

Supplementary Materials: Predicting similarity judgments in intertemporal choice with machine learning

Jeffrey R. Stevens and Leen-Kiat Soh

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R packages

This project used R (3.4.2, R Core Team, 2017).

Table S1: *Amount Questions and Mean Ratings for Experiment 1*

| Small Value | Large Value | Mean Similarity Rating |
|-------------|-------------|------------------------|
| 3 | 4 | 0.88 |
| 3 | 5 | 0.70 |
| 3 | 6 | 0.50 |
| 3 | 7 | 0.26 |
| 3 | 8 | 0.16 |
| 3 | 9 | 0.25 |
| 3 | 10 | 0.05 |
| 3 | 11 | 0.03 |
| 3 | 12 | 0.08 |
| 3 | 13 | 0.12 |
| 4 | 5 | 0.94 |
| 5 | 6 | 0.92 |
| 5 | 14 | 0.03 |
| 6 | 8 | 0.90 |
| 6 | 9 | 0.63 |
| 7 | 11 | 0.42 |
| 8 | 29 | 0.00 |
| 9 | 20 | 0.05 |
| 10 | 11 | 0.95 |
| 10 | 12 | 0.89 |
| 10 | 18 | 0.14 |
| 10 | 20 | 0.22 |
| 12 | 16 | 0.68 |
| 12 | 28 | 0.11 |
| 13 | 17 | 0.55 |
| 14 | 18 | 0.64 |
| 15 | 16 | 0.92 |
| 15 | 18 | 0.73 |
| 15 | 19 | 0.62 |
| 15 | 20 | 0.48 |
| 15 | 22 | 0.21 |
| 15 | 24 | 0.08 |
| 15 | 26 | 0.06 |
| 15 | 27 | 0.14 |
| 15 | 28 | 0.05 |
| 15 | 30 | 0.17 |
| 15 | 31 | 0.08 |
| 15 | 32 | 0.08 |
| 15 | 34 | 0.08 |
| 17 | 18 | 0.88 |
| 17 | 30 | 0.03 |
| 18 | 21 | 0.80 |
| 18 | 40 | 0.06 |
| 22 | 53 | 0.00 |
| 23 | 48 | 0.09 |
| 26 | 62 | 0.16 |
| 50 | 90 | 0.14 |
| 52 | 61 | 0.42 |
| 62 | 66 | 0.85 |
| 82 | 90 | 0.71 |

Table S2: *Delay Questions and Mean Ratings for Experiment 1*

| Small Value | Large Value | Mean Similarity Rating |
|-------------|-------------|------------------------|
| 8 | 29 | 0.00 |
| 12 | 28 | 0.12 |
| 13 | 17 | 0.69 |
| 15 | 16 | 0.95 |
| 15 | 18 | 0.88 |
| 15 | 20 | 0.55 |
| 15 | 22 | 0.37 |
| 15 | 24 | 0.23 |
| 15 | 26 | 0.17 |
| 15 | 27 | 0.19 |
| 15 | 28 | 0.11 |
| 15 | 30 | 0.18 |
| 15 | 31 | 0.14 |
| 15 | 32 | 0.11 |
| 15 | 34 | 0.09 |
| 17 | 18 | 0.94 |
| 17 | 28 | 0.17 |
| 17 | 30 | 0.02 |
| 18 | 40 | 0.05 |
| 21 | 39 | 0.14 |
| 22 | 53 | 0.03 |
| 23 | 48 | 0.08 |
| 26 | 62 | 0.14 |
| 29 | 60 | 0.08 |
| 32 | 36 | 0.94 |
| 34 | 45 | 0.25 |
| 35 | 56 | 0.06 |
| 36 | 38 | 0.94 |
| 36 | 41 | 0.73 |
| 36 | 44 | 0.50 |
| 36 | 47 | 0.37 |
| 36 | 50 | 0.14 |
| 36 | 53 | 0.09 |
| 36 | 56 | 0.12 |
| 36 | 59 | 0.10 |
| 36 | 62 | 0.11 |
| 36 | 65 | 0.05 |
| 38 | 60 | 0.08 |
| 42 | 74 | 0.06 |
| 43 | 64 | 0.09 |
| 43 | 70 | 0.03 |
| 46 | 53 | 0.62 |
| 46 | 56 | 0.52 |
| 48 | 51 | 0.86 |
| 50 | 90 | 0.15 |
| 52 | 61 | 0.58 |
| 62 | 66 | 0.94 |
| 75 | 89 | 0.52 |
| 82 | 90 | 0.75 |

