Supplementary Tables for Naïve Information Aggregation in Human Social Learning

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Table 1

Experiment 1: Model performances across conditions for agent A (participants). N = number of subjects best predicted by leave-one-out cross validation. τ and π correspond to median values.

Condition	Model	-LogError	N	τ	π
	Random	19.459	0	-	-
	Level-0	16.462	0	0.250	-
	Level-1	15.529	4	0.358	-
B $\rightarrow$ C	Level-2	14.446	8	0.474	-
	$\text{Level}_{\text{0-sticky}}$	13.068	2	0.270	0.471
	$\text{Level}_{\text{1-sticky}}$	11.883	19	0.510	0.471
	$\text{Level}_{\text{2-sticky}}$	12.088	14	0.471	0.422
	Random	19.459	0	-	-
	Level-0	18.667	0	0.091	-
	Level-1	15.482	6	0.384	-
Unknown	Level-2	17.162	1	0.254	-
	$\text{Level}_{\text{0-sticky}}$	14.532	3	0.105	0.489
	$\text{Level}_{\text{1-sticky}}$	11.499	27	0.648	0.403
	$\text{Level}_{\text{2-sticky}}$	12.310	13	0.482	0.439
	Random	19.459	0	-	-
	Level-0	18.110	0	0.130	-
	Level-1	14.815	6	0.421	-
C $\rightarrow$ B	Level-2	15.637	4	0.328	-
	$\text{Level}_{\text{0-sticky}}$	13.222	8	0.114	0.554
	$\text{Level}_{\text{1-sticky}}$	11.135	23	0.530	0.507
	$\text{Level}_{\text{2-sticky}}$	11.329	8	0.488	0.525

Table 2

Experiment 2: Model performances across conditions for agent A. N = number of subjects best predicted by leave-one-out cross validation. τ and π are median values.

Condition	Model	-LogError	N	τ	π
Independent	Random	19.459	1	-	-
	Level-0	16.463	1	0.283	-
	Level-1	14.885	2	0.445	-
	Level-2	14.885	2	0.445	-
	$\text{Level}_{\text{0-sticky}}$	12.894	2	0.341	0.439
	$\text{Level}_{\text{1-sticky}}$	11.961	6.5	0.534	0.406
	$\text{Level}_{\text{2-sticky}}$	12.961	6.5	0.534	0.406
$\text{B} \rightarrow \text{C}$	Random	19.459	2	-	-
	Level-0	18.251	0	0.127	-
	Level-1	17.833	0	0.181	-
	Level-2	17.904	0	0.168	-
	$\text{Level}_{\text{0-sticky}}$	15.431	4	0.132	0.397
	$\text{Level}_{\text{1-sticky}}$	14.648	13	0.252	0.393
	$\text{Level}_{\text{2-sticky}}$	14.808	2	0.225	0.394

Table 3

Experiment 2: Model performances across conditions for agent B. N = number of subjects best predicted by leave-one-out cross validation. τ and π are median values.

Condition	Model	-LogError	N	τ	π
Independent	Random	19.459	3	-	-
	Level-0	14.796	2	0.516	-
	Level-1	14.796	2	0.516	-
	Level-2	14.796	2	0.516	-
	$\text{Level}_{\text{0-sticky}}$	10.998	16	0.243	0.634
	$\text{Level}_{\text{1-sticky}}$	10.998	16	0.243	0.634
	$\text{Level}_{\text{2-sticky}}$	10.998	16	0.243	0.634
$\text{B} \rightarrow \text{C}$	Random	19.459	2	-	-
	Level-0	11.976	1	0.815	-
	Level-1	11.976	1	0.815	-
	Level-2	11.976	1	0.815	-
	$\text{Level}_{\text{0-sticky}}$	9.312	18	0.733	0.553
	$\text{Level}_{\text{1-sticky}}$	9.312	18	0.733	0.553
	$\text{Level}_{\text{2-sticky}}$	9.312	18	0.733	0.553

Table 4

Experiment 2: Model performances across conditions for agent C. N = number of subjects best predicted by leave-one-out cross validation. τ and π correspond to median values.

Condition	Model	-LogError	N	τ	π
Independent	Random	19.459	2	-	-
	Level-0	9.246	2	1.387	-
	Level-1	9.246	2	1.387	-
	Level-2	9.246	2	1.387	-
	$\text{Level}_{\text{0-sticky}}$	8.360	17	1.213	0.410
	$\text{Level}_{\text{1-sticky}}$	8.360	17	1.213	0.410
	$\text{Level}_{\text{2-sticky}}$	8.360	17	1.213	0.410
B $\rightarrow$ C	Random	19.459	1	-	-
	Level-0	17.297	1	0.245	-
	Level-1	16.455	2	0.307	-
	Level-2	16.455	2	0.307	-
	$\text{Level}_{\text{0-sticky}}$	13.030	5	0.169	0.547
	$\text{Level}_{\text{1-sticky}}$	12.805	12	0.212	0.542
	$\text{Level}_{\text{2-sticky}}$	12.805	12	0.212	0.542

Table 5

Experiment 3: Model performances across conditions for agent A. N = number of subjects best predicted by leave-one-out cross validation. τ and π correspond to median values.

