

Parameter Plots and Posterior Inference Tables for ATC Experiment E1

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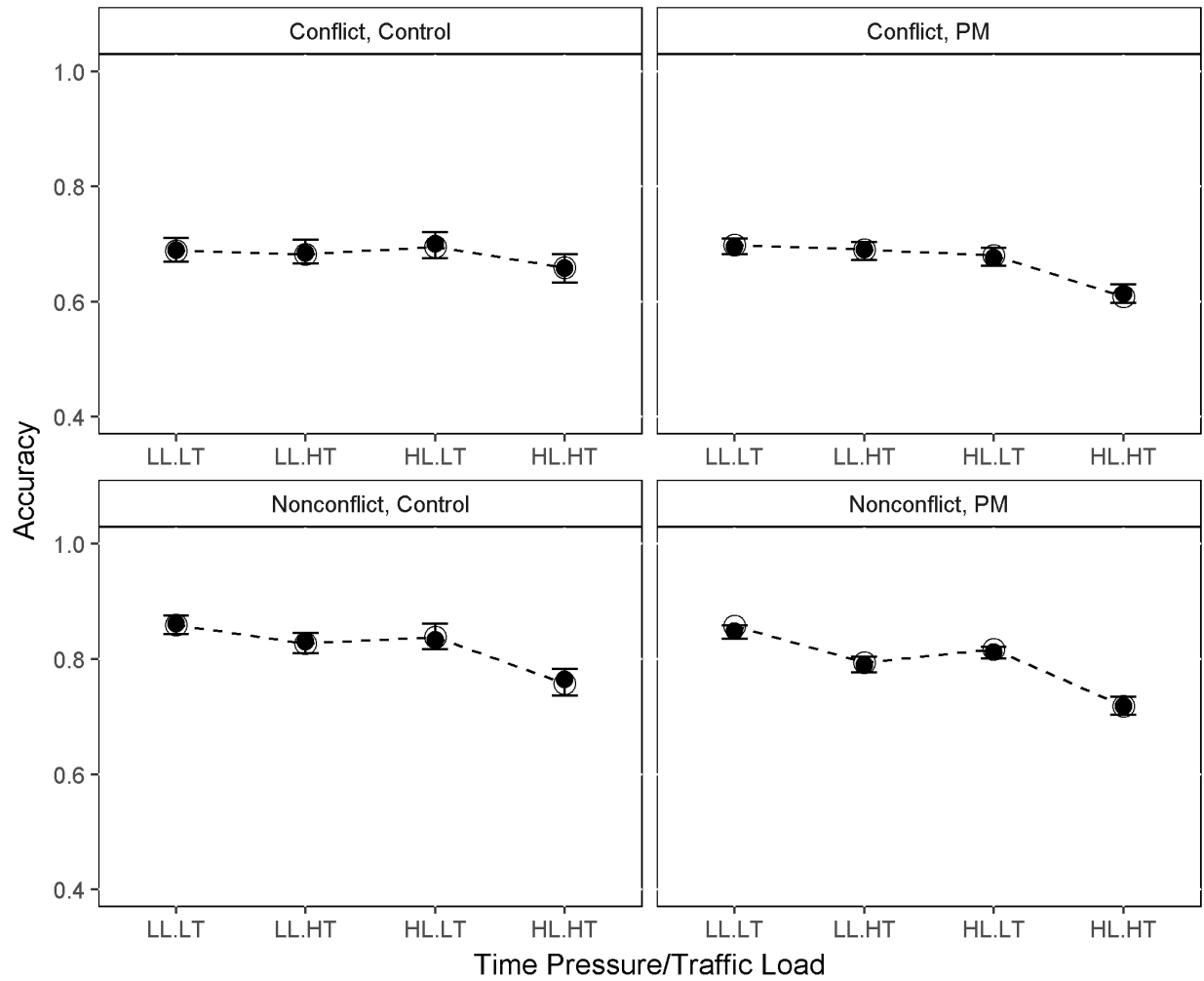
12 July 2017