Table S3: *Amount Questions and Mean Ratings for Experiment 2*

| Small Value | Large Value | Mean Similarity Rating |
|-------------|-------------|------------------------|
| 1 | 2 | 0.88 |
| 1 | 10 | 0.03 |
| 2 | 3 | 0.92 |
| 2 | 10 | 0.02 |
| 3 | 4 | 0.93 |
| 3 | 6 | 0.46 |
| 3 | 10 | 0.06 |
| 4 | 5 | 0.89 |
| 4 | 10 | 0.07 |
| 5 | 10 | 0.13 |
| 6 | 9 | 0.56 |
| 6 | 10 | 0.37 |
| 7 | 10 | 0.59 |
| 7 | 14 | 0.04 |
| 8 | 10 | 0.79 |
| 9 | 10 | 0.92 |
| 9 | 12 | 0.58 |
| 9 | 18 | 0.04 |
| 10 | 15 | 0.34 |
| 10 | 20 | 0.04 |
| 11 | 20 | 0.02 |
| 12 | 15 | 0.69 |
| 12 | 20 | 0.06 |
| 13 | 20 | 0.08 |
| 14 | 20 | 0.10 |
| 14 | 21 | 0.06 |
| 15 | 20 | 0.36 |
| 16 | 20 | 0.53 |
| 17 | 20 | 0.70 |
| 18 | 20 | 0.84 |
| 18 | 27 | 0.12 |
| 19 | 20 | 0.88 |
| 20 | 25 | 0.46 |
| 21 | 28 | 0.26 |
| 27 | 30 | 0.78 |
| 27 | 36 | 0.13 |
| 28 | 35 | 0.27 |
| 36 | 45 | 0.14 |
| 45 | 50 | 0.63 |
| 63 | 70 | 0.46 |
| 81 | 90 | 0.51 |

Table S4: *Delay Questions and Mean Ratings for Experiment 2*

| Small Value | Large Value | Mean Similarity Rating |
|-------------|-------------|------------------------|
| 0 | 1 | 0.84 |
| 0 | 2 | 0.64 |
| 0 | 3 | 0.42 |
| 0 | 4 | 0.32 |
| 0 | 5 | 0.23 |
| 0 | 6 | 0.08 |
| 0 | 7 | 0.07 |
| 0 | 8 | 0.04 |
| 0 | 9 | 0.03 |
| 0 | 10 | 0.03 |
| 1 | 2 | 0.91 |
| 1 | 10 | 0.06 |
| 2 | 3 | 0.92 |
| 2 | 10 | 0.11 |
| 3 | 4 | 0.93 |
| 3 | 6 | 0.63 |
| 3 | 10 | 0.07 |
| 4 | 5 | 0.92 |
| 4 | 10 | 0.11 |
| 5 | 10 | 0.29 |
| 6 | 9 | 0.71 |
| 6 | 10 | 0.48 |
| 7 | 10 | 0.71 |
| 7 | 14 | 0.13 |
| 8 | 10 | 0.86 |
| 9 | 10 | 0.92 |
| 9 | 12 | 0.73 |
| 9 | 18 | 0.11 |
| 10 | 15 | 0.53 |
| 12 | 15 | 0.81 |
| 14 | 21 | 0.14 |
| 15 | 20 | 0.58 |
| 18 | 27 | 0.13 |
| 20 | 25 | 0.64 |
| 21 | 28 | 0.37 |
| 27 | 30 | 0.81 |
| 27 | 36 | 0.27 |
| 28 | 35 | 0.30 |
| 36 | 45 | 0.32 |
| 45 | 50 | 0.72 |
| 63 | 70 | 0.48 |
| 81 | 90 | 0.64 |

