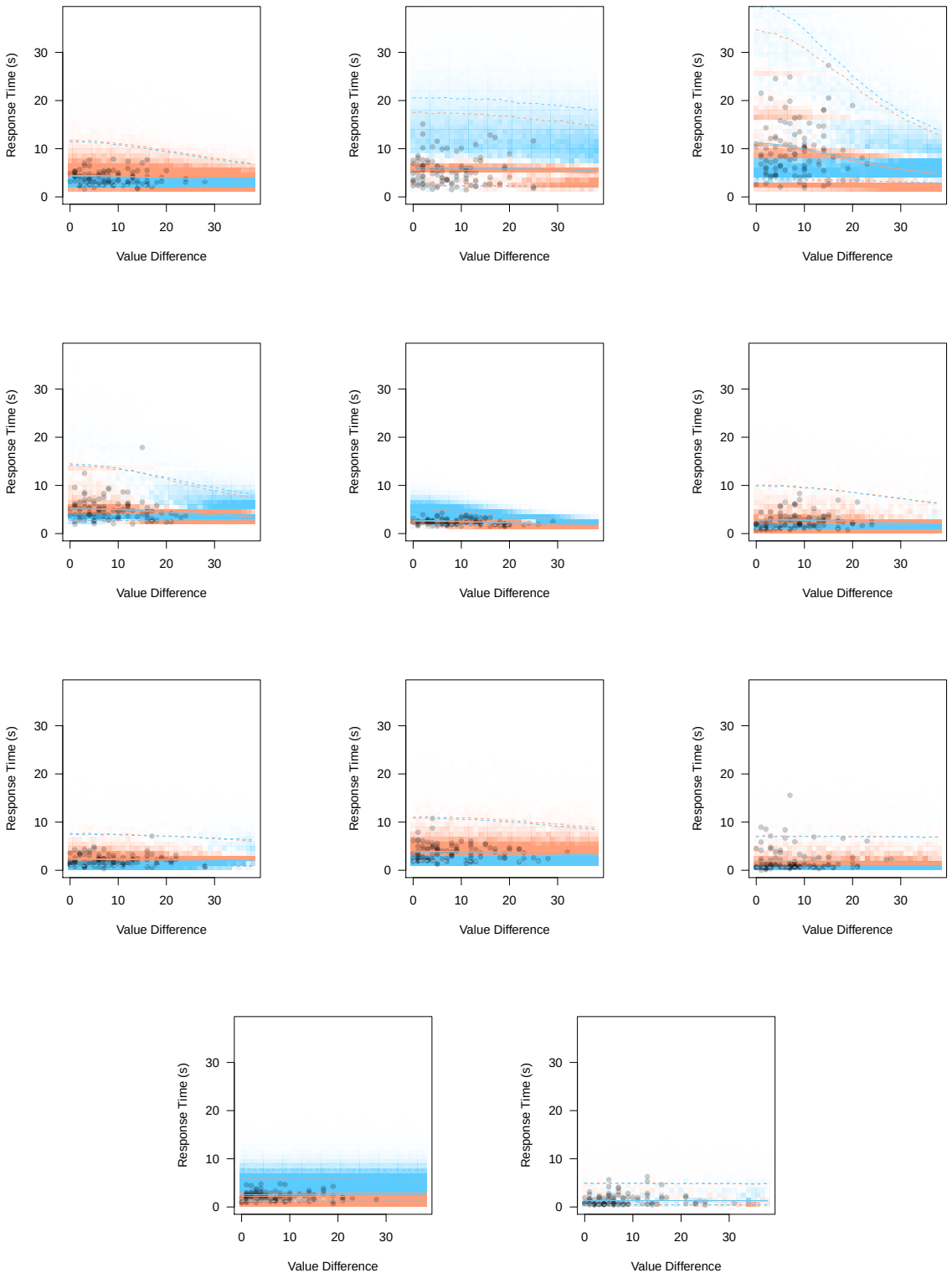
