Bonus material for

Chicken colour discrimination depends on background colour

by

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Content

1. Bonus figures.
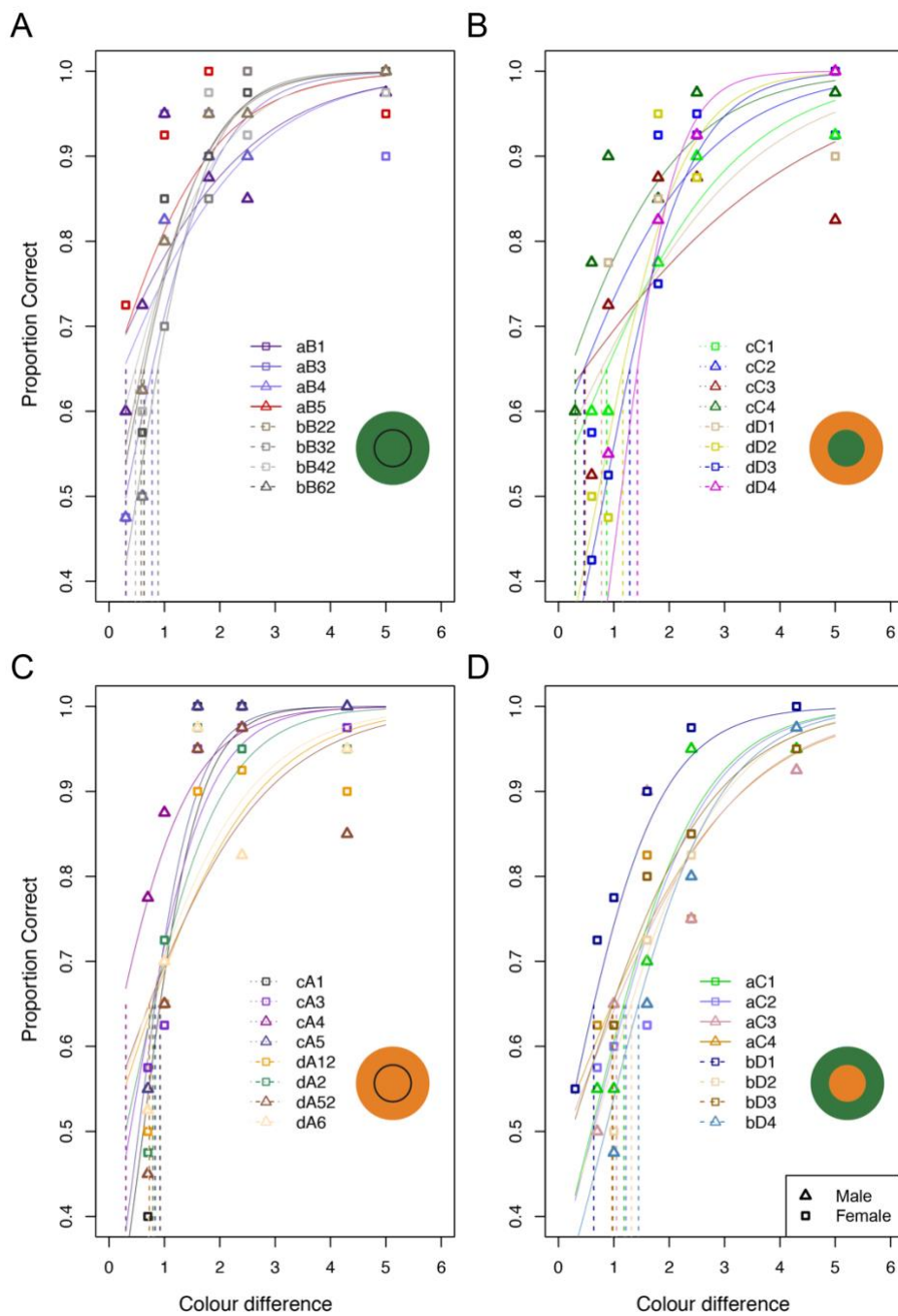
1. Bonus figures

Figure B1. Non-psychometric GLMM, Model (iii) predictions for performance as a function of colour difference for each individual chicken. Each solid line indicates the mean estimate of the fitted logistic curve for an individual chicken. Colour codes in the legend correspond to each of the chickens that participated in an experiment. The names shown are a combination of a lower case letter indicating the batch from which the individuals were drawn and an upper case letter and number that was the chicken's identifier during the experiment. The predicted "binomial threshold" (colour difference resulting in

