## Appendix A: Summary of Experimental Conditions

Table 1 describes the 44 experimental conditions included in the model comparison, including the number of trials, the number of words presented per trial (Words/Trial), the number of referents presented per trial (Objects/Trial), the number of to-be-learned word-referent pairs (Items), people's overall mean accuracy (p(o|w) across all intended w-o mappings) in each condition (Accuracy), the standard deviation of performance (SD), and the number of participants per condition (N).

## Appendix B: Clustering experiments and models by misfit

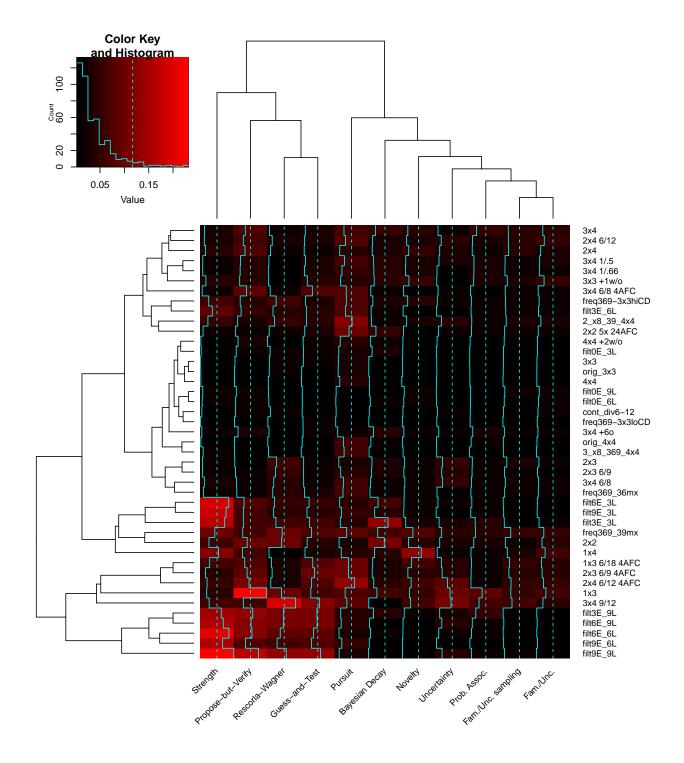
The heatmap below shows cross-validated model fit (SSE; sum of squared error) for each experimental condition. Note that each model has difficulty fitting at least one ore more experimental conditions—and these difficult conditions vary somewhat by model. For example, the strength-biased model has particular difficulty with the filt conditions<sup>1</sup> (Kachergis et al., 2012), which present a group of word-referent pairs early in training which then systematically co-occur with particular novel late-stage word-referent pairs, testing how strictly learners will maintain a mutual exclusivity (ME) constraint. The Trueswell2012 model also shows greater misfit in most of these conditions (except for the filtXE\_3L conditions, which have only 3 repetitions of the late-stage pairings, and thus do not overwhelm learners' ME bias).

On the other hand, many experimental conditions are nearly equally well fit by all models, especially those that have a fixed number of repetitions per word-referent pair (e.g., 3x3 and 4x4, although 2x2 presents difficulties for some models).

<sup>&</sup>lt;sup>1</sup>Except for the filt0E\_ conditions, which consist only of the late-stage pairs, with no early stage.

