1 Supplementary Material

Participant	σ	b	Model
1	0.087	0.016	Difference
2	0.057	0.063	Difference
3	0.067	0.021	Difference
4	0.072	0.033	Difference
5	0.074	0.007	Difference
6	0.087	0.001	Difference
7	0.075	0.003	Difference
8	0.091	0.011	Difference
9	0.067	0.026	Difference
10	0.159	0.003	Difference
11	0.068	0.003	Difference
12	0.061	0.015	Difference
13	0.091	0.004	Difference
14	0.050	0.004	Difference
15	0.128	0.004	Difference
1	0.099	0.004	Max
2	0.072	0.021	Max
3	0.076	0.006	Max
4	0.092	0.007	Max
5	0.086	0.005	Max
6	0.096	0.002	Max
7	0.089	0.001	Max
8	0.105	0.004	Max
9	0.082	0.015	Max
10	0.150	0.001	Max
11	0.080	0.002	Max
12	0.077	0.001	Max
13	0.112	0.001	Max
14	0.060	0.002	Max
15	0.144	0.002	Max
1	0.094	0.001	Bayesian
2	0.066	0.041	Bayesian
3	0.077	0.017	Bayesian
4	0.083	0.059	Bayesian
5	0.082	0.011	Bayesian
6	0.095	0.002	Bayesian
7	0.085	0.008	Bayesian
8	0.107	0.019	Bayesian
9	0.082	0.001	Bayesian
10	0.136	0.002	Bayesian
11	0.075	0.002	Bayesian
12	0.073	0.002	Bayesian
13	0.100	0.002	Bayesian
14	0.058	0.002	Bayesian
15	0.143	0.005	Bayesian

Table 1: The best fitting parameters for the one-responses dataset. The first variable, σ, represents the subject's noise level, and the second variable, b, represents their lapse rate. These parameters are sensible, σ is of the order of values used to generate a target Gabor patch, which ranges up to 0.15, and b is typically lower than 1%.

Participant	σ	b	Model
1	0.059	0.002	Difference
2	0.080	0.116	Difference
3	0.053	0.052	Difference
4	0.060	0.008	Difference
5	0.072	0.007	Difference
6	0.075	0.025	Difference
7	0.079	0.004	Difference
8	0.141	0.002	Difference
9	0.092	0.003	Difference
10	0.078	0.016	Difference
11	0.062	0.052	Difference
1	0.073	0.001	Max
2	0.087	0.112	Max
3	0.056	0.068	Max
4	0.074	0.003	Max
5	0.081	0.005	Max
6	0.094	0.022	Max
7	0.090	0.001	Max
8	0.148	0.004	Max
9	0.106	0.018	Max
10	0.096	0.063	Max
11	0.072	0.074	Max
1	0.068	0.002	Bayesian
2	0.097	0.001	Bayesian
3	0.060	0.039	Bayesian
4	0.069	0.002	Bayesian
5	0.079	0.003	Bayesian
6	0.082	0.015	Bayesian
7	0.087	0.006	Bayesian
8	0.134	0.002	Bayesian
9	0.102	0.002	Bayesian
10	0.085	0.018	Bayesian
11	0.079	0.001	Bayesian

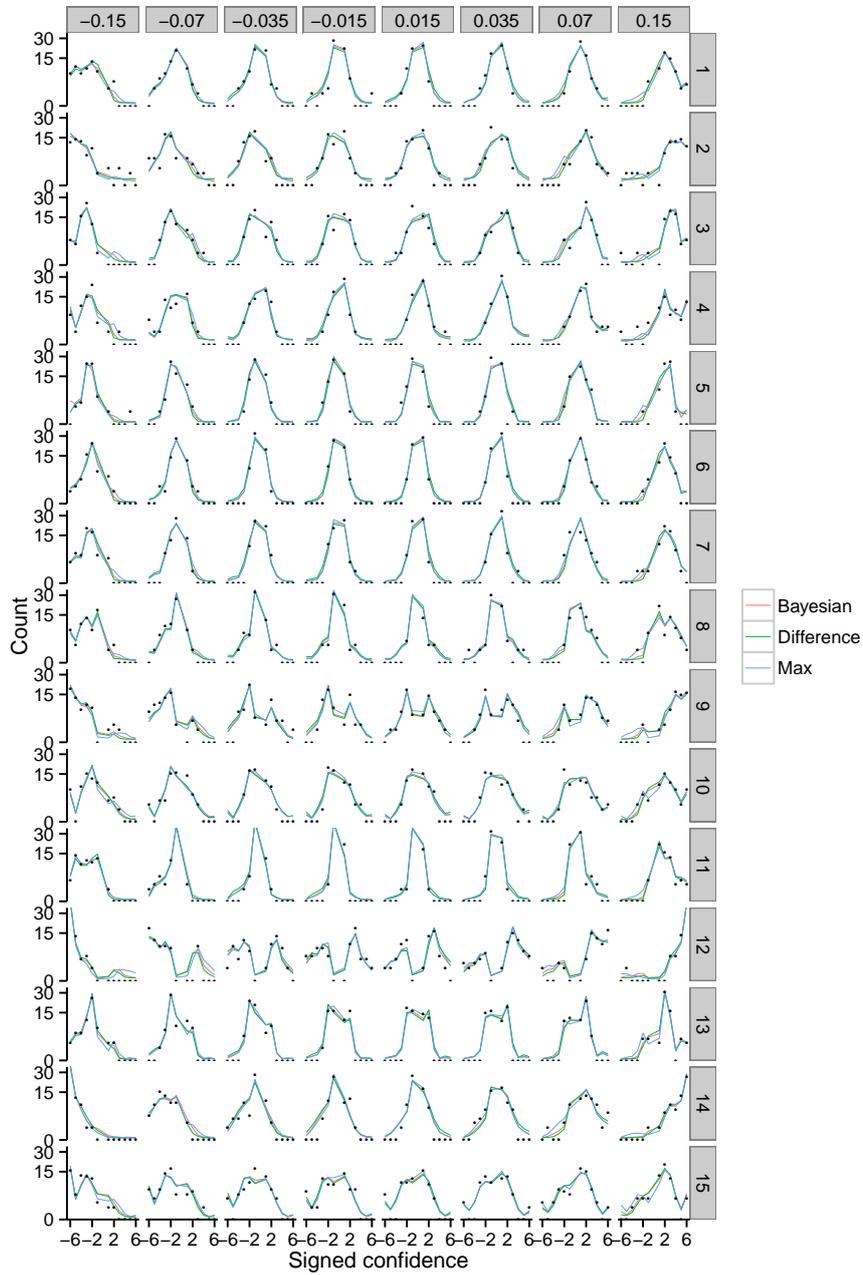Table 2: The best fitting parameters for the two-responses dataset. As Table 1.