Model Fit Plots

Parameter Plots

Model Exploration

Ongoing Task Accuracy by PM Block and Time Pressure



PM Task Accuracy by Time Pressure

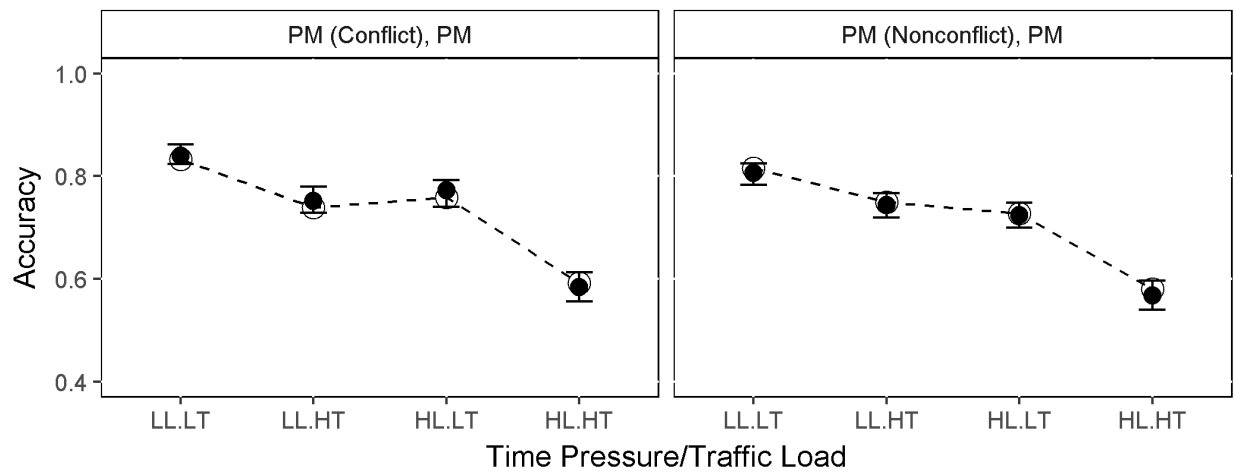
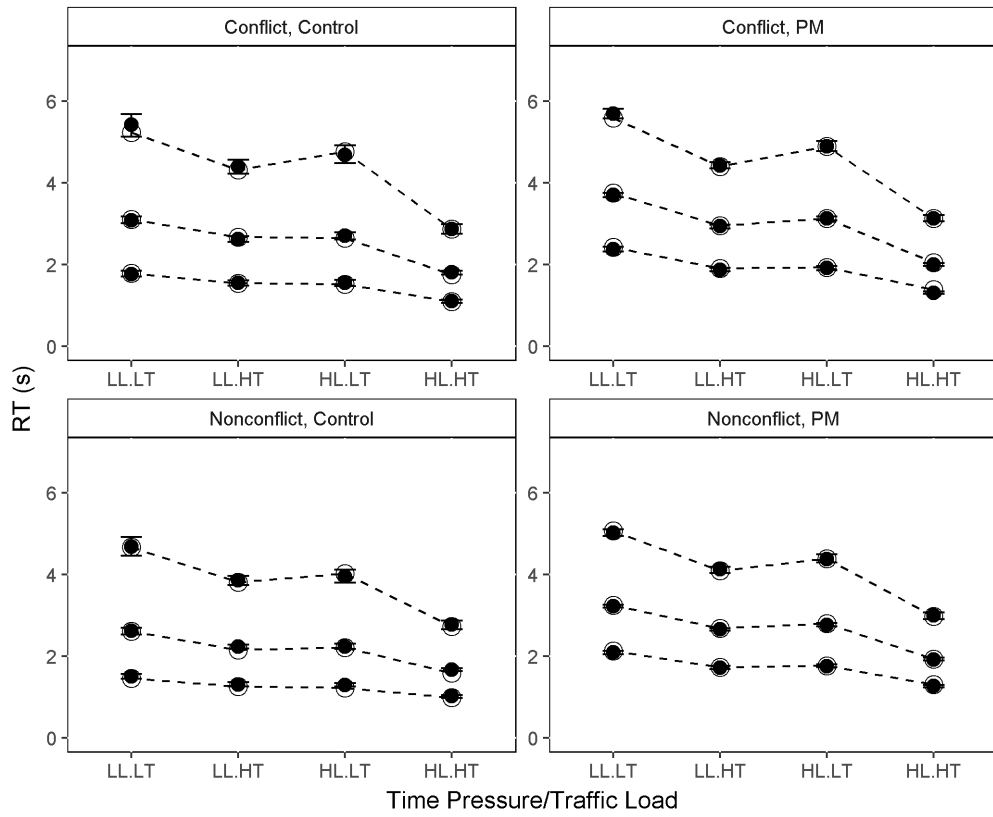