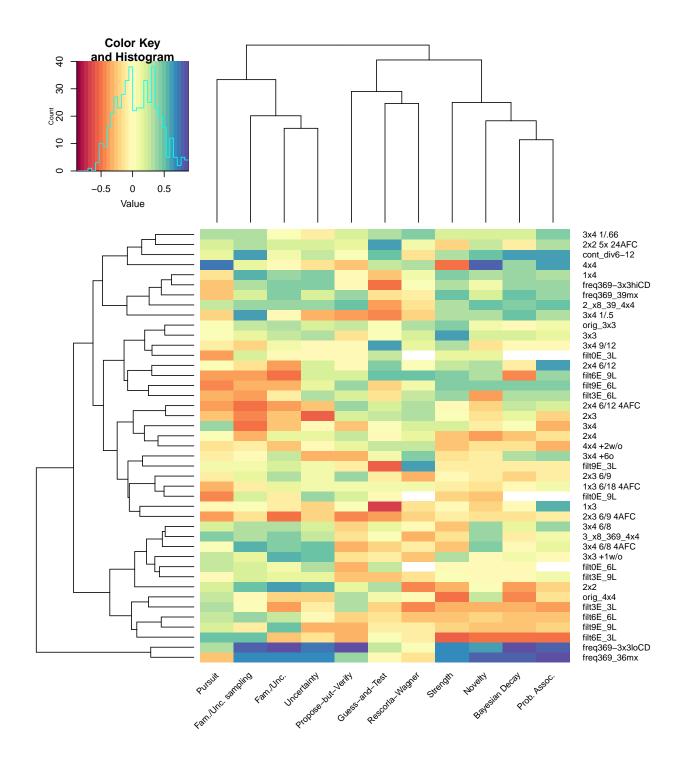
3x4     36     3     4     18     0.19     0.12     25       3x4 1/.66     36     3     4     18     0.22     0.11     25       3x4 1/.66     36     3     4     18     0.27     0.12     20       2x4     54     2     4     18     0.30     0.15     33       3x3 + 1w/o     54     2     4     18     0.30     0.15     33       4x4 + 2w/o     54     4     4     18     0.10     0.05     39       1x3 6/18 4AFC     108     1     3     18     0.67     0.10     33       2x3 6/9 4AFC     54     2     3     18     0.69     0.11     38       2x4 6/12 4AFC     54     2     4     18     0.69     0.01     38       1x3     108     1     3     18     0.67     0.01     31       3x4 6/8 4AFC     36     3     4     18     0.69     0.09	Condition Name	Trials	Words/Trial	Objects/Trial	Items	Accuracy	SD	N
3x4 1/.5     36     3     4     18     0.22     0.11     25       3x4 1/.66     36     3     4     18     0.21     0.09     25       2x4     54     2     4     18     0.27     0.12     20       2x4     54     2     4     18     0.30     0.15     33       3x3 +1w/o     54     4     4     18     0.17     0.08     39       4x4 +2w/o     54     4     4     18     0.10     0.05     39       1x3 6/9 4AFC     108     1     3     18     0.69     0.11     38       2x4 6/12 4AFC     54     2     3     18     0.69     0.11     38       1x3     108     1     3     18     0.69     0.11     38       2x4 6/12 54     2     4     18     0.69     0.09     36       1x3     18     0.55     0.07     23     3     18     0.55     0.07<		36	,	<u> </u>	18		0.12	25
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$3x4 \ 1/.5$	36		4	18	0.22	0.11	25
3x4 + 6o     36     3     4     18     0.27     0.12     20       2x4     54     2     4     18     0.30     0.15     33       3x3 + 1 lw/o     54     3     3     18     0.17     0.08     39       4x4 + 2w/o     54     4     4     18     0.10     0.05     39       1x3 6/18 4AFC     108     1     3     18     0.67     0.10     43       2x3 6/9 4AFC     54     2     3     18     0.69     0.11     38       2x4 6/12 4AFC     54     2     4     18     0.69     0.09     36       1x3     108     1     3     18     0.67     0.11     23       2x4 6/12     54     2     3     18     0.55     0.07     23       2x4 6/12     54     2     3     18     0.55     0.07     23       2x4 6/12     54     2     3     18     0.55     0.01	'							
2x4     54     2     4     18     0.30     0.15     33       3x3 + 1w/o     54     3     3     18     0.17     0.08     39       1x3 6/18 4AFC     108     1     3     18     0.10     0.05     39       1x3 6/18 4AFC     108     1     3     18     0.67     0.10     43       2x4 6/12 4AFC     54     2     3     18     0.69     0.11     38       2x4 6/12 4AFC     54     2     4     18     0.62     0.12     31       3x4 6/8 4AFC     36     3     4     18     0.62     0.12     31       2x3     54     2     3     18     0.58     0.07     23       2x4 6/12     54     2     3     18     0.58     0.07     23       2x4 6/12     54     2     3     18     0.55     0.01     13       3x4 6/8     36     3     4     18     0.43     0.08		36		4	18	0.27	0.12	20
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		54		4	18	0.30	0.15	33
1x3 6/18 4AFC	3x3 + 1w/o	54	3	3	18	0.17	0.08	39
1x3 6/18 4AFC		54	4	4	18	0.10	0.05	39
2x4 6/12 4AFC     54     2     4     18     0.62     0.12     31       3x4 6/8 4AFC     36     3     4     18     0.69     0.09     36       1x3     108     1     3     18     0.74     0.11     23       2x3     54     2     3     18     0.58     0.07     23       2x4 6/12     54     2     4     18     0.33     0.18     14       3x4 6/8     36     3     4     18     0.42     0.14     13       2x3 6/9     54     2     3     18     0.55     0.11     32       3x4 9/12     54     3     4     18     0.69     0.08     33       1x4     108     1     4     18     0.69     0.08     33       1x4     108     1     3     18     0.43     0.09     0.12     40       4x4     27     4     4     18     0.31     0.07 <t< td=""><td></td><td>108</td><td>1</td><td>3</td><td>18</td><td>0.67</td><td>0.10</td><td>43</td></t<>		108	1	3	18	0.67	0.10	43
