# Appendices

## Appendix A

$$z = \frac{(k - \mu) \pm 0.5}{\sigma} \quad \text{(A1)}$$

where:

$\mu = np$, the mean of the binomial sampling distribution,

$\sigma = \sqrt{npq}$,

$n$ = the number of opportunities for the event $x$ to occur,

$k$ = the observed or stipulated number of occurrences of event $x$,

$p$ = the probability that event $x$ will occur on any particular occasion,

$q$ = the complementary probability that event $x$ will not occur on any particular occasion

**Note** The $z$-score formula is reported here for clarity, as this measure was originally calculated when performing the literature search and creating the dataset. As declared in the main body of text, the session $z$-scores were not used in the models.

$$Hit\ rate\%(HR) = (\frac{k}{n}) * 100 \quad \text{(A2)}$$

where:

$k$ = number of successes

$n$ = number of trials

$$I^2 = 100\% \times \frac{\hat{\tau}^2}{\hat{\tau}^2 + \tilde{v}} \quad \text{(A3)}$$

where:

$\tau\hat{}^2$ = the estimated value of $\tau^2$ and

$$\tilde{v} = \frac{(k-1)\sum w_i}{(\sum w_i)^2 - \sum w_i^2} \quad \text{(A4)}$$

where:

$w_i = 1/v_i$ is the inverse of the sampling variance of the $i^{th}$ study

***Model 1, 1.1 and 1.2 formulae***

$$y_i = HR \tag{A5}$$

$$\sigma = \sqrt{(1/(n-1) * (n * \bar{x} - n * \bar{x}^2))} \tag{A6}$$

***Model 2 formulae***

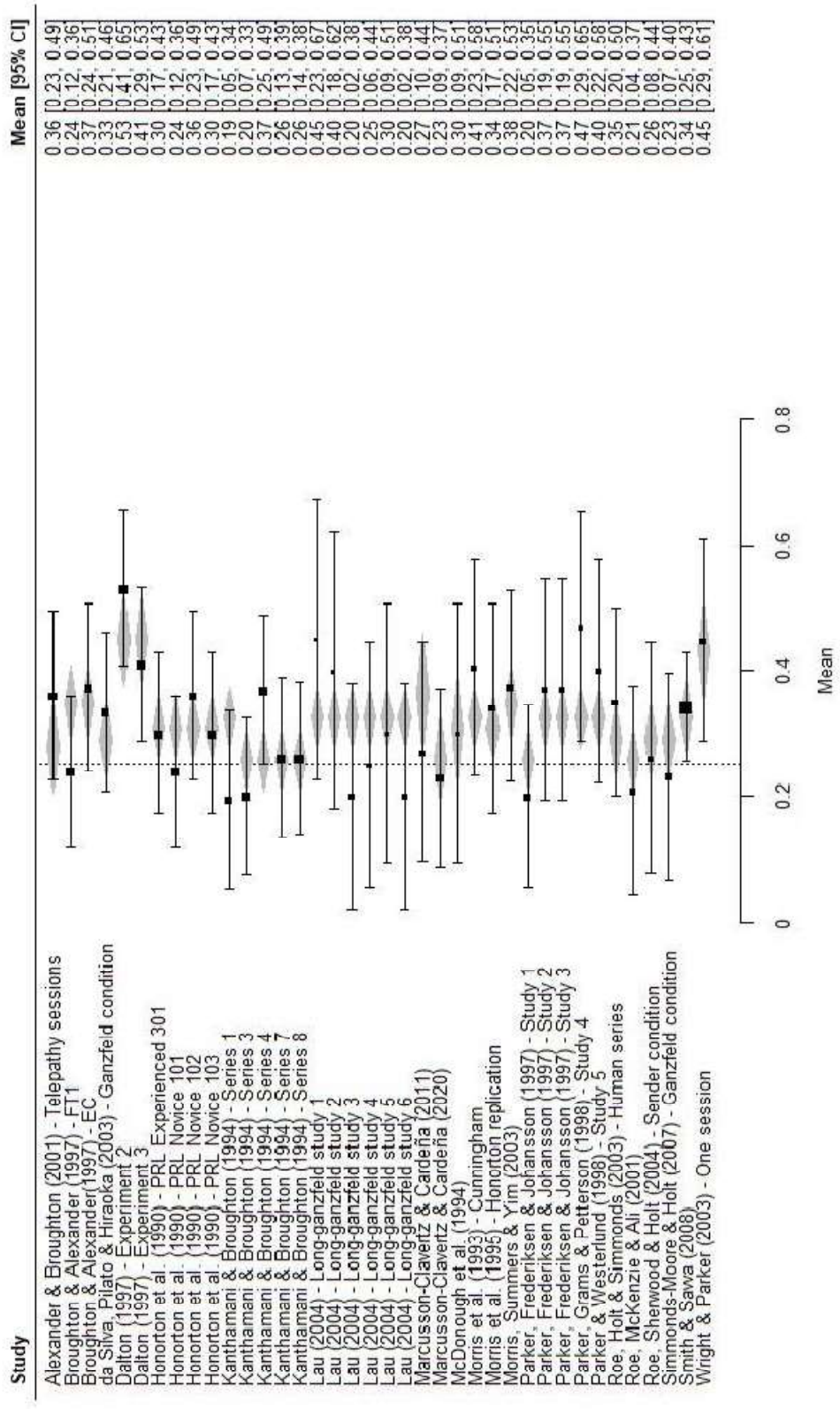