Figure 1: Model Fits: Accuracy

Ongoing Task Correct RTs by PM Block and Time Pressure



Ongoing Task Error RTs by PM Block and Time Pressure

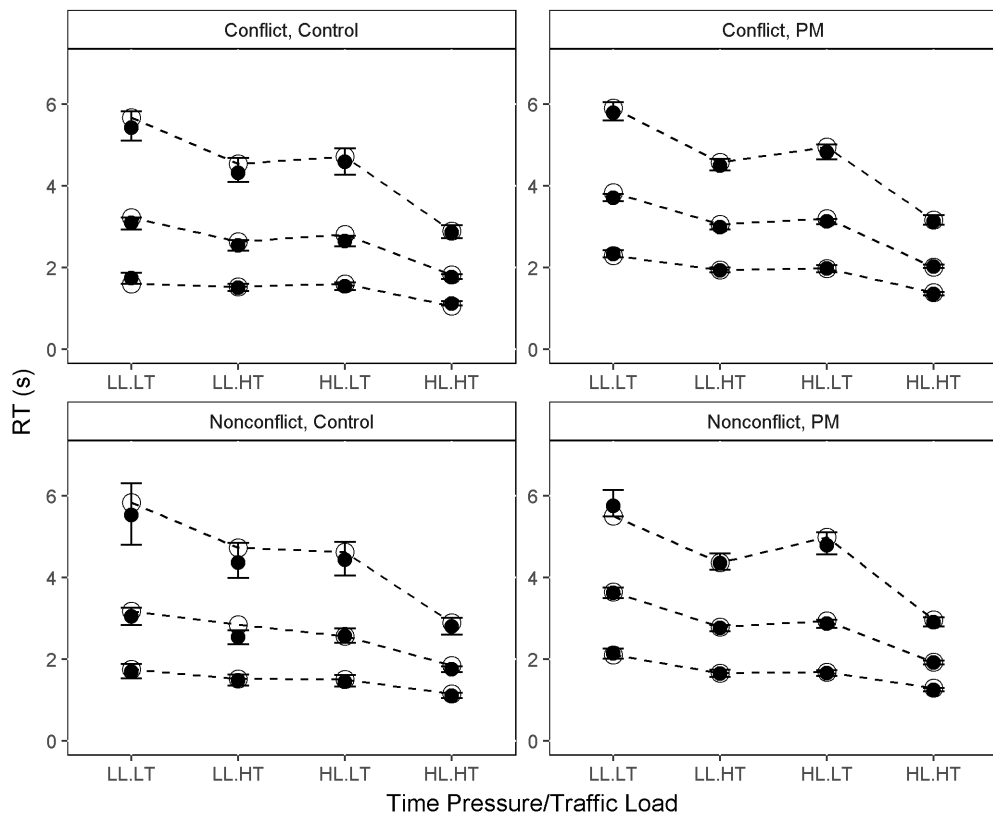


Figure 2: Model Fits: Ongoing Task RT

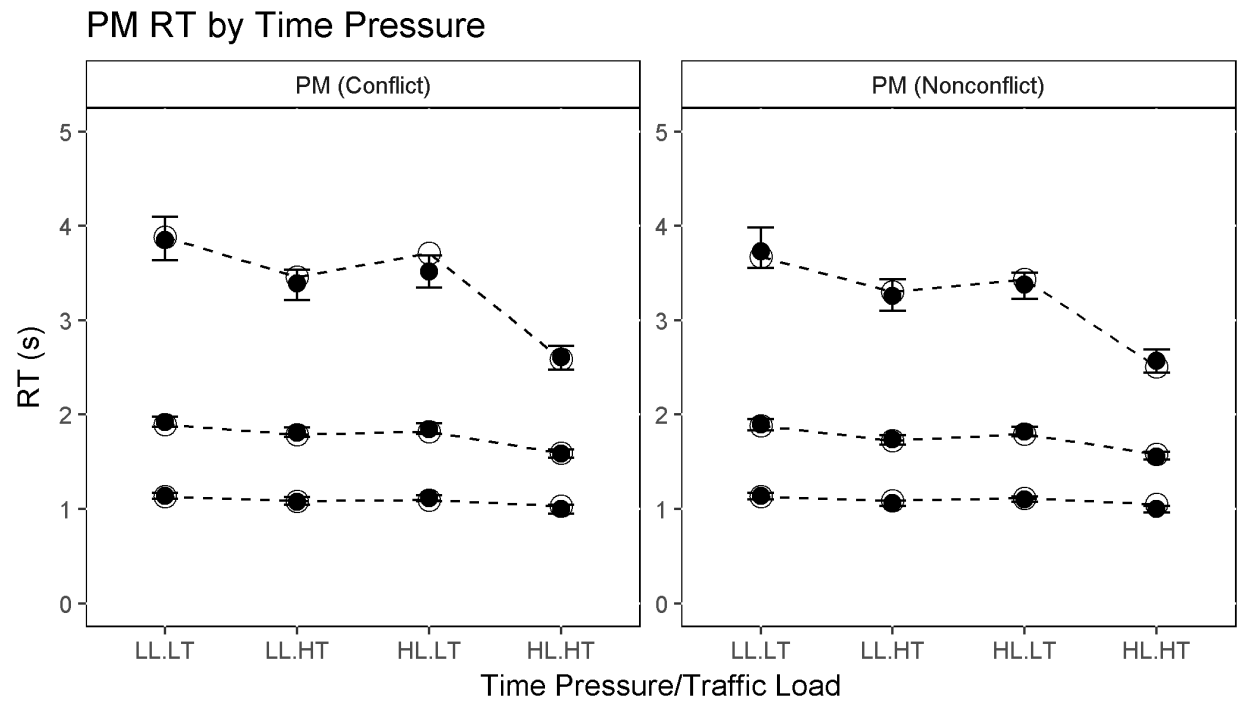


Figure 3: Model Fits: PM RT

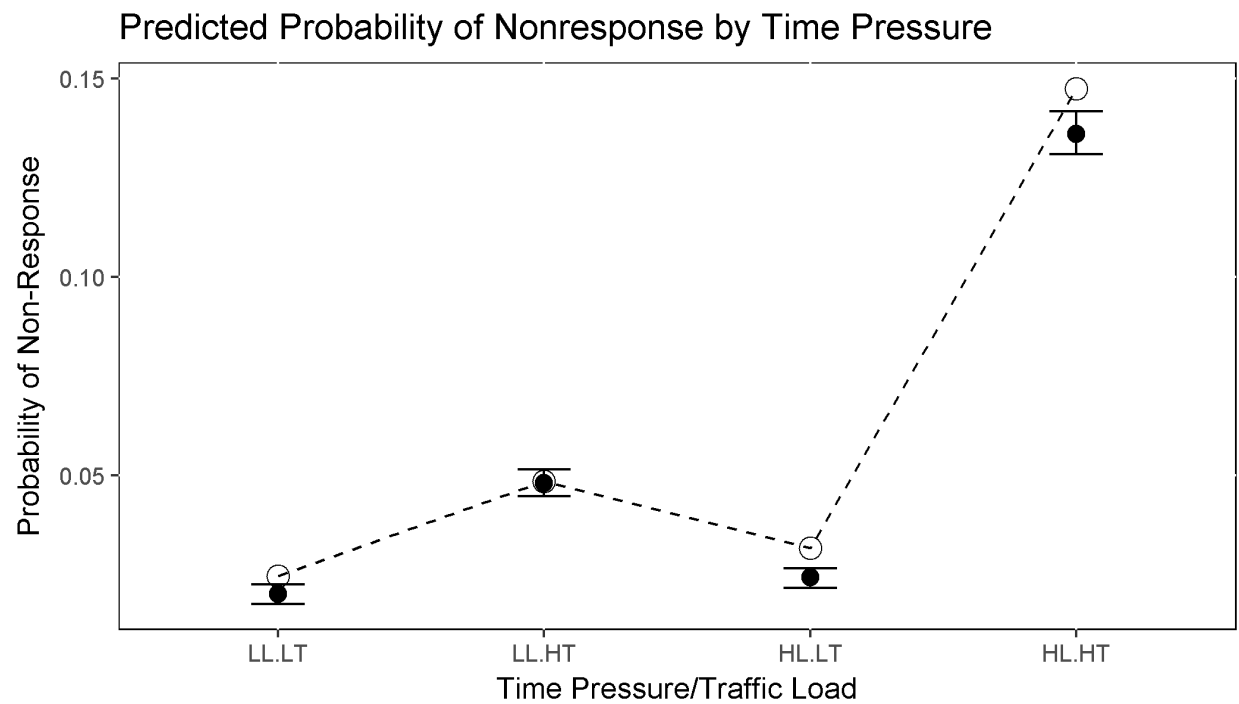
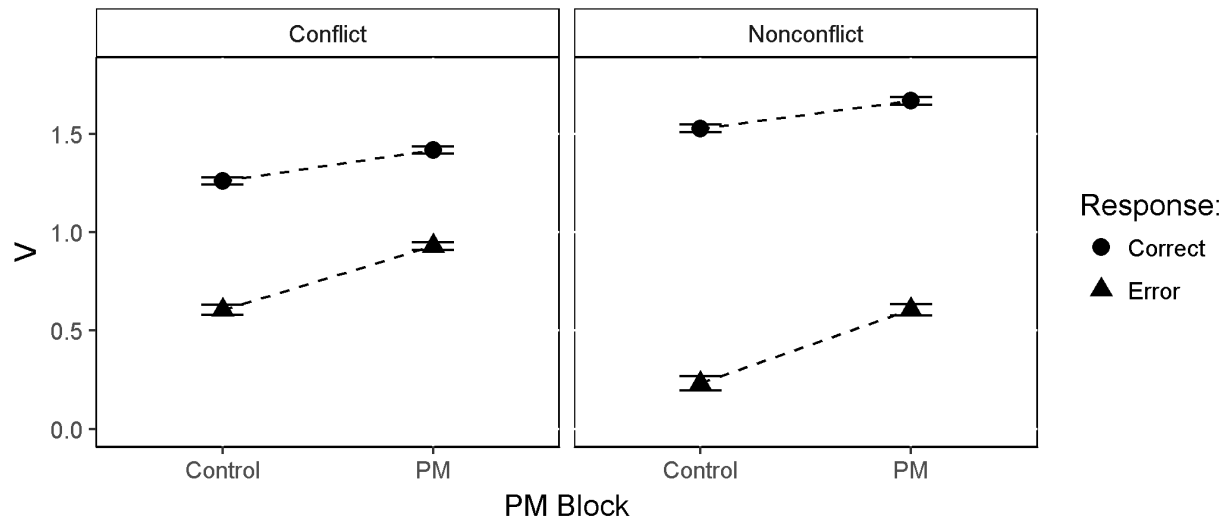


