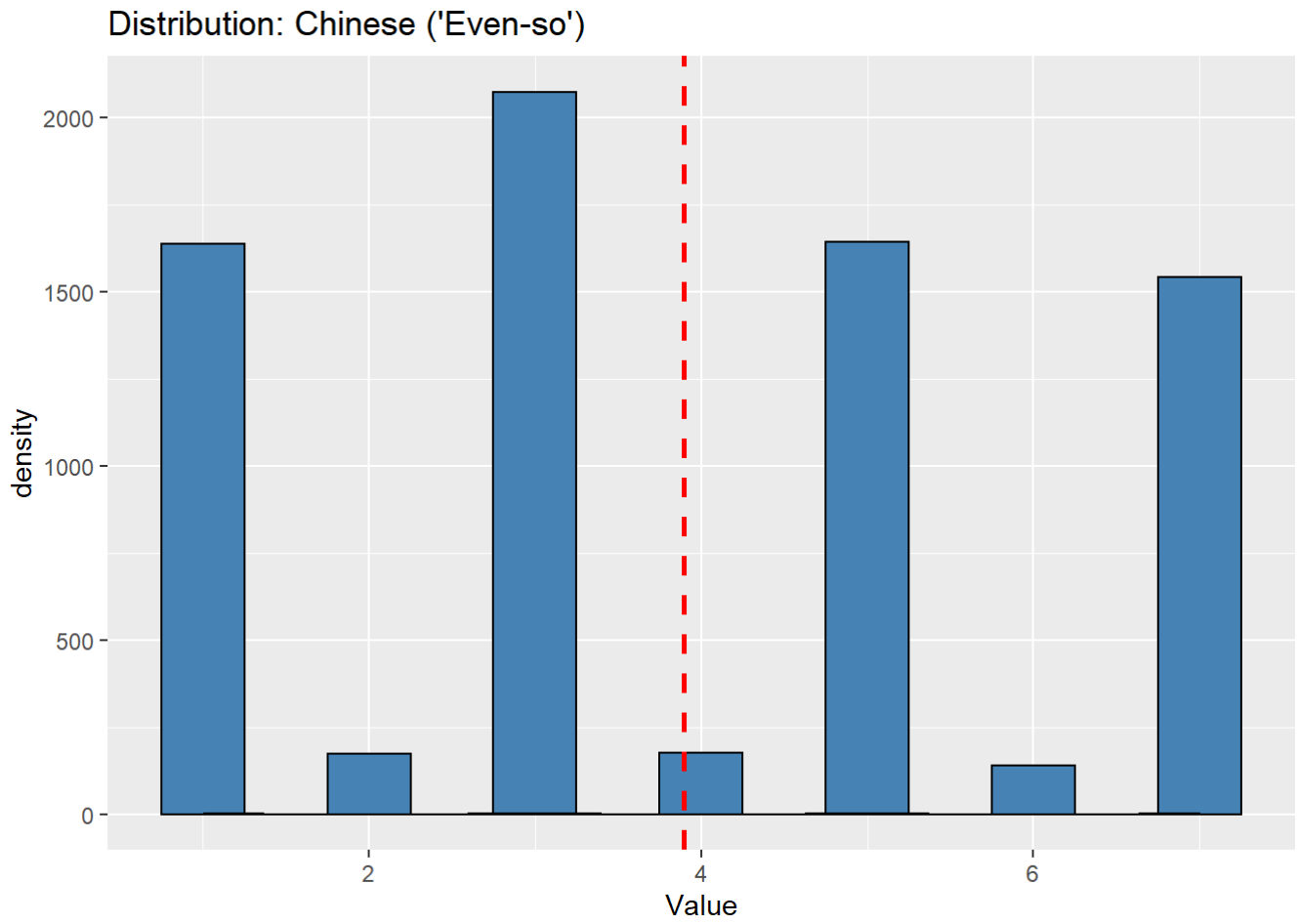
Chinese ‘Even-so’ Summary

This provides a summary of plots and models for the Chinese ‘even-so’ data from the self-paced reading task.