3x4 6/8 4AFC     36     3     4     18     0.69     0.09     36       1x3     108     1     3     18     0.74     0.11     23       2x3     54     2     3     18     0.58     0.07     23       2x4 6/12     54     2     4     18     0.33     0.18     14       3x4 6/8     36     3     4     18     0.42     0.14     13       2x3 6/9     54     2     3     18     0.55     0.11     32       3x4 9/12     54     3     4     18     0.69     0.08     33       1x4     108     1     4     18     0.19     0.10     40       1x3     108     1     3     18     0.49     0.08     33       1x4     18     0.19     0.10     40     44     18     0.19     0.10     40       4x4     27     4     4     18     0.31     0.02 </td <td>2x3 6/9 4AFC</td> <td>54</td> <td>2</td> <td>3</td> <td>18</td> <td>0.69</td> <td>0.11</td> <td>38</td>	2x3 6/9 4AFC	54	2	3	18	0.69	0.11	38
1x3     108     1     3     18     0.74     0.11     23       2x3     54     2     3     18     0.58     0.07     23       2x4 6/12     54     2     4     18     0.42     0.14     13       3x4 6/8     36     3     4     18     0.42     0.14     13       2x3 6/9     54     2     3     18     0.55     0.11     32       3x4 9/12     54     3     4     18     0.69     0.08     33       1x4     108     1     4     18     0.19     0.10     40       1x3     108     1     3     18     0.39     0.12     40       4x4     27     4     4     18     0.31     0.07     77       3x3     36     3     3     18     0.43     0.08     36       2x2     5x     24     2     2     18     0.79     0.11     19	2x4 6/12 4AFC	54	2	4	18	0.62	0.12	31
1x3     108     1     3     18     0.74     0.11     23       2x3     54     2     3     18     0.58     0.07     23       2x4 6/12     54     2     4     18     0.33     0.18     14       3x4 6/8     36     3     4     18     0.42     0.14     13       2x3 6/9     54     2     3     18     0.55     0.11     32       3x4 9/12     54     3     4     18     0.69     0.08     33       1x4     108     1     4     18     0.19     0.10     40       1x3     108     1     3     18     0.39     0.12     40       4x4     27     4     4     18     0.31     0.07     77       3x3     36     3     3     18     0.43     0.08     36       2x2     54     2     2     18     0.79     0.11     19	3x46/84AFC	36	3	4	18	0.69	0.09	36
2x4 6/12     54     2     4     18     0.33     0.18     14       3x4 6/8     36     3     4     18     0.42     0.14     13       2x3 6/9     54     2     3     18     0.55     0.11     32       3x4 9/12     54     3     4     18     0.69     0.08     33       1x4     108     1     4     18     0.19     0.10     40       1x3     108     1     3     18     0.39     0.12     40       4x4     27     4     4     18     0.31     0.07     77       3x3     36     3     3     18     0.43     0.08     36       2x2     54     2     2     18     0.79     0.11     19       2x2 5x 24AFC     60     2     2     2     4     0.51     0.12     46       filt3E_3L     18     2     2     12     0.72     0.12     30	•	108	1	3	18	0.74	0.11	23
3x4 6/8   36   3   4   18   0.42   0.14   13     2x3 6/9   54   2   3   18   0.55   0.11   32     3x4 9/12   54   3   4   18   0.69   0.08   33     1x4   108   1   4   18   0.19   0.10   40     1x3   108   1   3   18   0.39   0.12   40     4x4   27   4   4   18   0.31   0.07   77     3x3   36   3   3   18   0.43   0.08   36     2x2   54   2   2   18   0.79   0.11   19     2x2 5x 24AFC   60   2   2   24   0.51   0.12   46     filt0E_3L   18   2   2   12   0.38   0.09   31     filt3E_3L   18   2   2   12   0.72   0.12   30     filt6E_3L   36   2   2   12   0.70   0.08   31	2x3	54	2	3	18	0.58	0.07	23