Condition	Model	-LogError	N	τ	π
Independent	Random	19.459	0	-	-
	Level-0	17.401	1	0.192	-
	Level-1	15.817	2	0.342	-
	Level-2	16.687	2	0.273	-
	$\text{Level}_{\text{0-sticky}}$	12.908	3	0.174	0.544
	$\text{Level}_{\text{1-sticky}}$	11.849	9	0.361	0.520
	$\text{Level}_{\text{2-sticky}}$	12.244	5	0.303	0.538
B $\rightarrow$ C	Random	19.459	0	-	-
	Level-0	16.640	4	0.236	-
	Level-1	16.392	2	0.311	-
	Level-2	16.844	3	0.278	-
	$\text{Level}_{\text{0-sticky}}$	14.296	3	0.256	0.383
	$\text{Level}_{\text{1-sticky}}$	13.607	6	0.397	0.357
	$\text{Level}_{\text{2-sticky}}$	13.691	6	0.383	0.374

Table 6

Experiment 3: Model performances across conditions for agent B. N = number of subjects best predicted by leave-one-out cross validation. τ and π correspond to median values.

Condition	Model	-LogError	N	τ	π
Independent	Random	19.459	1	-	-
	Level-0	11.970	1	0.991	-
	Level-1	11.970	1	0.991	-
	Level-2	11.970	1	0.991	-
	$\text{Level}_{\text{0-sticky}}$	9.842	20	0.600	0.655
	$\text{Level}_{\text{1-sticky}}$	9.842	20	0.600	0.655
	$\text{Level}_{\text{2-sticky}}$	9.842	20	0.600	0.655
B $\rightarrow$ C	Random	19.459	0	-	-
	Level-0	10.935	1	0.991	-
	Level-1	10.935	1	0.991	-
	Level-2	10.935	1	0.991	-
	$\text{Level}_{\text{0-sticky}}$	8.164	20	1.074	0.536
	$\text{Level}_{\text{1-sticky}}$	8.164	20	1.074	0.536
	$\text{Level}_{\text{2-sticky}}$	8.164	20	1.074	0.536

Table 7

Experiment 3: Model performances across conditions for agent C. N = number of subjects best predicted by leave-one-out cross validation. τ and π correspond to median values.

Condition	Model	-LogError	N	τ	π
Independent	Random	19.459	2	-	-
	Level-0	14.463	4	0.627	-
	Level-1	14.463	4	0.627	-
	Level-2	14.463	4	0.627	-
	$\text{Level}_{\text{0-sticky}}$	11.737	16	0.330	0.578
	$\text{Level}_{\text{1-sticky}}$	11.737	16	0.330	0.578
	$\text{Level}_{\text{2-sticky}}$	11.737	16	0.330	0.578
B $\rightarrow$ C	Random	19.459	1	-	-
	Level-0	16.095	1	0.319	-
	Level-1	14.338	5	0.476	-
	Level-2	14.338	5	0.476	-
	$\text{Level}_{\text{0-sticky}}$	14.341	3	0.237	0.390
	$\text{Level}_{\text{1-sticky}}$	13.049	11	0.408	0.357
	$\text{Level}_{\text{2-sticky}}$	13.049	11	0.408	0.357

Table 8

Experiment 1: Average judgements for each inference model across experimental conditions. Average was based on judgements starting at $t = 4$ which corresponded to the first judgement affected by the experimental manipulations.

Condition	Model	Average judgement ($t_{4:10}$)
B $\rightarrow$ C	Level-0	1.143
	Level-1	-0.725
	Level-2	0.594
Unknown	Level-0	1.143
	Level-1	-0.725
	Level-2	-0.509
C $\rightarrow$ B	Level-0	1.143
	Level-1	-0.725
	Level-2	-0.990

Table 9

Experiment 2: Average judgements for each inference model across experimental conditions. Average was based on judgements starting at $t = 6$ which corresponded to the first judgement affected by the experimental manipulations.

Condition	Model	Average judgement ($t_{6:10}$)
Independent	Level-0	1.143
	Level-1	0.404
	Level-2	0.404
B $\rightarrow$ C	Level-0	1.143
	Level-1	0.171
	Level-2	0.397