Figure 4: Model Fits: Nonresponse Proportions

Effort/Arousal:
Ongoing Task Rates by PM Block



Effort/Arousal:
Ongoing Task Rates by Time Pressure and Traffic Load

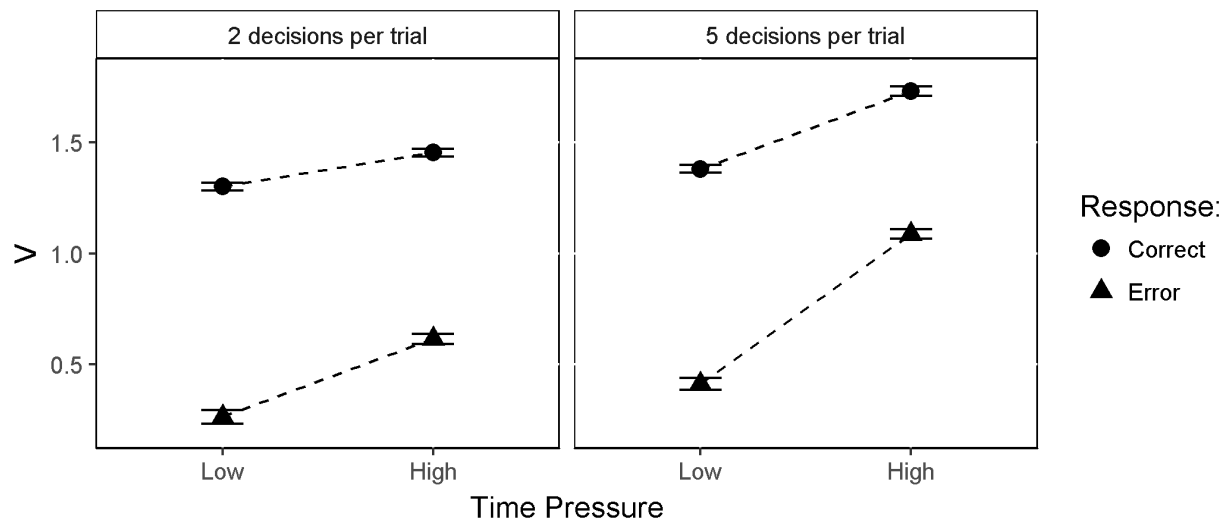
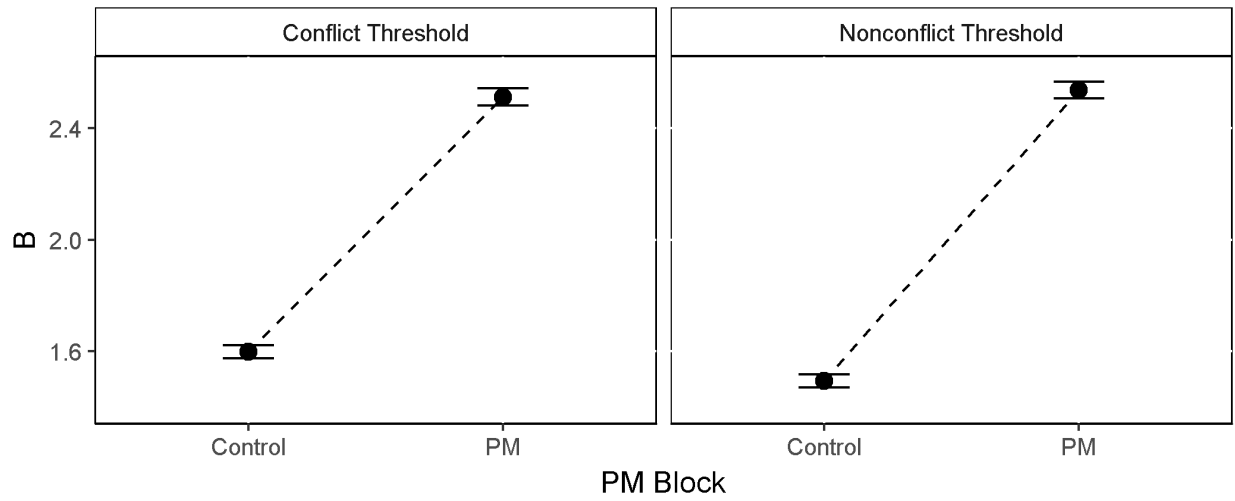