2x3 6/9     54     2     3     18     0.55     0.11     32       3x4 9/12     54     3     4     18     0.69     0.08     33       1x4     108     1     4     18     0.19     0.10     40       1x3     108     1     3     18     0.39     0.12     40       4x4     27     4     4     18     0.31     0.07     77       3x3     36     3     3     18     0.43     0.08     36       2x2     54     2     2     18     0.79     0.11     19       2x2 5x 24AFC     60     2     2     24     0.51     0.12     46       filt0E_3L     18     2     2     12     0.38     0.09     31       filt3E_3L     18     2     2     12     0.72     0.12     30       filt6E_3L     36     2     2     12     0.71     0.09     31	2x4 6/12	54	2	4	18	0.33	0.18	14
3x4 9/12   54   3   4   18   0.69   0.08   33     1x4   108   1   4   18   0.19   0.10   40     1x3   108   1   3   18   0.39   0.12   40     4x4   27   4   4   18   0.31   0.07   77     3x3   36   3   3   18   0.43   0.08   36     2x2   54   2   2   18   0.79   0.11   19     2x2 5x 24AFC   60   2   2   24   0.51   0.12   46     filt0E_3L   18   2   2   12   0.38   0.09   31     filt3E_3L   18   2   2   12   0.72   0.12   30     filt6E_3L   36   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.70   0.08   31 </td <td>3x46/8</td> <td>36</td> <td>3</td> <td>4</td> <td>18</td> <td>0.42</td> <td>0.14</td> <td>13</td>	3x46/8	36	3	4	18	0.42	0.14	13
3x4 9/12     54     3     4     18     0.69     0.08     33       1x4     108     1     4     18     0.19     0.10     40       1x3     108     1     3     18     0.39     0.12     40       4x4     27     4     4     18     0.31     0.07     77       3x3     36     3     3     18     0.43     0.08     36       2x2     54     2     2     18     0.79     0.11     19       2x2 5x 24AFC     60     2     2     24     0.51     0.12     46       filt0E_3L     18     2     2     12     0.38     0.09     31       filt3E_3L     18     2     2     12     0.72     0.12     30       filt6E_3L     18     2     2     12     0.71     0.09     31       filt9E_3L     45     2     2     12     0.70     0.08     31	2x3 6/9	54	2	3	18	0.55	0.11	32
1x4   108   1   4   18   0.19   0.10   40     1x3   108   1   3   18   0.39   0.12   40     4x4   27   4   4   18   0.31   0.07   77     3x3   36   3   3   18   0.43   0.08   36     2x2   54   2   2   18   0.79   0.11   19     2x2 5x 24AFC   60   2   2   24   0.51   0.12   46     filt0E_3L   18   2   2   12   0.38   0.09   31     filt3E_3L   18   2   2   12   0.72   0.12   30     filt6E_3L   36   2   2   12   0.71   0.09   30     filt6E_3L   36   2   2   12   0.71   0.09   30     filt9E_6L   36   2   2   12   0.77   0.08   31     filt6E_6L   45   2   2   12   0.67   0.11   27 <	'	54		4	18	0.69	0.08	33
4x4   27   4   4   18   0.31   0.07   77     3x3   36   3   3   18   0.43   0.08   36     2x2   54   2   2   18   0.79   0.11   19     2x2 5x 24AFC   60   2   2   24   0.51   0.12   46     filt0E_3L   18   2   2   12   0.38   0.09   31     filt3E_3L   27   2   2   12   0.72   0.12   30     filt6E_3L   36   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.70   0.08   31     filt0E_6L   36   2   2   12   0.70   0.08   31     filt6E_6L   45   2   2   12   0.67   0.11   27     filt6E_9L   54   2   2   12   0.75   0.09   27<	•	108	1	4	18	0.19	0.10	40
3x3   36   3   3   18   0.43   0.08   36     2x2   54   2   2   18   0.79   0.11   19     2x2 5x 24AFC   60   2   2   24   0.51   0.12   46     filt0E_3L   18   2   2   12   0.38   0.09   31     filt3E_3L   27   2   2   12   0.72   0.12   30     filt6E_3L   36   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.70   0.08   31     filt0E_6L   36   2   2   12   0.47   0.11   27     filt3E_6L   45   2   2   12   0.67   0.11   27     filt9E_6L   63   2   2   12   0.75   0.09   27     filt9E_9L   54   2   2   12   0.54   0.09   <	1x3	108	1	3	18	0.39	0.12	40