$$y_i = HR \tag{A7}$$

$$v_i = HR * \frac{(1 - HR)}{n} \tag{A8}$$

## Appendix B

### Figure B1

*Forest plot for Model 1.1*




*Note*. Reference line is set to MCE (0.25).

## Appendix C

### Table C1

*Model 2: Proportion of hits summary output with the same 3 outliers removed in Model 1.1*

| | Estimate | Standard error | t-value | p-value | 95% CI Lower Bound 95 | 95% CI Upper Bound |
|---|---|---|---|---|---|---|
| Intercept | .36 | .05 | 7.15 | <.0001*** | 0.26 | 0.46 |
| See | .00 | .03 | 0.03 | .92 | -0.07 | 0.07 |
| Hear | .07 | .03 | 0.03 | .03* | 0.01 | 0.13 |
| Hear judging | -.04 | .03 | 0.03 | .28 | -0.11 | 0.03 |
| Silent | .02 | .03 | 0.03 | .53 | -0.04 | 0.08 |
| Review | -.10 | .04 | 0.04 | .02* | -0.19 | -0.01 |

*Note*. *** indicates significance at the 1% level. * indicates significance at the 5% level.

### Table C2

*Model 2: Permutation test results (5000 iterations)*

| | Estimate | Standard error | t-value | p-value | 95% CI Lower Bound | 95% CI Upper Bound |
|---|---|---|---|---|---|---|
| Intercept | .36 | .05 | 7.15 | .05* | 0.26 | 0.46 |
| See | .00 | .03 | 0.10 | .92 | -0.07 | 0.07 |
| Hear | .07 | .03 | 2.27 | .03* | 0.01 | 0.13 |
| Hear judging | -.04 | .03 | -1.10 | .29 | -0.11 | 0.03 |
| Silent | .02 | .03 | 0.64 | .53 | -0.04 | 0.08 |
| Review | -.10 | .04 | -2.38 | .03* | -0.19 | -0.01 |

*Note.* * indicates significance at the 5% level.