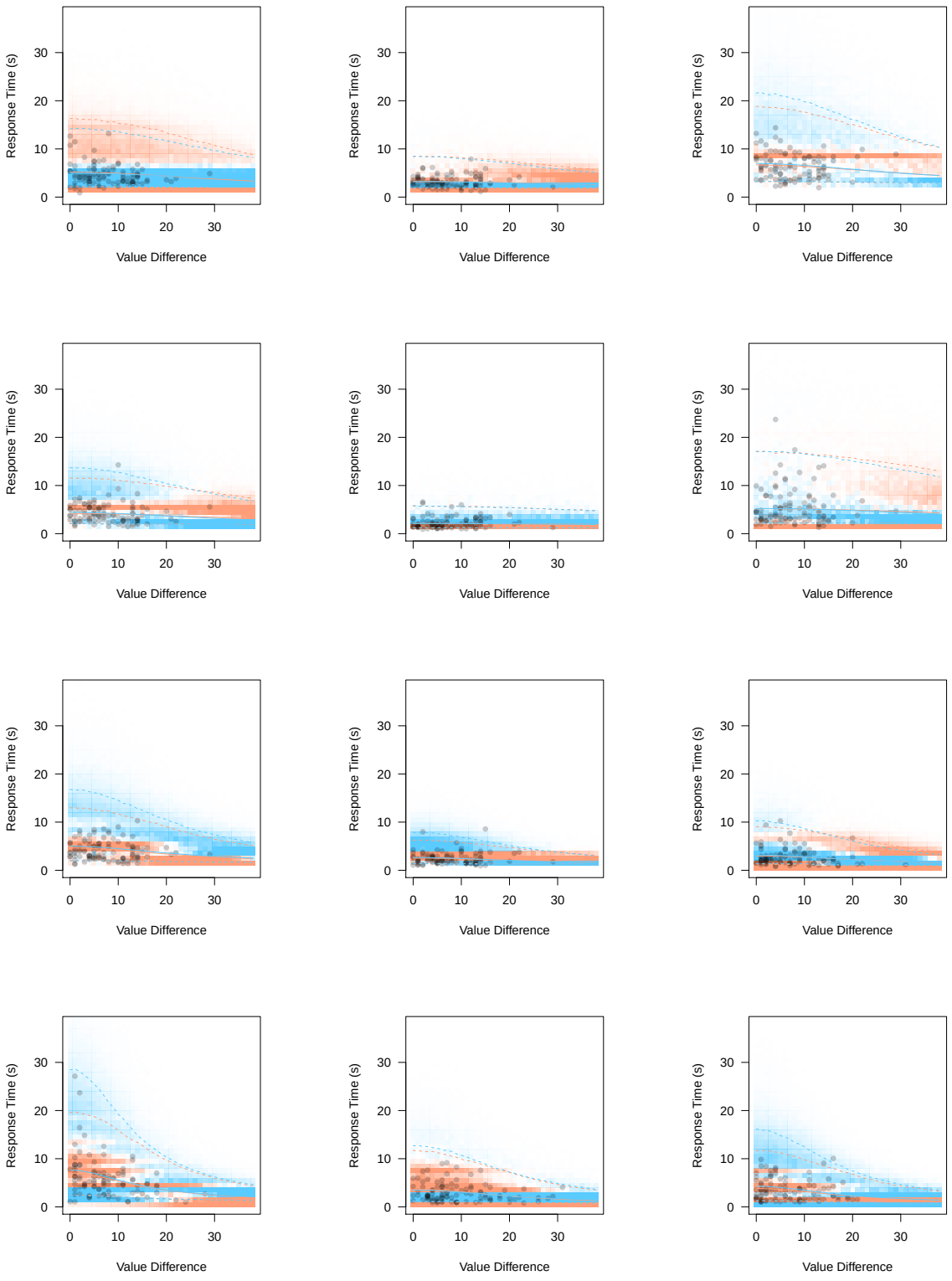