65% success rate) is shown for each individual as a dashed line extending from the curve to the x axis. Where the curve does not reach 65% within the range of colour differences tested in this study, this is plotted at the lowest colour difference tested (0.3).
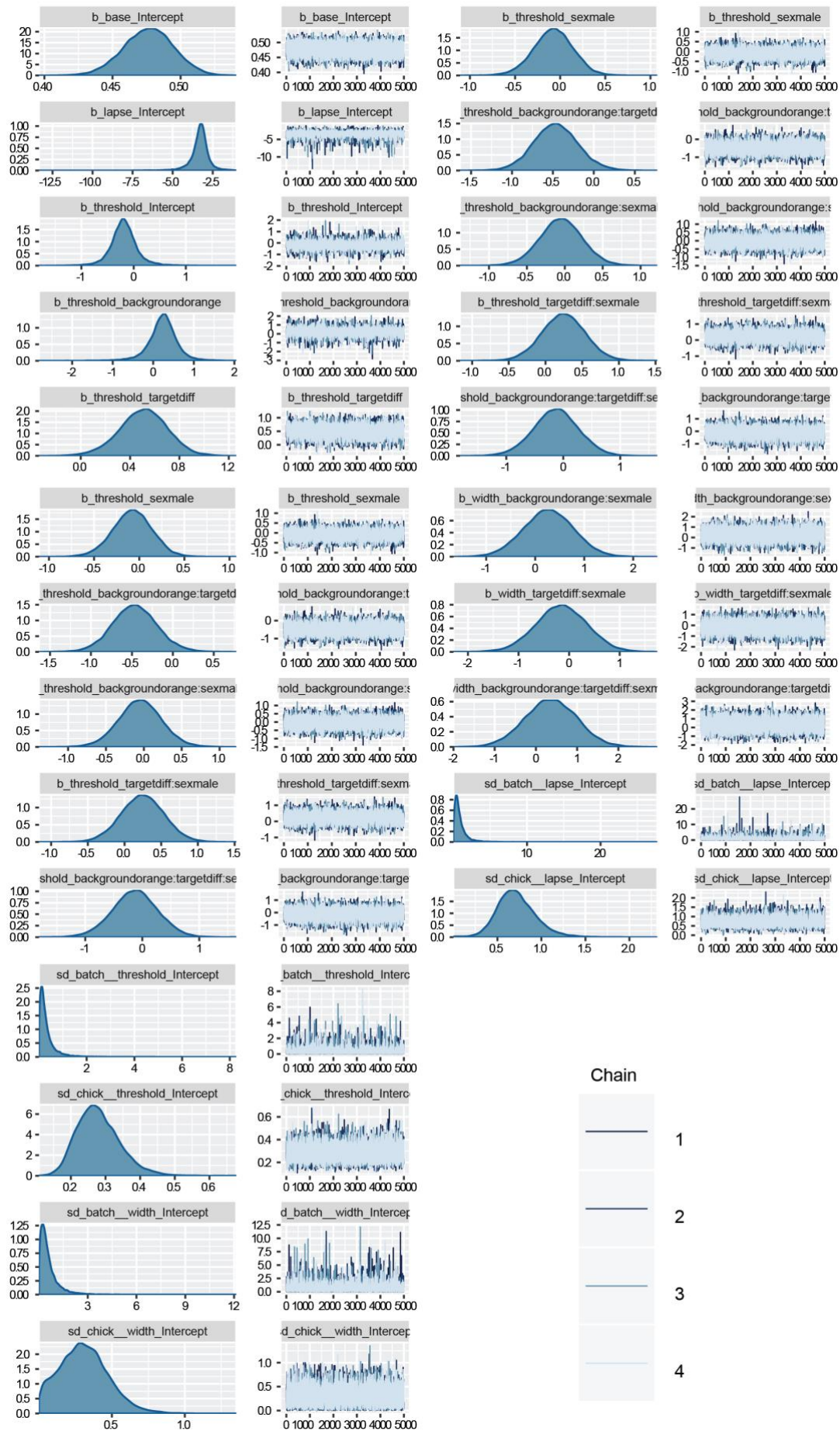
Figure B2. Posterior distribution and traces for MCMC chains from the Bayesian inference method, model (ii). Four separate MCMC chains ran in parallel to estimate the parameters for this model. The left half of each panel shows the posterior distribution for estimates of each parameter, pooled across all chains. The right half of each panel shows the values of each parameter estimate at each iteration after the "warm up" phase (a further 5000 iterations prior to the sampling phase shown here). The smooth unimodal posterior distributions suggest that the majority of estimates were drawn from a specific region of parameter space. The high degree of overlap between chains for any given iteration suggests that all chains converged on similar region of parameter space, sampling it efficiently.