Figure 1: The empirical and fitted distributions over signed confidence given the signed contrast. The lines show the fitted models, and the points show the data. Each row gives the complete responses for one subject. Each column gives the responses to one particular signed contrast level. The axis has been square-root transformed, in order to emphasize differences in low probabilities.
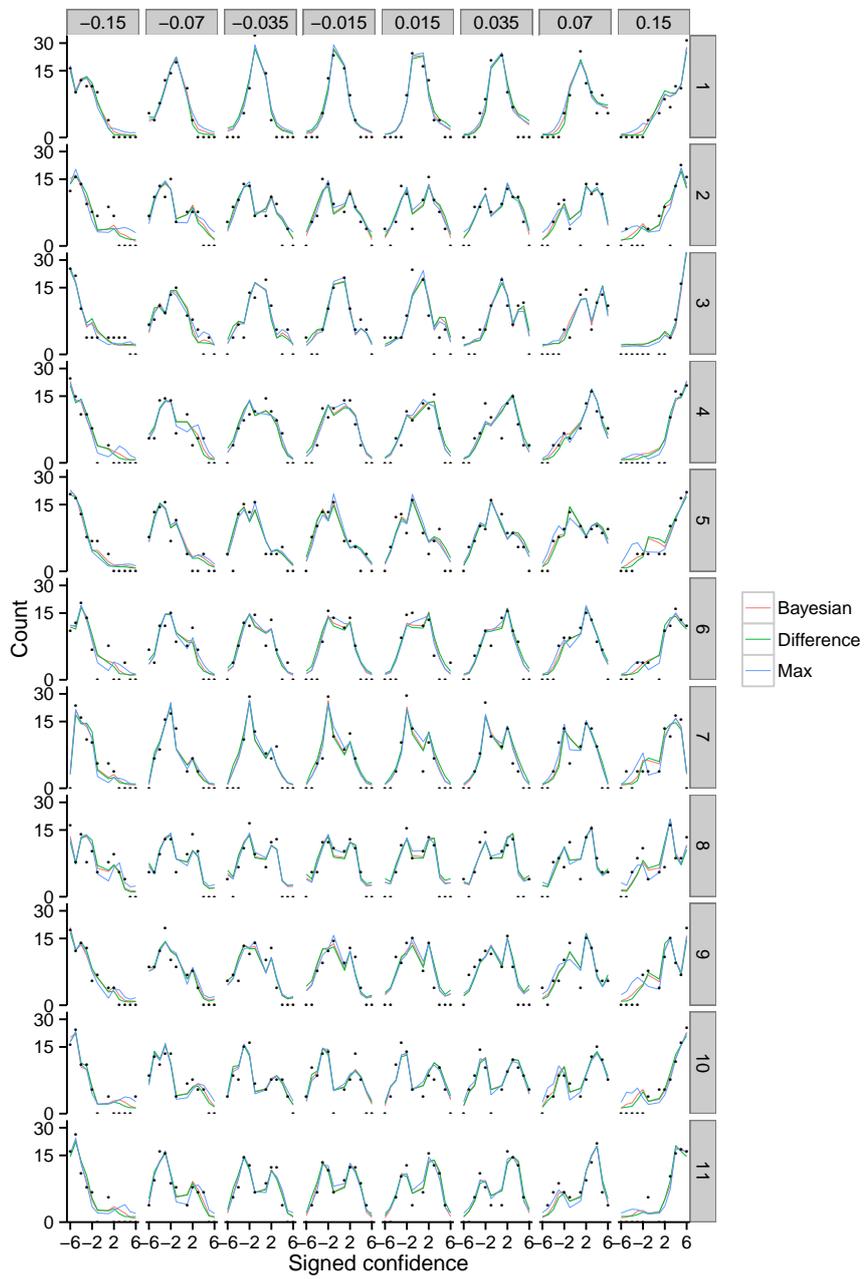
Figure 2: As Figure 1, but for the two-responses dataset.