Figure 5: Effort/Arousal

Proactive Control: Response Thresholds by PM Block



Proactive Control: Response Thresholds by Time Pressure and Traffic Load

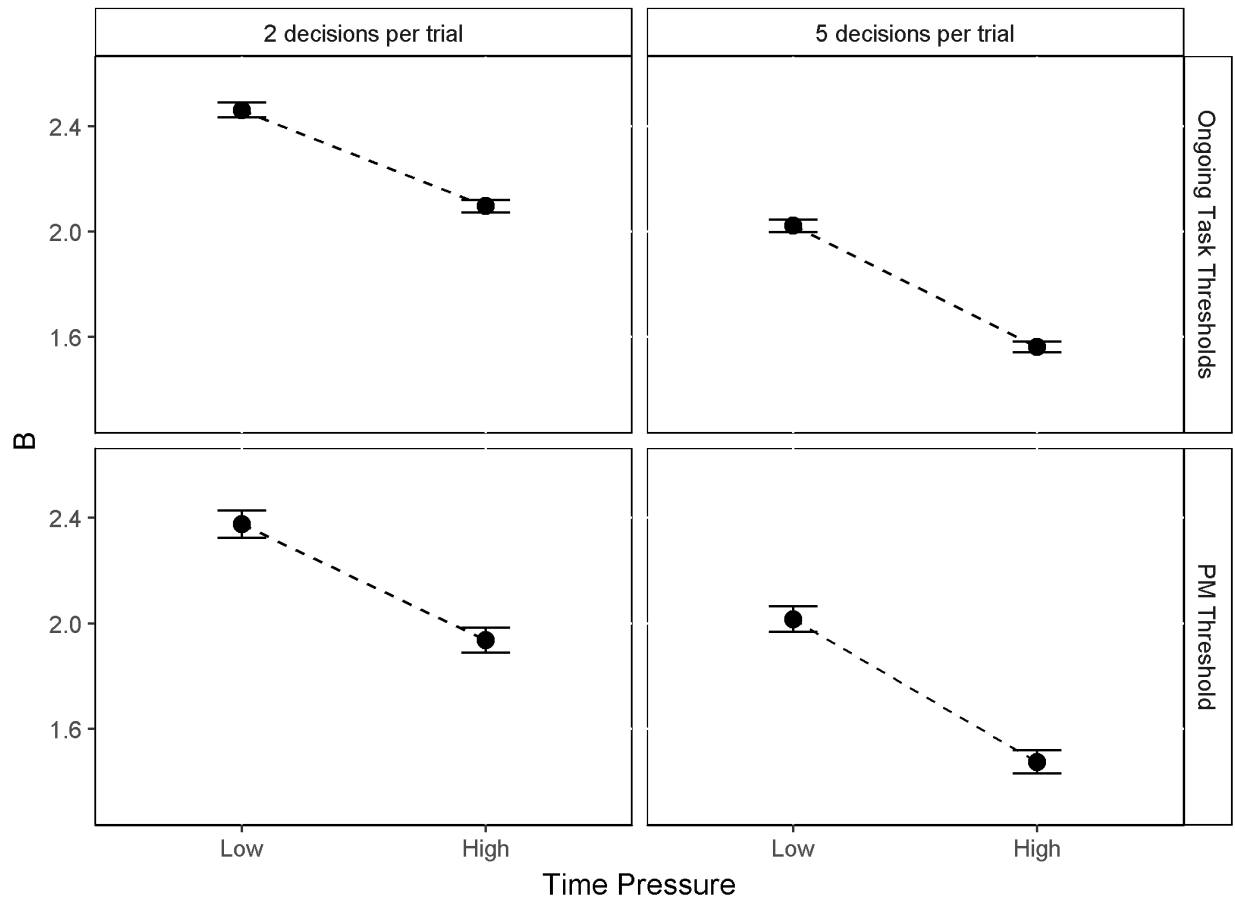


Figure 6: Proactive Control

Reactive Inhibition: Ongoing Task Rates for Non-PM and PM Stimuli