Distribution

```
chinDist
```



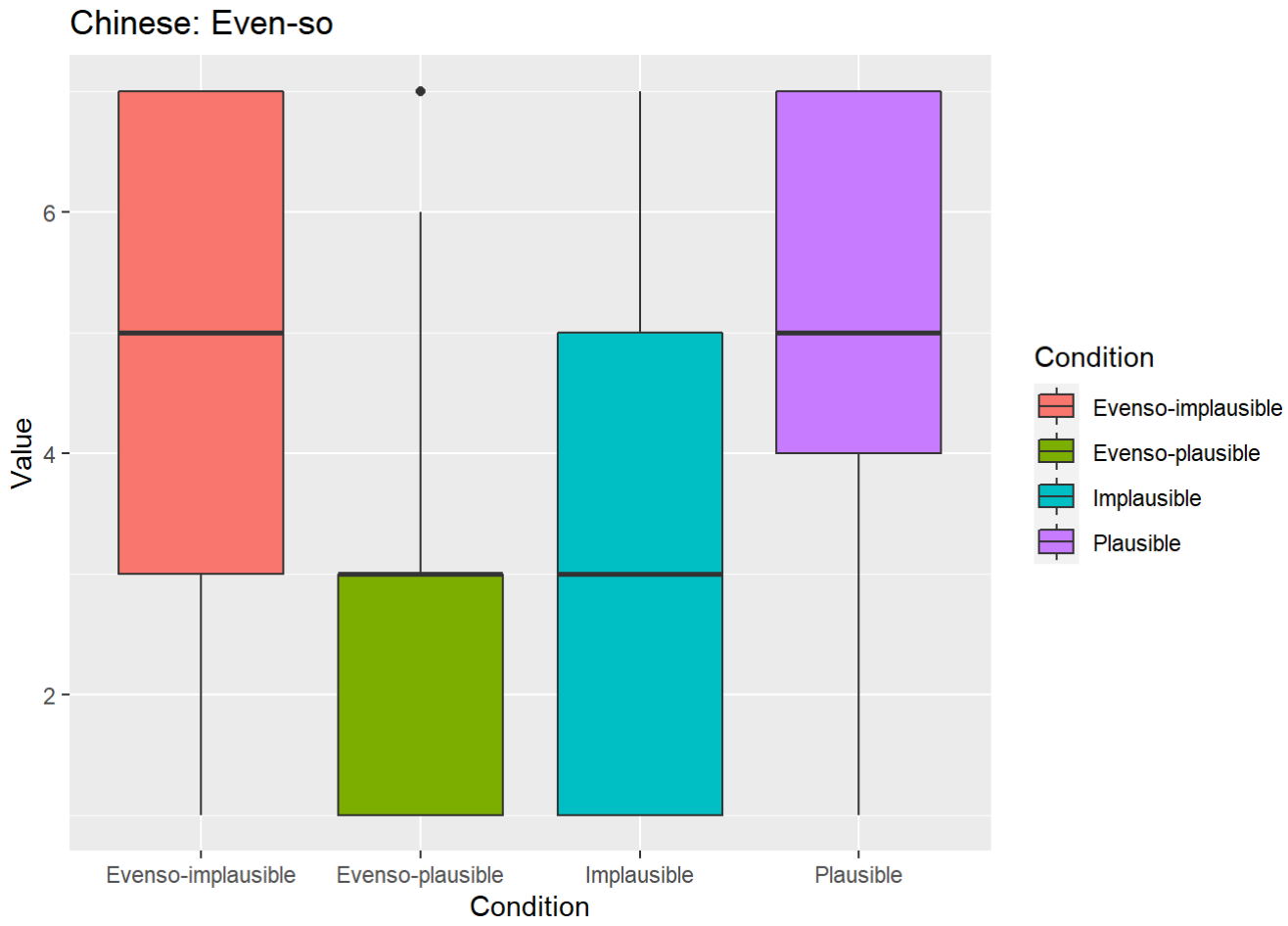
Means and Standard Deviations per Condition

```
chineseCondNorms
```

```
##            Condition     Mean       SD
## 1 Evenso-implausible 4.352846 2.098612
## 2   Evenso-plausible 2.831978 1.580095
## 3         Implausible 3.199458 2.040613
## 4           Plausible 5.192954 1.893205
```

Box plots per Condition

```
chinscoreBox
```



Clmm Analysis

Model with value as DV and Condition as IV (Participant as random effect)

```
chinclmmModel <- clmm(Value~Condition + (1|Participant), data = coherenceScores)
summary(chinclmmModel)
```

```
## Cumulative Link Mixed Model fitted with the Laplace approximation
##
## formula: Value ~ Condition + (1 | Participant)
## data:    coherenceScores
##
##  link  threshold nobs logLik    AIC      niter      max.grad cond.H
##  logit flexible  7380 -10797.87 21615.75 1289(3870) 1.55e-02 1.6e+03
##
## Random effects:
##  Groups      Name        Variance Std.Dev.
##  Participant (Intercept) 0.3415   0.5844
## Number of groups:  Participant 41
##
## Coefficients:
##                            Estimate Std. Error z value Pr(>|z|)
## ConditionEvenso-plausible -1.43824    0.06133  -23.45   <2e-16 ***
## ConditionImplausible      -1.15877    0.06230  -18.60   <2e-16 ***
## ConditionPlausible         0.80231    0.06131   13.09   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Threshold coefficients:
##     Estimate Std. Error z value
## 1|2  -2.0135     0.1047 -19.225
## 2|3  -1.8623     0.1044 -17.845
## 3|4  -0.3589     0.1019  -3.522
## 4|5  -0.2375     0.1018  -2.332
## 5|6   1.0440     0.1026  10.171
## 6|7   1.1789     0.1029  11.455
```