Figure A4: Heatmap depicting the difference in predicted response time distributions (conditional on value difference) between the approximately optimal and fixed threshold models for all subject in block 1, similar to Figure 4.


Response Time (s)
0
10
20
30
Value Difference
0
10
20
30

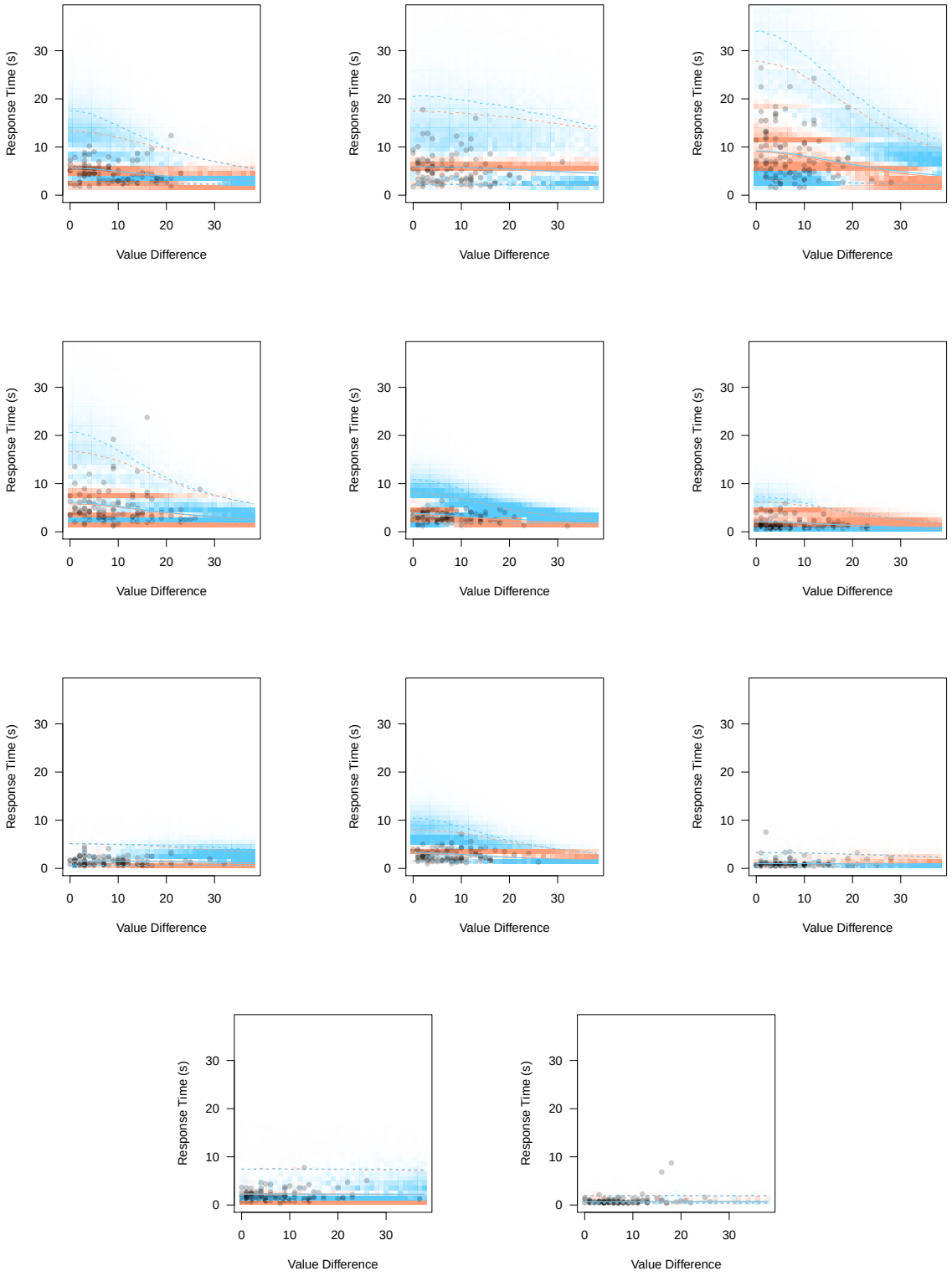


Figure A5: Heatmap depicting the difference in predicted response time distributions (conditional on value difference) between the approximately optimal and fixed threshold models for all subject in block 2, similar to Figure 4.

Figure A6 depicts the relationship between absolute value and response time for nearly equal alternative trials (trials in which the difference in values was exactly or nearly zero), following propositions in Teodorescu et al. (2016) and Pirrone et al. (2018a) that absolute value can influence the accumulation process. The top and bottom 1% of baseline value are trimmed to exclude outliers. Table A1 reports corresponding regressions similar to Pirrone et al. (2018a), none of which reveal a significant effect, and comparable results are obtained when the data is split by block. In other words, conditioning on the net value difference in a trial, absolute baseline value appears to have no discernible effect in the present data.