**Figure C3**

*Forest plot for Model 2 with same 3 outliers removed from Model 1.1*

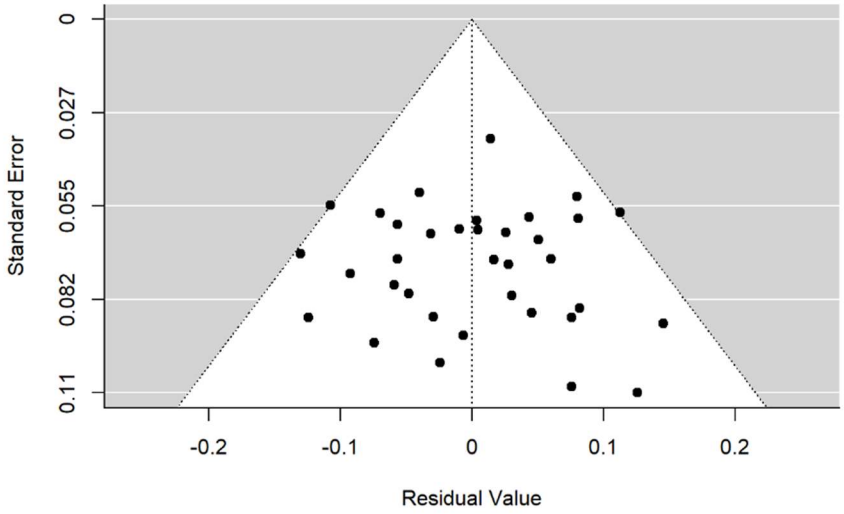
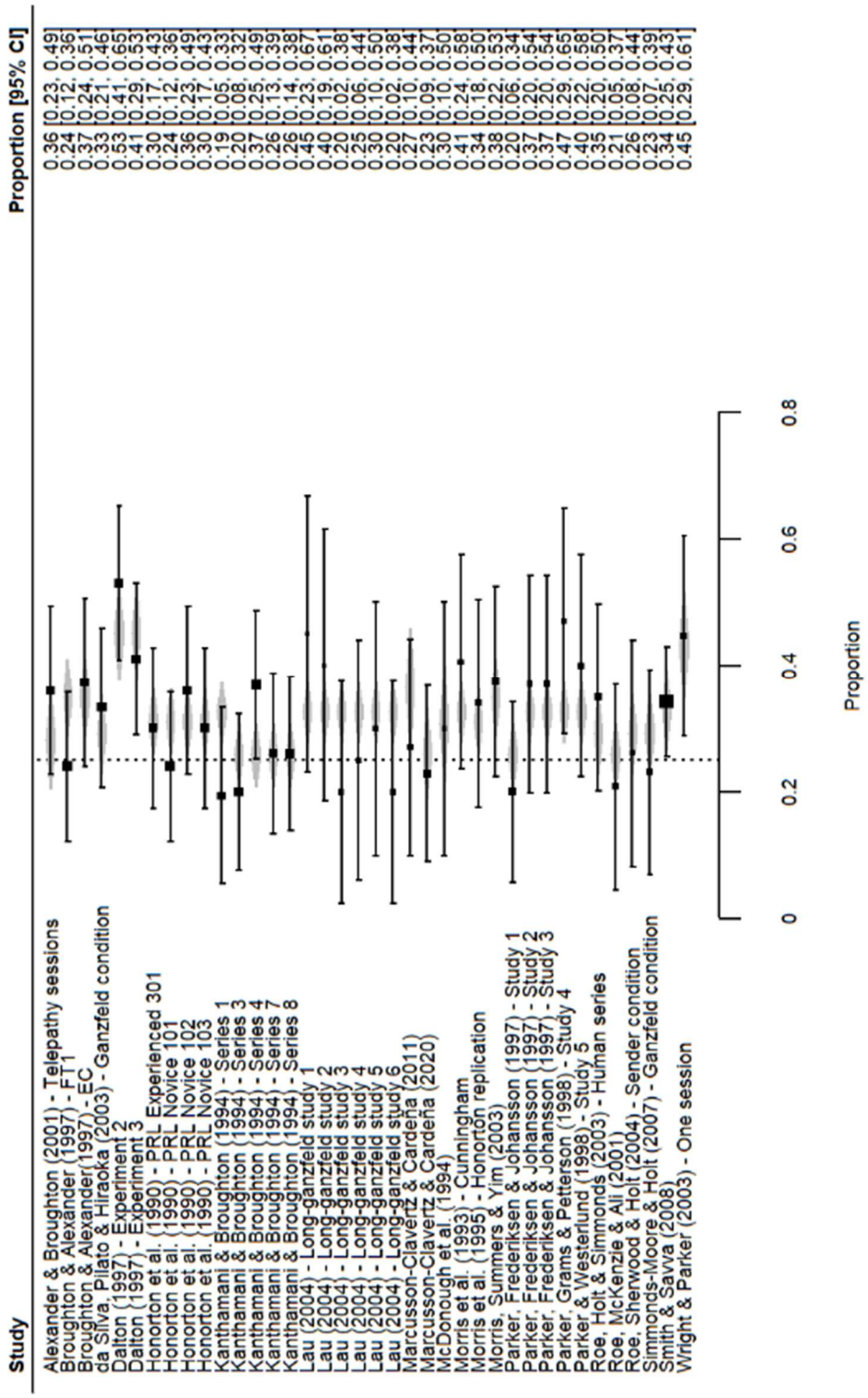


**Figure C4**

*Funnel plot for Model 2*




*Note*. Reference line is set to MCE (0.25).

**Table C5**

*Model 1.2: Binomial mean model with the Review factor removed*[4]

| | Estimate | Standard error | t-value | p-value | 95% CI Lower Bound | 95% CI Upper Bound |
|---|---|---|---|---|---|---|
| Intercept | .23 | .02 | 10.22 | <.0001*** | 0.19 | 0.28 |
| See | .04 | .03 | 1.51 | .14 | -0.01 | 0.10 |
| Hear | .09 | .03 | 3.38 | < .01* | 0.04 | 0.15 |
| Hear judging | -.08 | .03 | -2.70 | .01* | -0.14 | -0.02 |
| Silent | .03 | .03 | 0.97 | .34 | -0.03 | 0.08 |

*Note*. *** indicates significance at the 0.1% level. ** indicates significance at the 1% level. * indicates significance at the 5% level.