3x3   36   3   3   18   0.43   0.08   36     2x2   54   2   2   18   0.79   0.11   19     2x2 5x 24AFC   60   2   2   24   0.51   0.12   46     filt0E_3L   18   2   2   12   0.38   0.09   31     filt3E_3L   27   2   2   12   0.72   0.12   30     filt6E_3L   36   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.70   0.08   31     filt0E_6L   36   2   2   12   0.47   0.11   27     filt3E_6L   45   2   2   12   0.67   0.11   27     filt6E_6L   54   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   <	4x4	27	4	4	18	0.31	0.07	
2x2   54   2   2   18   0.79   0.11   19     2x2 5x 24AFC   60   2   2   24   0.51   0.12   46     filt0E_3L   18   2   2   12   0.38   0.09   31     filt3E_3L   27   2   2   12   0.72   0.12   30     filt6E_3L   36   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.71   0.09   30     filt9E_6L   36   2   2   12   0.70   0.08   31     filt0E_6L   36   2   2   12   0.47   0.11   27     filt3E_6L   45   2   2   12   0.67   0.11   27     filt6E_6L   54   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08	3x3	36	3	3		0.43	0.08	
2x2 5x 24AFC 60 2 2 24 0.51 0.12 46   filt0E_3L 18 2 2 12 0.38 0.09 31   filt3E_3L 27 2 2 12 0.72 0.12 30   filt6E_3L 36 2 2 12 0.71 0.09 30   filt9E_3L 45 2 2 12 0.70 0.08 31   filt0E_6L 36 2 2 12 0.47 0.11 27   filt3E_6L 45 2 2 12 0.67 0.11 27   filt6E_6L 54 2 2 12 0.67 0.11 27   filt6E_6L 54 2 2 12 0.79 0.09 27   filt0E_9L 63 2 2 12 0.54 0.09 31   filt3E_9L 63 2 2 12 0.83 0.08 31   filt6E_9L 72 2 2 12 0.82 0.09 31   filt9E_9L 81 2 2 12 0.86 0.06 31   2_x8_39_4x4 27 4	2x2	54	2		18	0.79	0.11	19
filtoE_3L     18     2     2     12     0.38     0.09     31       filt3E_3L     27     2     2     12     0.72     0.12     30       filt6E_3L     36     2     2     12     0.71     0.09     30       filt9E_3L     45     2     2     12     0.70     0.08     31       filt0E_6L     36     2     2     12     0.70     0.08     31       filt0E_6L     36     2     2     12     0.47     0.11     27       filt6E_6L     45     2     2     12     0.67     0.11     27       filt6E_6L     54     2     2     12     0.79     0.09     27       filt9E_6L     63     2     2     12     0.75     0.09     27       filt0E_9L     54     2     2     12     0.54     0.09     31       filt3E_9L     63     2     2     12     0.83     0.08	2x2 5x 24AFC	60			24	0.51	0.12	46
filt6E_3L   36   2   2   12   0.71   0.09   30     filt9E_3L   45   2   2   12   0.70   0.08   31     filt0E_6L   36   2   2   12   0.47   0.11   27     filt3E_6L   45   2   2   12   0.67   0.11   27     filt6E_6L   54   2   2   12   0.79   0.09   27     filt9E_6L   63   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_3x3loCD   36   3   3   18   0.33 <td< td=""><td><math>filt0E\_3L</math></td><td>18</td><td>2</td><td>2</td><td>12</td><td>0.38</td><td>0.09</td><td>31</td></td<>	$filt0E\_3L$	18	2	2	12	0.38	0.09	31
filt9E_3L   45   2   2   12   0.70   0.08   31     filt0E_6L   36   2   2   12   0.47   0.11   27     filt3E_6L   45   2   2   12   0.67   0.11   27     filt6E_6L   54   2   2   12   0.79   0.09   27     filt9E_6L   63   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.08   102     freq369_3x3hiCD   36   3   3   18   0.45	$filt3E\_3L$	27	2	2	12	0.72	0.12	30
filtoE_6L   36   2   2   12   0.47   0.11   27     filt3E_6L   45   2   2   12   0.67   0.11   27     filt6E_6L   54   2   2   12   0.79   0.09   27     filt9E_6L   63   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369_3x3hiCD   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62	$filt6E\_3L$	36	2	2	12	0.71	0.09	30