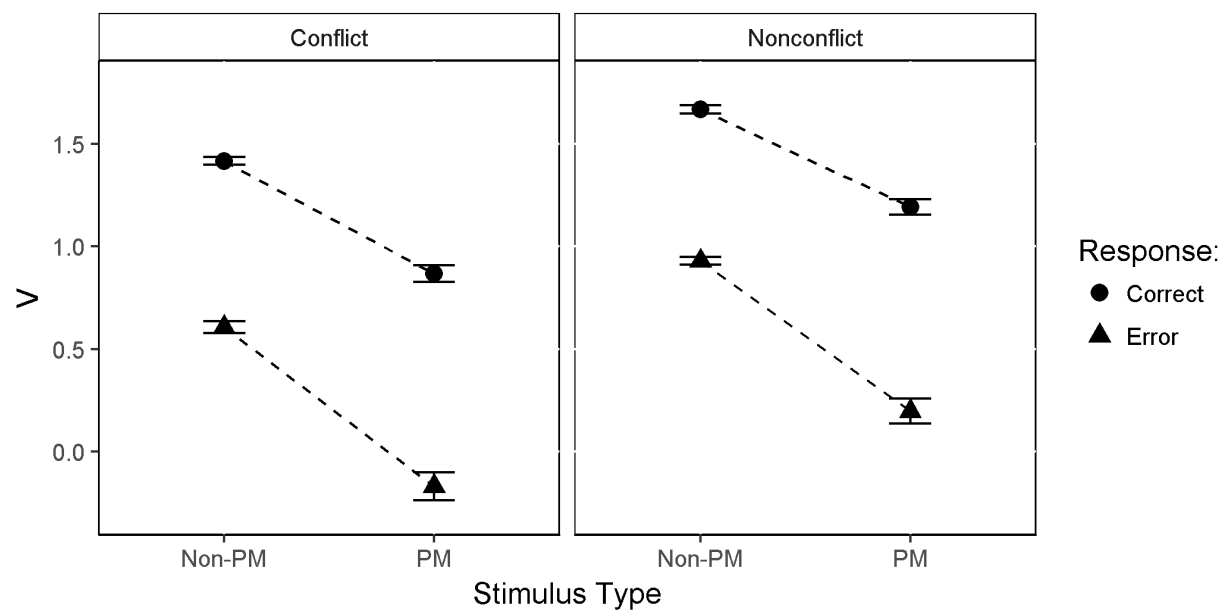


Figure 7: Reactive Inhibition

**Model Exploration:
Observed vs Predicted Ongoing Task Accuracy and RT (PM-Control Contrasts)**

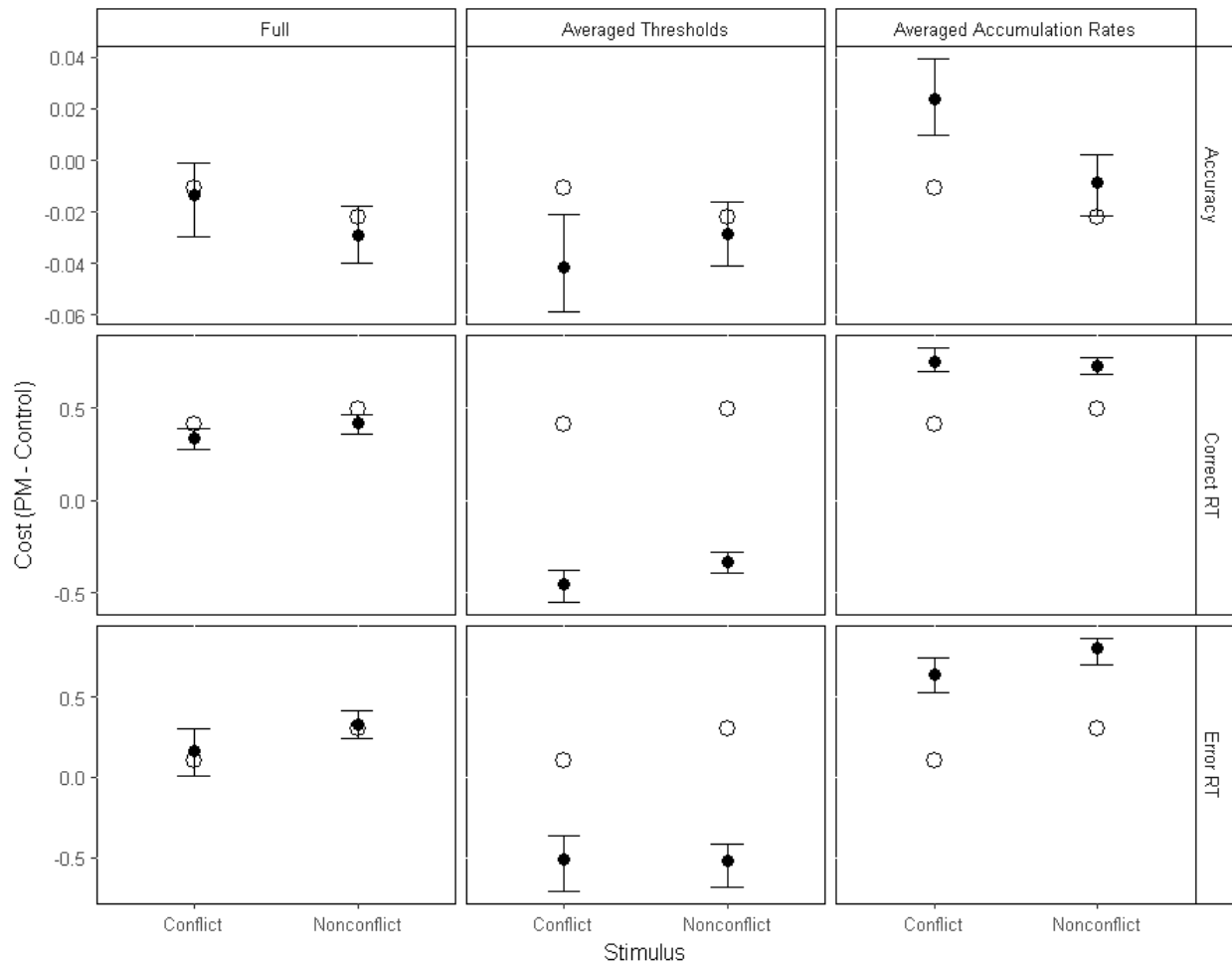
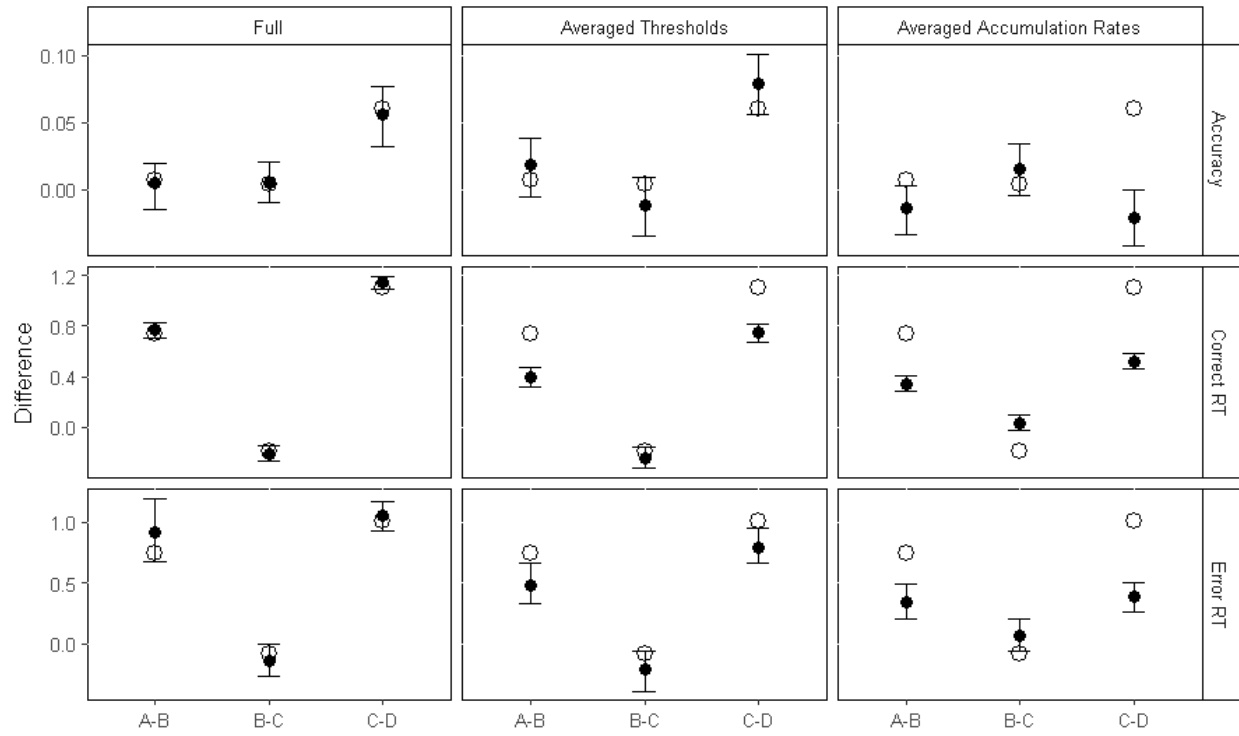