**Table C6**

*Model 1.2: Permutation test (5000 iterations)*

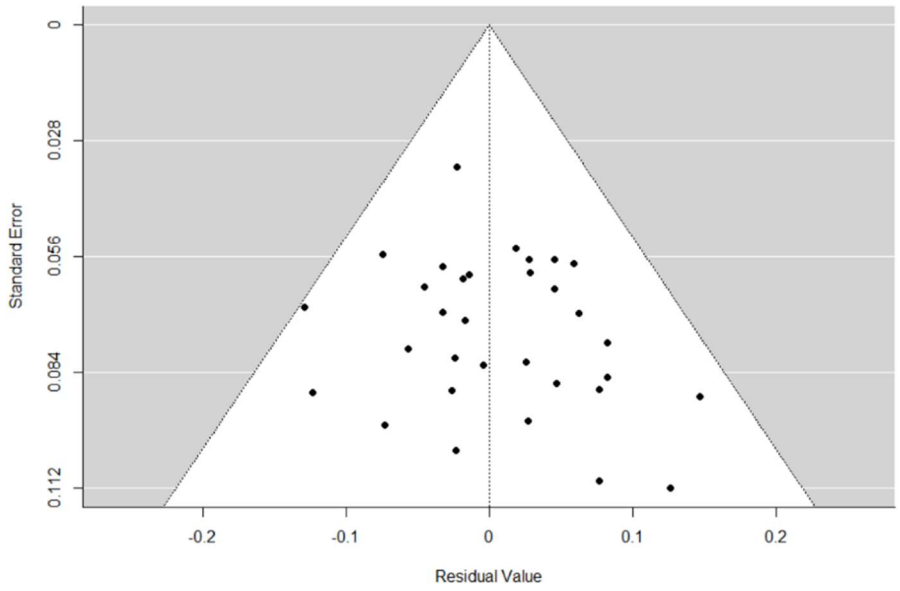
| | Estimate | Standard error | t-value | p-value | 95% CI Lower Bound | 95% CI Upper Bound |
|---|---|---|---|---|---|---|
| Intercept | .23 | .02 | 10.22 | .51 | 0.19 | 0.28 |
| See | .04 | .03 | 1.51 | .15 | -0.01 | 0.10 |
| Hear | .09 | .03 | 3.38 | <.01** | 0.04 | 0.15 |
| Hear judging | -.08 | .03 | -2.70 | .01* | -0.14 | -0.02 |
| Silent | .03 | .03 | 0.97 | .34 | -0.03 | 0.08 |

*Note*. *** indicates significance at the 0.1% level. ** indicates significance at the 1% level. * indicates significance at the 5% level.

[4] In addition to the three studies removed in Model 1 and 2, Broughton & Alexander FT1 was removed first then Kanthamani & Broughton Series 4, then Dalton Experiment 2 until no more studies were flagged as influential. These studies were removed to the same criteria for the previous models with standardized residuals exceeding ±2.