filt0E_6L   36   2   2   12   0.47   0.11   27     filt3E_6L   45   2   2   12   0.67   0.11   27     filt6E_6L   54   2   2   12   0.79   0.09   27     filt9E_6L   63   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369_3x3hiCD   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62	filt9E 3L	45	2	2	12	0.70	0.08	31
filt6E_6L   54   2   2   12   0.79   0.09   27     filt9E_6L   63   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3liCD   36   3   3   18   0.33   0.08   102     freq369_36mx   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27	$filt0E\_6L$	36	2	2	12	0.47	0.11	27
filt9E_6L   63   2   2   12   0.75   0.09   27     filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3loCD   36   3   3   18   0.33   0.08   102     freq369_36mx   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27   0.07   88	$filt3E\_6L$	45	2	2	12	0.67	0.11	27
filt0E_9L   54   2   2   12   0.54   0.09   31     filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3loCD   36   3   3   18   0.33   0.08   102     freq369-3s3hiCD   36   3   3   18   0.56   0.12   26     freq369_36mx   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27   0.07   88	$\mathrm{filt}6\mathrm{E}\_6\mathrm{L}$	54	2	2	12	0.79	0.09	27
filt3E_9L   63   2   2   12   0.83   0.08   31     filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3loCD   36   3   3   18   0.33   0.08   102     freq369-3x3hiCD   36   3   3   18   0.56   0.12   26     freq369_36mx   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27   0.07   88	$filt9E\_6L$	63	2	2	12	0.75	0.09	27
filt6E_9L   72   2   2   12   0.82   0.09   31     filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3loCD   36   3   3   18   0.33   0.08   102     freq369-3x3hiCD   36   3   3   18   0.56   0.12   26     freq369_36mx   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27   0.07   88	$filt0E\_9L$	54	2	2	12	0.54	0.09	31
filt9E_9L 81 2 2 12 0.86 0.06 31   2_x8_39_4x4 27 4 4 18 0.41 0.16 30   3_x8_369_4x4 27 4 4 18 0.33 0.06 74   freq369-3x3loCD 36 3 18 0.33 0.08 102   freq369-3x3hiCD 36 3 18 0.56 0.12 26   freq369_36mx 36 3 18 0.45 0.16 62   freq369_39mx 36 3 18 0.62 0.14 66   orig_4x4 27 4 4 18 0.27 0.07 88	$filt3E\_9L$	63	2	2	12	0.83	0.08	31
filt9E_9L   81   2   2   12   0.86   0.06   31     2_x8_39_4x4   27   4   4   18   0.41   0.16   30     3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3loCD   36   3   3   18   0.33   0.08   102     freq369-3x3hiCD   36   3   3   18   0.56   0.12   26     freq369_36mx   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27   0.07   88	$filt6E\_9L$	72	2	2	12	0.82	0.09	31
3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3loCD   36   3   18   0.33   0.08   102     freq369-3x3hiCD   36   3   18   0.56   0.12   26     freq369_36mx   36   3   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27   0.07   88	$filt9E\_9L$	81	2		12	0.86	0.06	31
3_x8_369_4x4   27   4   4   18   0.33   0.06   74     freq369-3x3loCD   36   3   18   0.33   0.08   102     freq369-3x3hiCD   36   3   18   0.56   0.12   26     freq369_36mx   36   3   18   0.45   0.16   62     freq369_39mx   36   3   3   18   0.62   0.14   66     orig_4x4   27   4   4   18   0.27   0.07   88	2_x8_39_4x4	27	4	4	18	0.41	0.16	30
freq369-3x3hiCD 36 3 18 0.56 0.12 26   freq369_36mx 36 3 18 0.45 0.16 62   freq369_39mx 36 3 18 0.62 0.14 66   orig_4x4 27 4 4 18 0.27 0.07 88		27	4	4	18	0.33	0.06	74
freq369_36mx 36 3 3 18 0.45 0.16 62   freq369_39mx 36 3 3 18 0.62 0.14 66   orig_4x4 27 4 4 18 0.27 0.07 88	freq369-3x3loCD	36	3	3	18	0.33	0.08	102
freq369_36mx 36 3 3 18 0.45 0.16 62   freq369_39mx 36 3 3 18 0.62 0.14 66   orig_4x4 27 4 4 18 0.27 0.07 88	•							
freq369_39mx 36 3 3 18 0.62 0.14 66 orig_4x4 27 4 4 18 0.27 0.07 88								
orig_4x4 27 4 4 18 0.27 0.07 88	$freq369\_39mx$							
	_							
	orig_3x3	36	3	3	18	0.43	0.08	104
cont_div6-12								