Figure 8: Model Exploration PM Contrasts

**Model Exploration:
Observed vs Predicted Conflict Accuracy and RT (Time Pressure Contrasts)**



**Model Exploration:
Observed vs Predicted Nonconflict Accuracy and RT (Time Pressure Contrasts)**

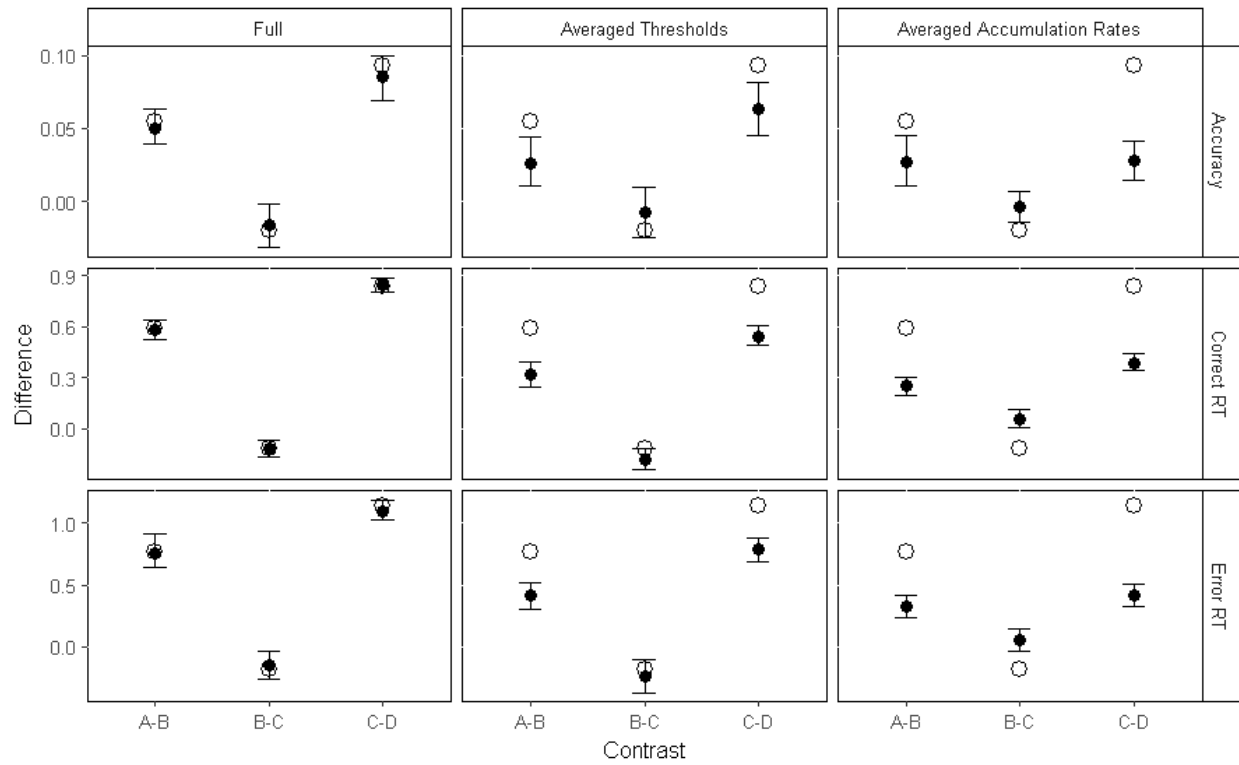
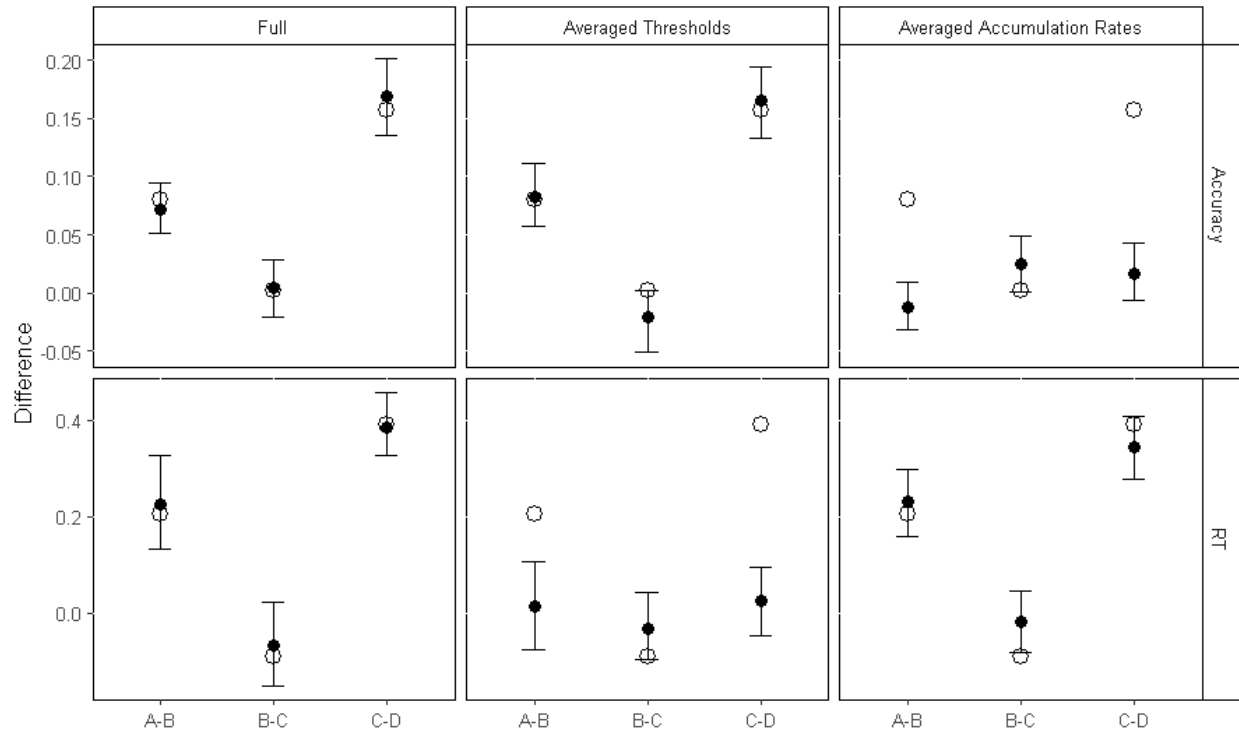