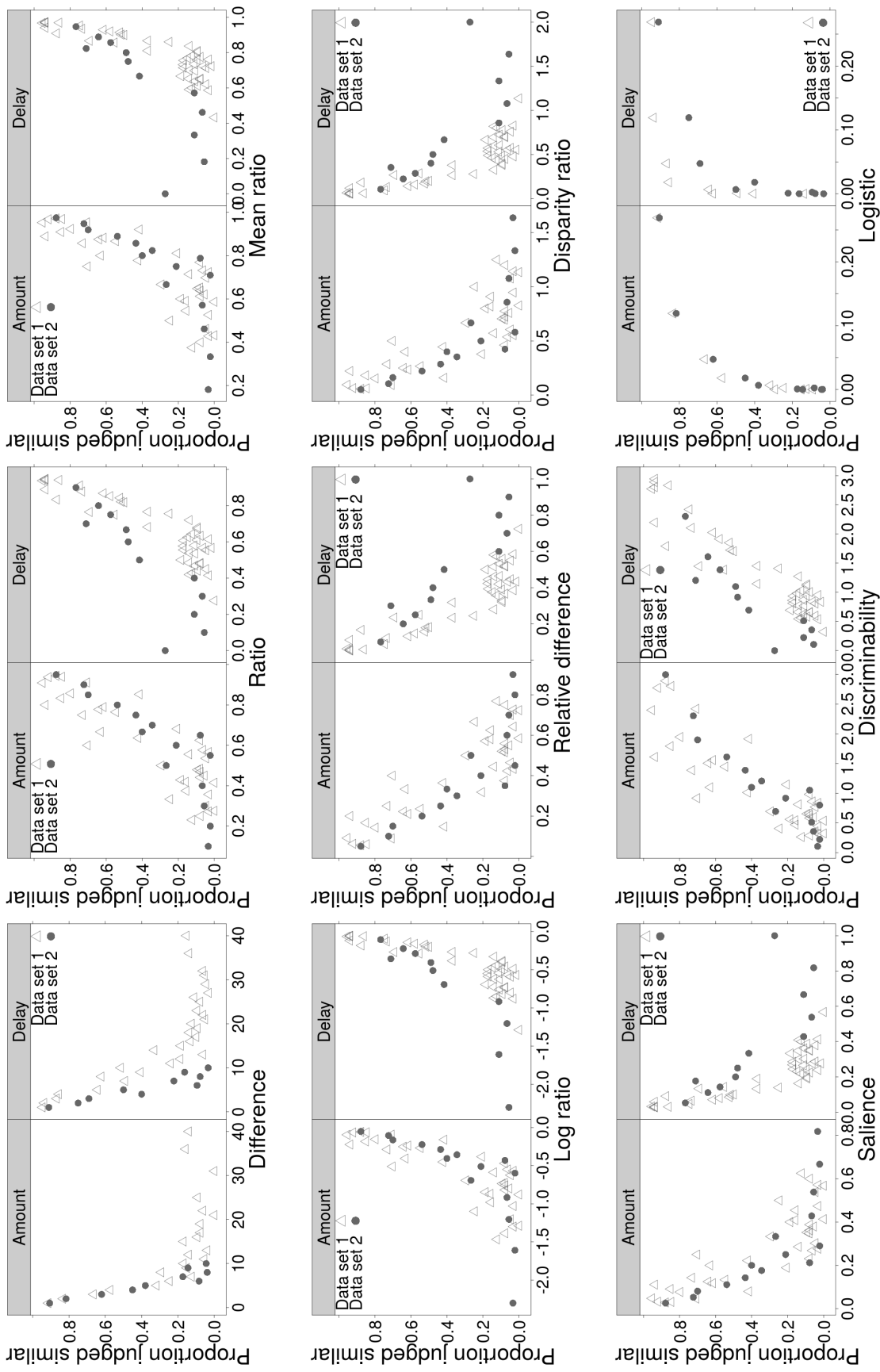


Figure S1: Attribute effects on similarity judgements. Dots represent mean proportion of pairs judged as similar for each attribute value.