Table A1: Absolute value regressions

	Dependent variable:			
	Response Time			
	$\Delta v = 0$	$\Delta v = 1$	$\Delta v = 2$	$\Delta v = 3$
Baseline Value	0.018	−0.046	−0.027	0.036
	(0.047)	(0.036)	(0.036)	(0.036)
	[0.704]	[0.200]	[0.451]	[0.313]
Individual × Block Specific Intercepts	Yes	Yes	Yes	Yes
Observations	206	359	342	305
Note: standard errors in parentheses, *p*-values in square brackets.		*p<0.05; **p<0.01; ***p<0.001		

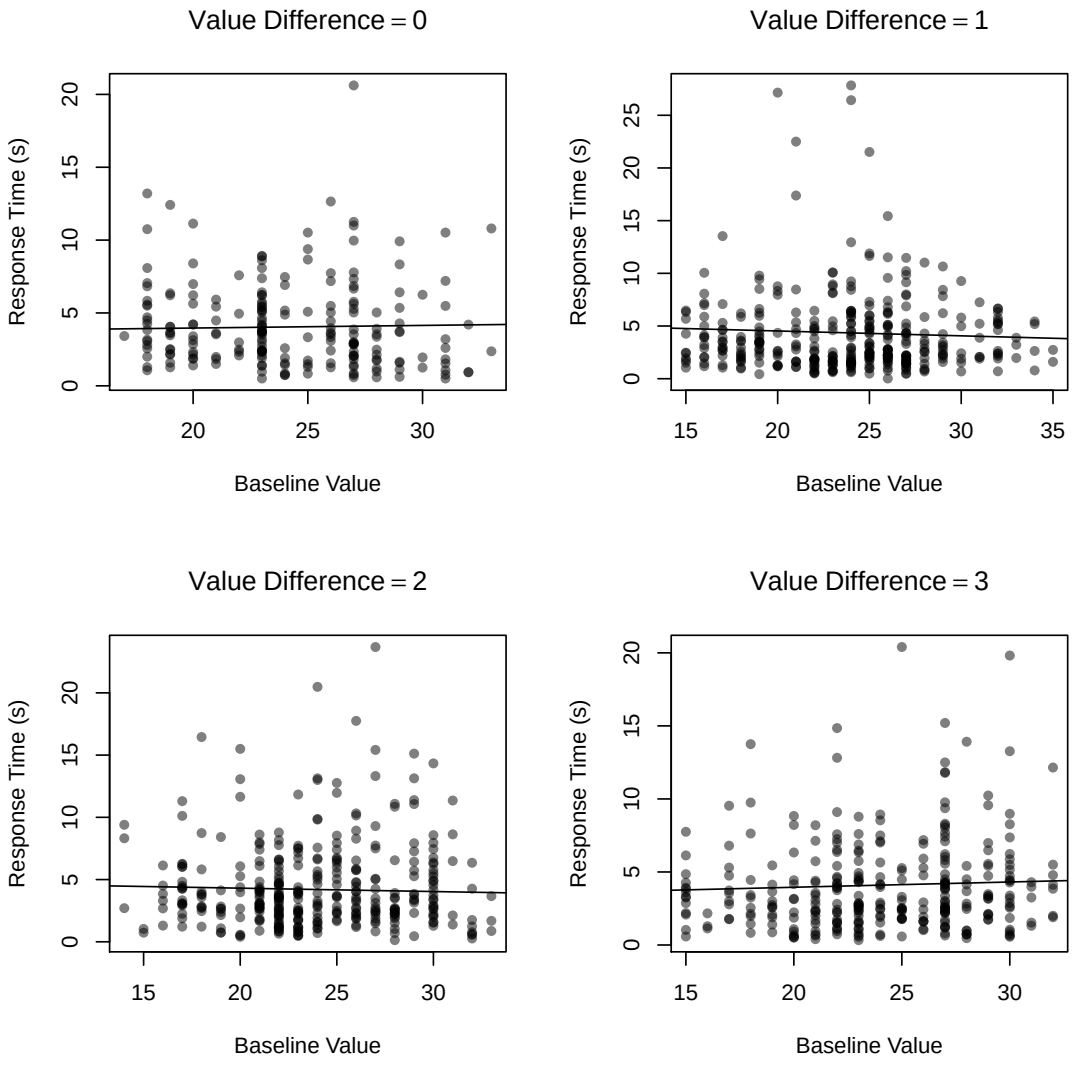


Figure A6: Absolute baseline value (i.e., of lower valued option) plotted against response time. Regression lines from Table A1 shown.