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

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R packages

This project used R (3.4.2, R Core Team, 2017) and the R-packages *BayesFactor* (0.9.12.2, Morey & Rouder, 2015), *car* (2.1.5, Fox & Weisberg, 2011), *cowplot* (0.8.0, Wilke, 2016), *dplyr* (0.7.4, Wickham & Francois, 2016), *foreach* (1.4.3, Analytics & Weston, 2015), *ggplot2* (2.2.1, Wickham, 2009), *lattice* (0.20.35, Sarkar, 2008), *lme4* (1.1.14, Bates, Mächler, Bolker, & Walker, 2015), *MBESS* (4.4.0, Kelley, 2017), *papaja* (0.1.0.9492, Aust & Barth, 2017), *plyr* (Wickham, 2011; 1.8.4, Wickham & Francois, 2016), *rpart* (Milborrow, 2017; 4.1.11, Therneau, Atkinson, & Ripley, 2017), *rpart.plot* (2.1.2, Milborrow, 2017), *tidyr* (0.7.1, Wickham, 2017), and *xtable* (1.8.2, Dahl, 2016).

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

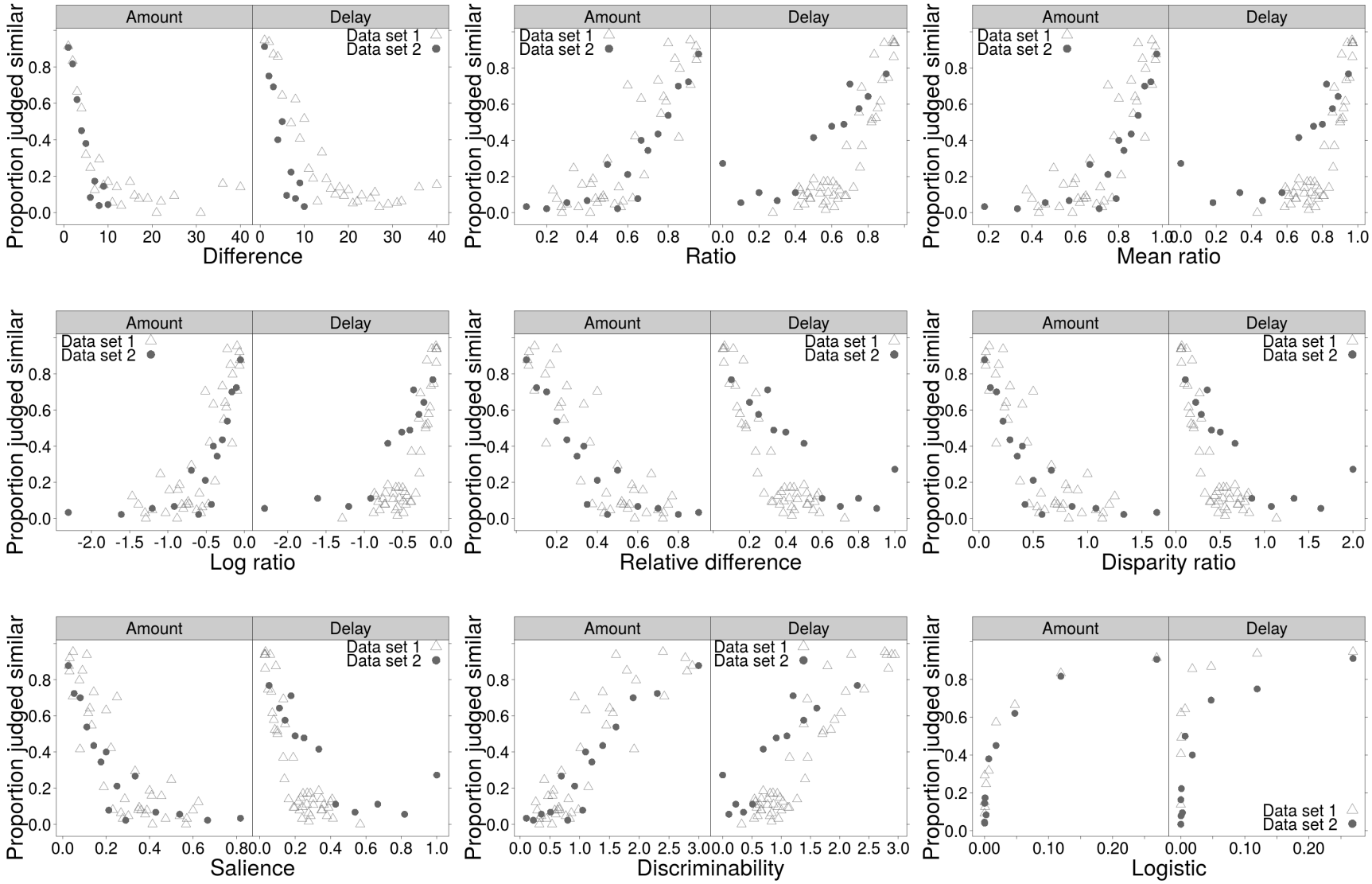

Figure S1: Attribute effects on similarity judgments. Dots represent mean proportion of pairs judged as similar for each attribute value.

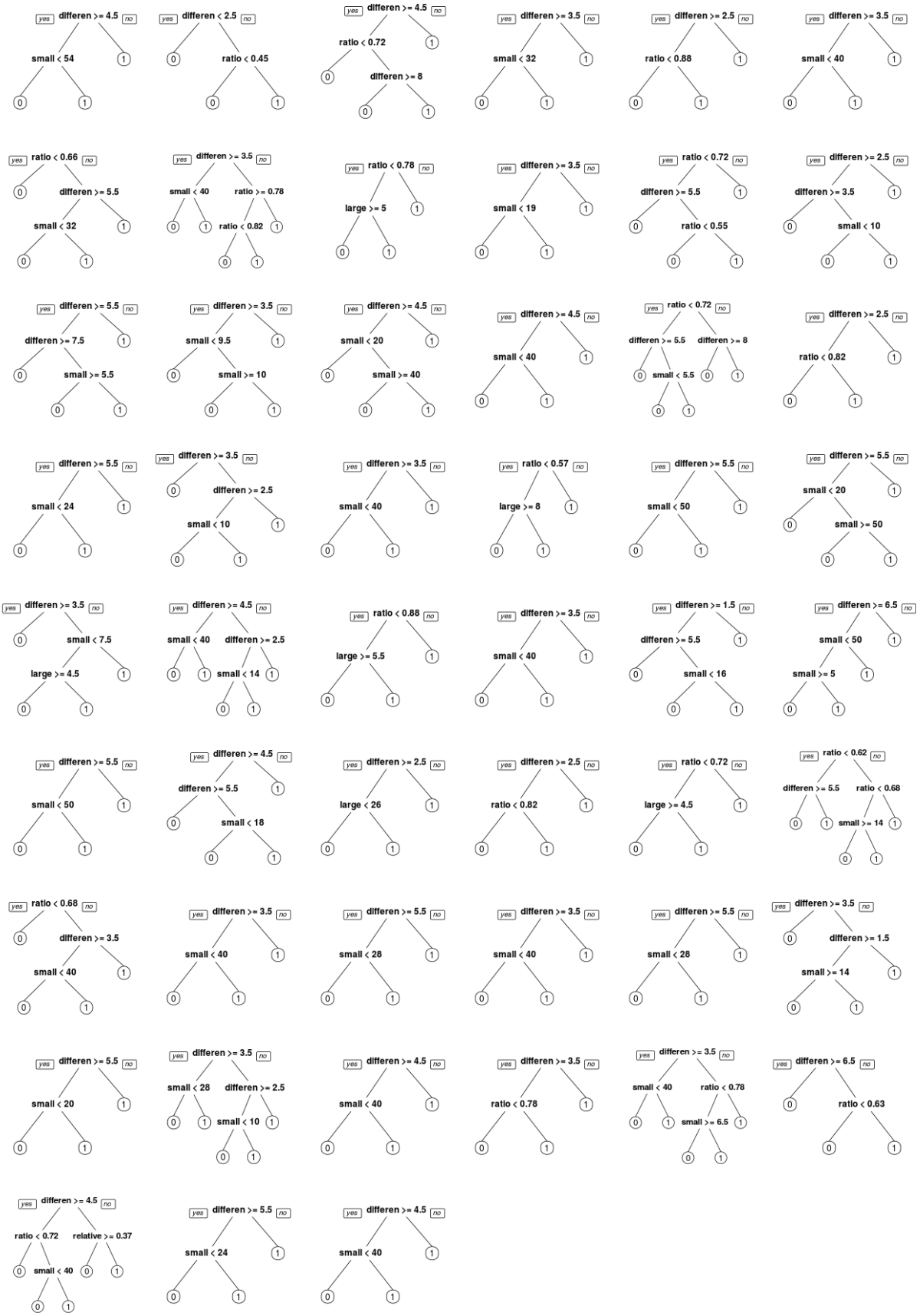

Figure S2: Amount judgment trees for participants with at least two nodes.