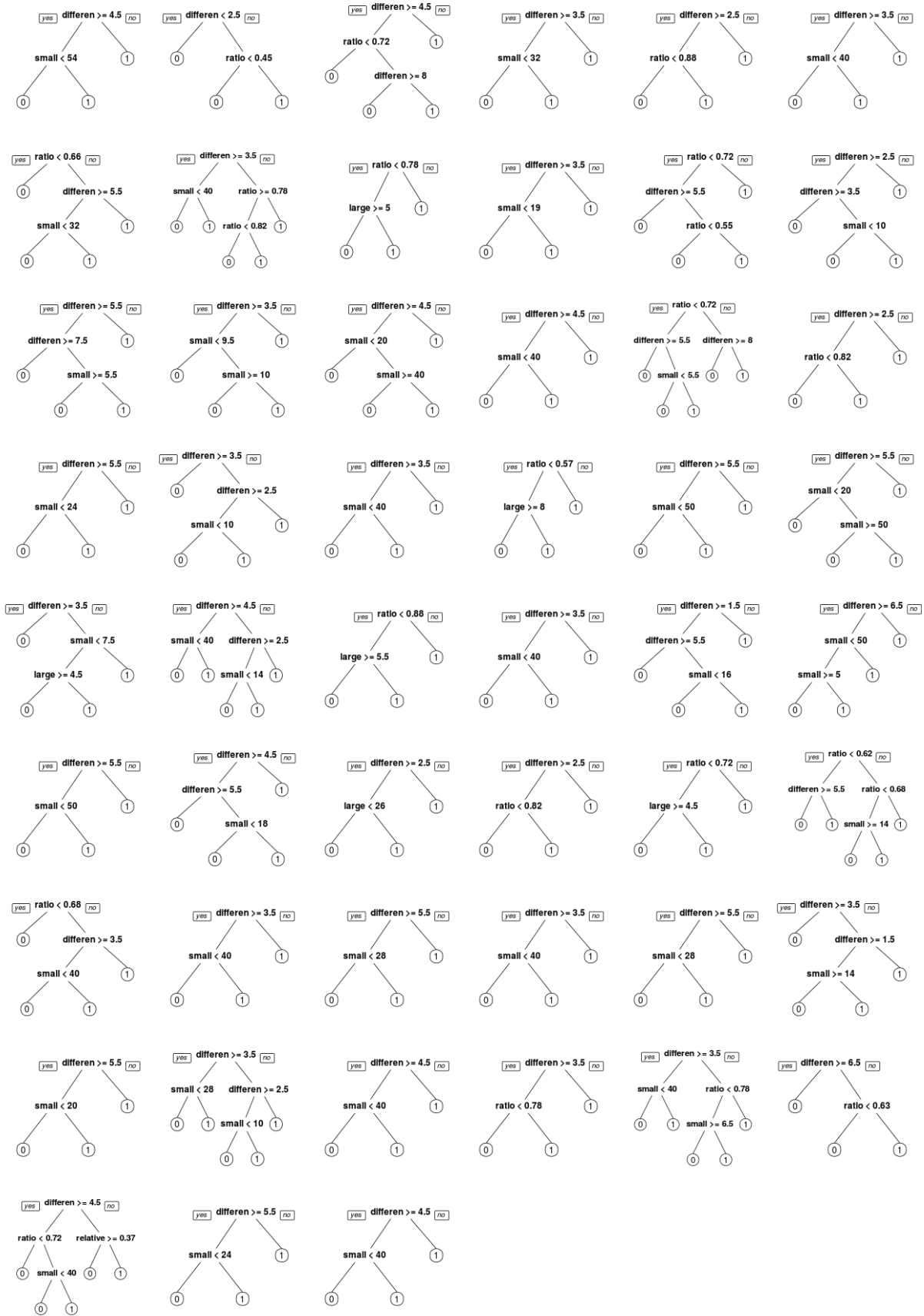


Figure S2: Amount judgment trees for participants with at least two nodes.