Table 1: Summary of modeled datasets.



## Correlation of model vs. human item-level performance per condition

Each cell displays the correlation coefficient of model vs. human item-level performance in a given experimental condition.



## Each Model's Best- and Worst-Fitting Experiment

Table 2 summarizes for each model, what experimental condition is best fit by that model (in terms of correlation, best and best\_cond), and what condition has the worst fit for that model (worst and worst\_cond). For six models, freq369-3x3loC was the easiest to fit. For four models, filt6E\_3Lfazly was the most difficult to fit.

Model	best	worst	best_cond	worst_cond
Bayesian Decay	0.88	-0.53	freq369-3x3loCD	filt6E_3L
Prob. Assoc.	0.88	-0.52	$\rm freq 369\_36mx$	$filt6E\_3L$
Fam./Unc.	0.84	-0.52	freq369-3x3loCD	2x3 6/9 4AFC
Propose-but-Verify	0.84	-0.43	freq369-3x3loCD	2x3 6/9 4AFC
Novelty	0.78	-0.52	$\rm freq 369\_36mx$	$filt6E\_3L$
Fam./Unc. sampling	0.78	-0.52	freq369-3x3loCD	3x4
Uncertainty	0.76	-0.56	freq369-3x3loCD	2x3
Pursuit	0.72	-0.44	4x4	$filt0E\_9L$
Strength	0.69	-0.53	freq369-3x3loCD	$filt6E\_3L$
Guess-and-Test	0.62	-0.70	2x2 5x 24AFC	1x3
Rescorla-Wagner	0.61	-0.46	$filt9E\_3L$	2x2

Table 2: Each model's best- and worst-fitting experiment.