Between conditions analysis with emmeans

```
emmeans(chinclmmModel,pairwise ~ Condition | Value, mode = "prob")
```

```
## $`Differences of cumulative probabilities`
## Value = 1:
##  Condition             prob      SE  df asymp.LCL asymp.UCL
##  Evenso-implausible 0.11779 0.01088 Inf   0.09646    0.1391
##  Evenso-plausible   0.36002 0.02331 Inf   0.31433    0.4057
##  Implausible        0.29843 0.02146 Inf   0.25637    0.3405
##  Plausible          0.05647 0.00568 Inf   0.04534    0.0676
##
## Value = 2:
##  Condition             prob      SE  df asymp.LCL asymp.UCL
##  Evenso-implausible 0.01664 0.00177 Inf   0.01317    0.0201
##  Evenso-plausible   0.03552 0.00279 Inf   0.03006    0.0410
##  Implausible        0.03259 0.00272 Inf   0.02726    0.0379
##  Plausible          0.00862 0.00101 Inf   0.00663    0.0106
##
## Value = 3:
##  Condition             prob      SE  df asymp.LCL asymp.UCL
##  Evenso-implausible 0.27680 0.01350 Inf   0.25034    0.3033
##  Evenso-plausible   0.35083 0.00805 Inf   0.33506    0.3666
##  Implausible        0.35893 0.00659 Inf   0.34602    0.3718
##  Plausible          0.17336 0.01262 Inf   0.14862    0.1981
##
## Value = 4:
##  Condition             prob      SE  df asymp.LCL asymp.UCL
##  Evenso-implausible 0.02968 0.00226 Inf   0.02525    0.0341
##  Evenso-plausible   0.02229 0.00201 Inf   0.01835    0.0262
##  Implausible        0.02535 0.00215 Inf   0.02114    0.0296
##  Plausible          0.02274 0.00204 Inf   0.01874    0.0267
##
## Value = 5:
##  Condition             prob      SE  df asymp.LCL asymp.UCL
##  Evenso-implausible 0.29871 0.00831 Inf   0.28243    0.3150
##  Evenso-plausible   0.15423 0.01112 Inf   0.13243    0.1760
##  Implausible        0.18519 0.01211 Inf   0.16145    0.2089
##  Plausible          0.29894 0.00825 Inf   0.28277    0.3151
##
## Value = 6:
##  Condition             prob      SE  df asymp.LCL asymp.UCL
##  Evenso-implausible 0.02513 0.00244 Inf   0.02034    0.0299
##  Evenso-plausible   0.00907 0.00109 Inf   0.00693    0.0112
##  Implausible        0.01145 0.00135 Inf   0.00881    0.0141
##  Plausible          0.03292 0.00279 Inf   0.02745    0.0384
##
## Value = 7:
##  Condition             prob      SE  df asymp.LCL asymp.UCL
##  Evenso-implausible 0.23525 0.01852 Inf   0.19896    0.2715
##  Evenso-plausible   0.06804 0.00670 Inf   0.05491    0.0812
##  Implausible        0.08805 0.00849 Inf   0.07142    0.1047
##  Plausible          0.40695 0.02457 Inf   0.35880    0.4551
##
## Confidence level used: 0.95
##
## $contrasts
## Value = 1:
##  contrast                                  estimate       SE  df z.ratio
```

```
##  (Evenso-implausible) - (Evenso-plausible) -0.242227 0.015624 Inf -15.504
##  (Evenso-implausible) - Implausible        -0.180644 0.014008 Inf -12.896
##  (Evenso-implausible) - Plausible           0.061315 0.006919 Inf   8.862
##  (Evenso-plausible) - Implausible           0.061583 0.013251 Inf   4.647
##  (Evenso-plausible) - Plausible             0.303542 0.018979 Inf  15.993
##  Implausible - Plausible                    0.241959 0.017173 Inf  14.089
##  p.value
##   <.0001
##   <.0001
##   <.0001
##   <.0001
##   <.0001
##   <.0001
##
## Value = 2:
##  contrast                                   estimate       SE  df z.ratio
##  (Evenso-implausible) - (Evenso-plausible) -0.018880 0.001628 Inf -11.596
##  (Evenso-implausible) - Implausible        -0.015946 0.001438 Inf -11.092
##  (Evenso-implausible) - Plausible           0.008024 0.000972 Inf   8.251
##  (Evenso-plausible) - Implausible           