Figure 9: Model Exploration TP Contrasts Ongoing

**Model Exploration:
Observed vs Predicted PM Accuracy and RT (Time Pressure Contrasts)**



**Model Exploration:
Observed vs Predicted PM Accuracy and RT by Cognitive Control Mechanism**

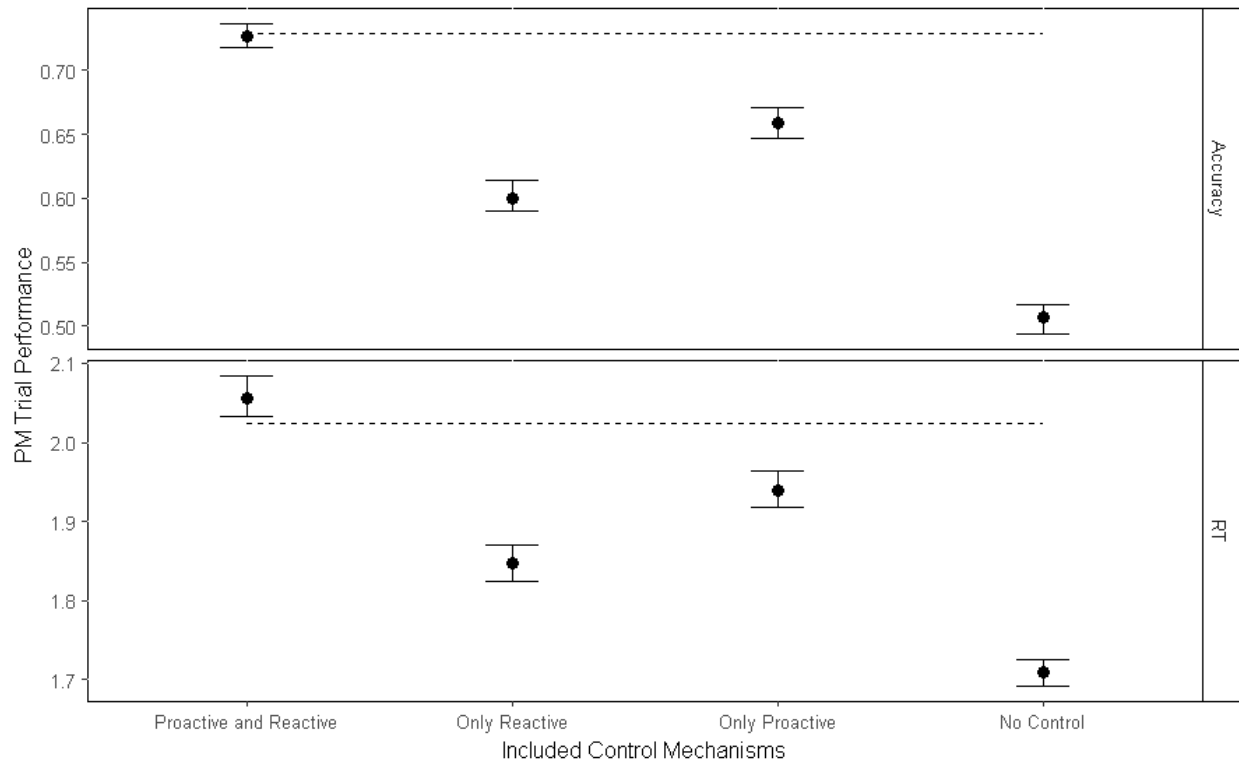


Figure 10: Model Exploration TP Contrasts PM and Control Mechanisms