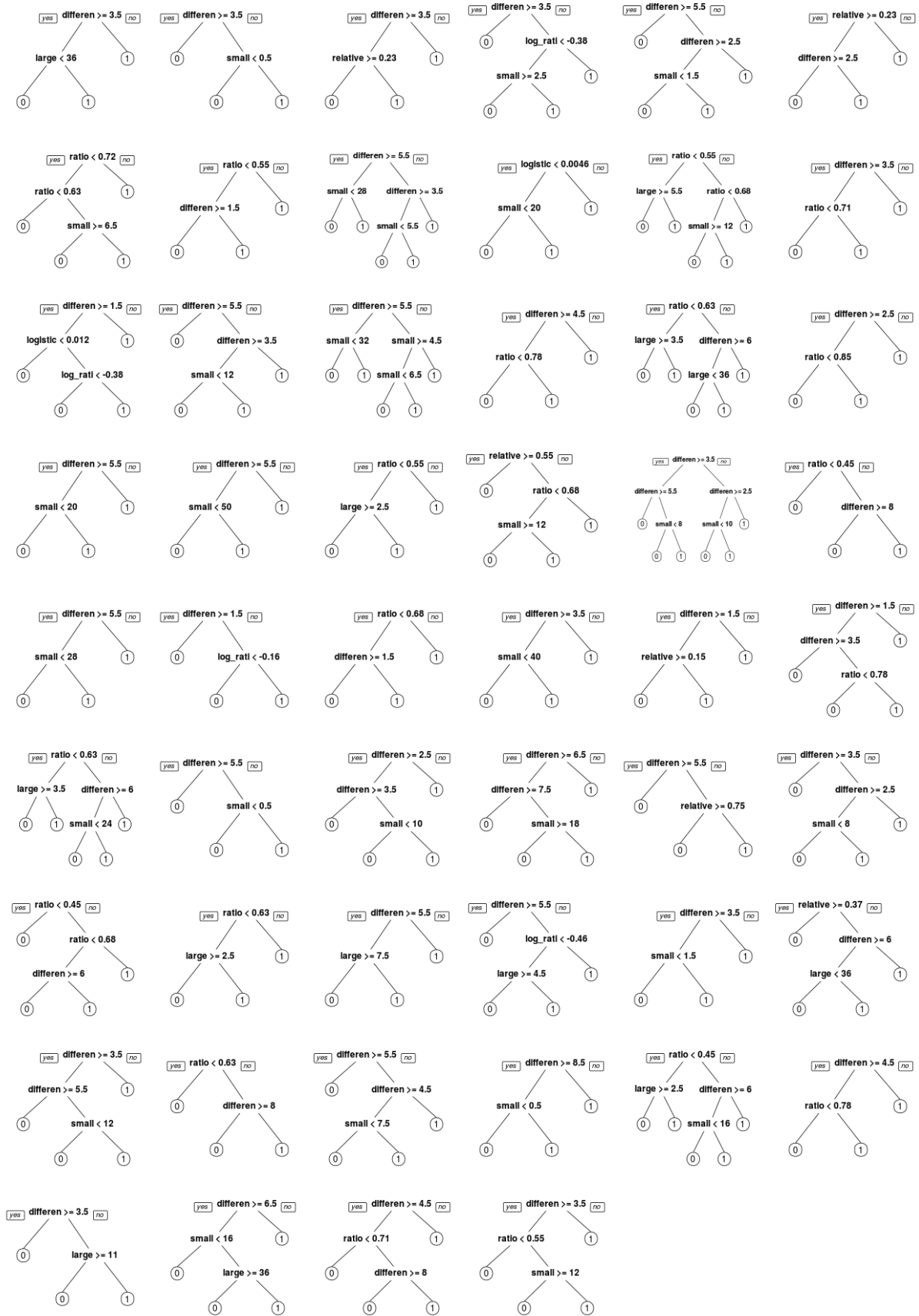


Figure S3: Delay judgment trees for participants with at least two nodes.

References

R Core Team. (2017). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.