0.002933 0.000743 Inf   3.949
##  (Evenso-plausible) - Plausible             0.026904 0.002092 Inf  12.857
##  Implausible - Plausible                    0.023970 0.001955 Inf  12.260
##  p.value
##   <.0001
##   <.0001
##   <.0001
##   0.0005
##   <.0001
##   <.0001
##
## Value = 3:
##  contrast                                   estimate       SE  df z.ratio
##  (Evenso-implausible) - (Evenso-plausible) -0.074036 0.017236 Inf  -4.295
##  (Evenso-implausible) - Implausible        -0.082129 0.013599 Inf  -6.039
##  (Evenso-implausible) - Plausible           0.103440 0.007831 Inf  13.210
##  (Evenso-plausible) - Implausible          -0.008093 0.004384 Inf  -1.846
##  (Evenso-plausible) - Plausible             0.177477 0.017205 Inf  10.316
##  Implausible - Plausible                    0.185570 0.013723 Inf  13.522
##  p.value
##   0.0001
##   <.0001
##   <.0001
##   0.2519
##   <.0001
##   <.0001
##
## Value = 4:
##  contrast                                   estimate       SE  df z.ratio
##  (Evenso-implausible) - (Evenso-plausible)  0.007390 0.001657 Inf   4.459
##  (Evenso-implausible) - Implausible         0.004323 0.001478 Inf   2.926
##  (Evenso-implausible) - Plausible           0.006938 0.000999 Inf   6.947
##  (Evenso-plausible) - Implausible          -0.003067 0.000702 Inf  -4.368
##  (Evenso-plausible) - Plausible            -0.000452 0.002220 Inf  -0.204
##  Implausible - Plausible                    0.002615 0.002119 Inf   1.234
##  p.value
##   <.0001
```

```
##   0.0181
##   <.0001
##   0.0001
##   0.9970
##   0.6053
##
## Value = 5:
##  contrast                                  estimate       SE  df z.ratio
##  (Evenso-implausible) - (Evenso-plausible)  0.144486 0.008094 Inf  17.850
##  (Evenso-implausible) - Implausible         0.113520 0.008476 Inf  13.392
##  (Evenso-implausible) - Plausible          -0.000226 0.010348 Inf  -0.022
##  (Evenso-plausible) - Implausible          -0.030966 0.006687 Inf  -4.631
##  (Evenso-plausible) - Plausible            -0.144711 0.016048 Inf  -9.017
##  Implausible - Plausible                   -0.113745 0.016645 Inf  -6.833
##  p.value
##   <.0001
##   <.0001
##   1.0000
##   <.0001
##   <.0001
##   <.0001
##
## Value = 6:
##  contrast                                  estimate       SE  df z.ratio
##  (Evenso-implausible) - (Evenso-plausible)  0.016060 0.001549 Inf  10.367
##  (Evenso-implausible) - Implausible         0.013678 0.001367 Inf  10.007
##  (Evenso-implausible) - Plausible          -0.007791 0.001148 Inf  -6.785
##  (Evenso-plausible) - Implausible          -0.002382 0.000568 Inf  -4.192
##  (Evenso-plausible) - Plausible            -0.023852 0.002078 Inf -11.481
##  Implausible - Plausible                   -0.021469 0.001930 Inf -11.125
##  p.value
##   <.0001
##   <.0001
##   <.0001
##   0.0002
##   <.0001
##   <.0001
##
## Value = 7:
##  contrast                                  estimate       SE  df z.ratio
##  (Evenso-implausible) - (Evenso-plausible)  0.167208 0.013507 Inf  12.379
##  (Evenso-implausible) - Implausible         0.147200 0.012512 Inf  11.765
##  (Evenso-implausible) - Plausible          -0.171700 0.014134 Inf -12.148
##  (Evenso-plausible) - Implausible          -0.020008 0.004623 Inf  -4.328
##  (Evenso-plausible) - Plausible            -0.338908 0.019521 Inf -17.361
##  Implausible - Plausible                   -0.318900 0.018391 Inf -17.340
##  p.value
##   <.0001
##   <.0001
##   <.0001
##   0.0001
##   <.0001
##   <.0001
```

```
##
## P value adjustment: tukey method for comparing a family of 4 estimates
```