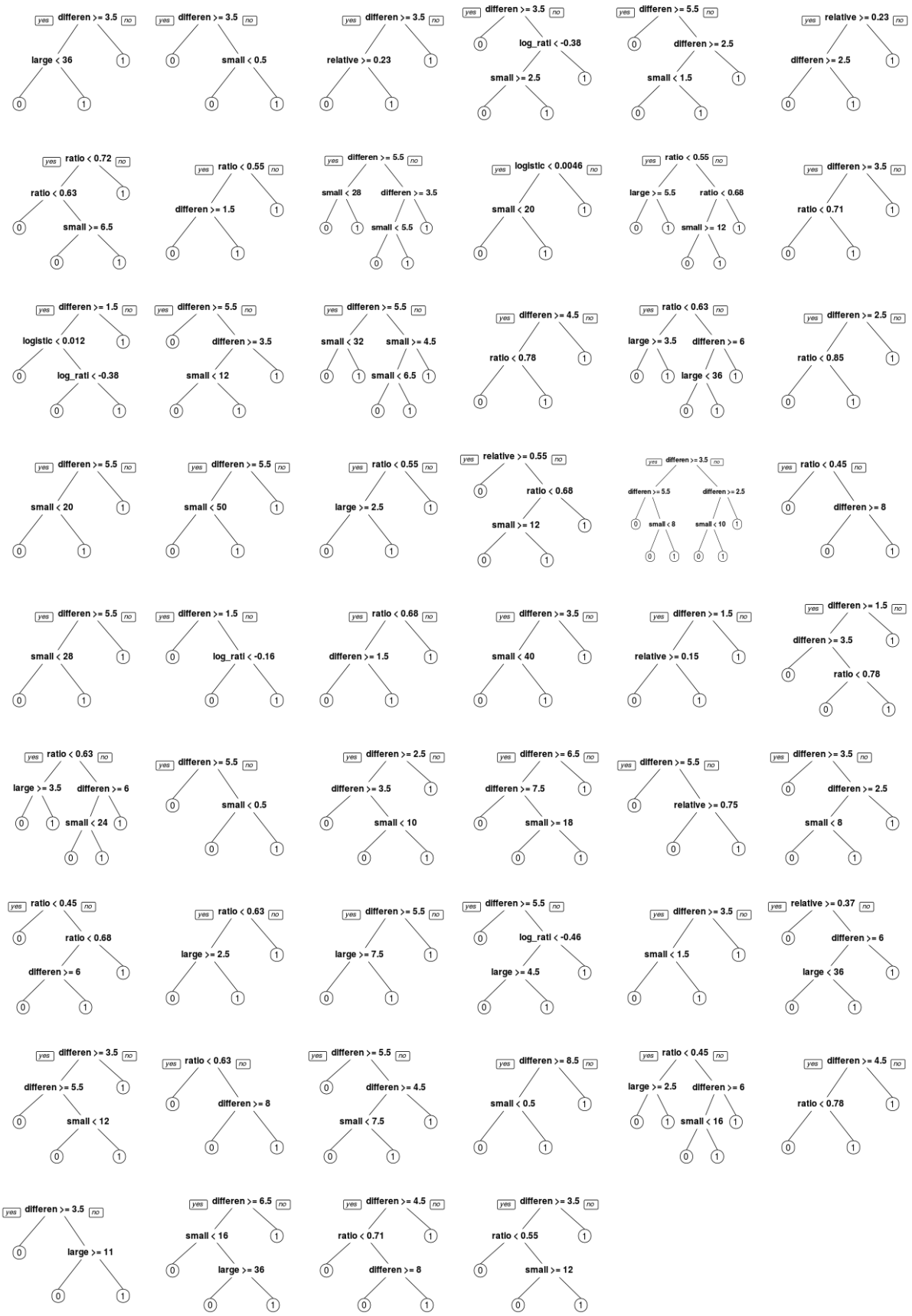

Figure S3: Delay judgment trees for participants with at least two nodes.

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