**Figure C7**

*Funnel plot for Model 1.2*



**Appendix D**

**Figure D1**

*Flowchart of study selection*

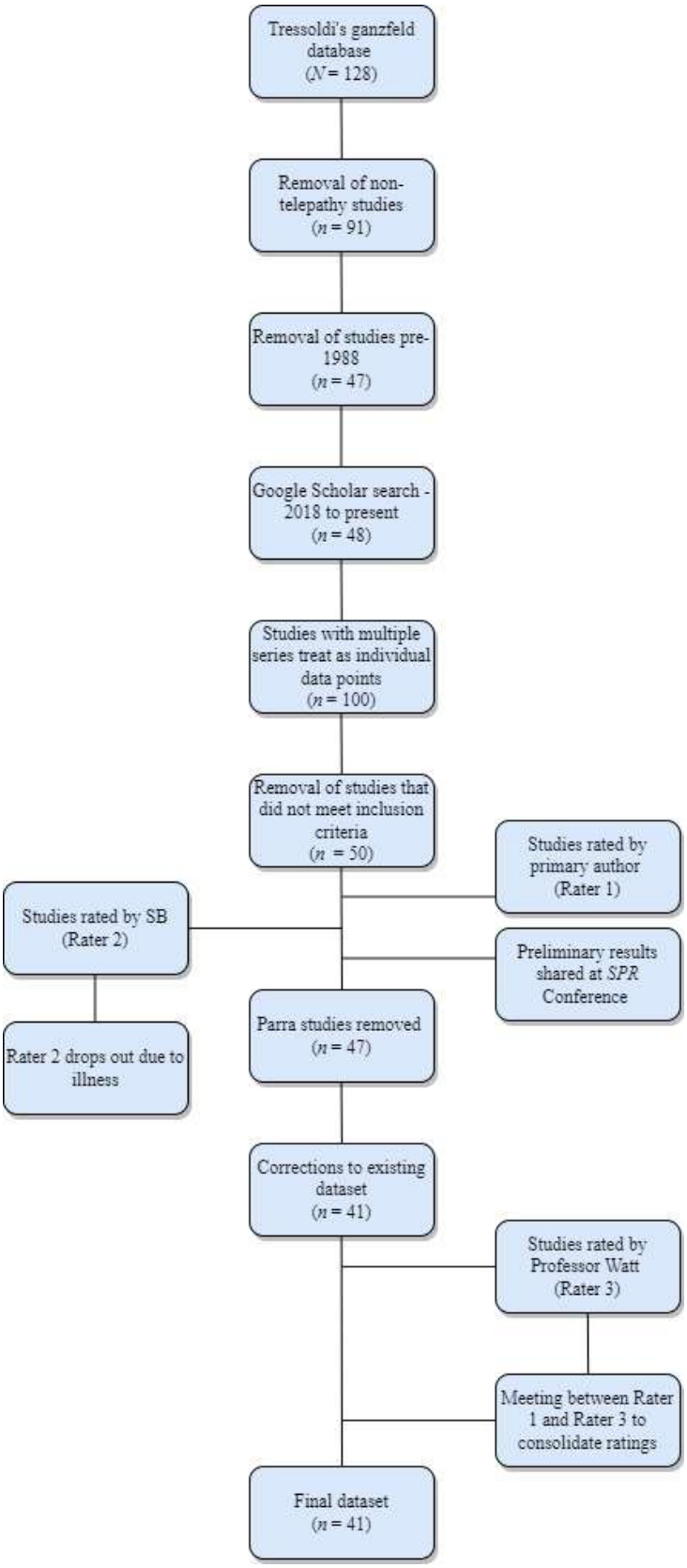


**Figure D2**

*Rating instructions*

**RATING INSTRUCTIONS**

For each of the papers your task is to assess if they have certain characteristics present. If the characteristic is present then give it a 1, if not then a 0. Give a 1 if the characteristics are detailed.

There are 5 characteristics to assess:

1. **Did the receiver see the sender's room?**
    a. *Some papers may say that both participants were shown the whole operation.*
2. **Did the sender hear the receiver produce their mentation (verbal report)?**
3. **Did the sender hear the receiver during the judging procedure?**
4. **Was the sender explicitly told to be silent?**
    a. *Some are told that any shouting/loud noises from sender's room would abort the session.*
5. **Did the experimenter review/allow additions to the mentation notes with the receiver, after the sending period?**
    a. *Some papers say they review the notes with the participant and allow for additions/changes.*

Use your judgement and common sense to assess if these characteristics were present, some will require re-reading and thinking but the main question is, "Is this clearly stated? Would I be able to run the exact same procedure given the detail in this paper?".

**Important notes:**

- Some shorter papers refer to other, already published papers and their procedures. Unless the author's state there were specific deviations from the previous design, you can give them the same ratings.
- Also, be careful for footnotes and procedural information outside of the 'Methods' section. It's worth skim reading all sections. Information about the study design may also be in the 'Participants'/'Procedure'/'Lab set-up'/'Design' parts of the paper (depending on how the paper is formatted).
- Some papers have multiple studies in them – you will be given a list of the studies of interest. However, this might require you to distinguish any differences in the procedures between the series, so it may take some deeper reading.

**Figure D3**

*Dataset*

| Study | ID | See | Hear | Judge | Silent | Review | IIR | z-score | ES(h) | N participants | Trials |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alexander & Broughton (2001) - Telepathy sessions | 125 | 1 | 0 | 0 | 1 | 1 | 36.00% | 1.63 | 0.24 | 50 | 50 |
| Broughton & Alexander (1997) - FT1[b] | 101.1 | 1 | 1 | 0 | 1 | 1 | 24.00% | 0 | -0.023 | 50 | 50 |
| Broughton & Alexander (1997) - FT2[a] | 101.2 | 1 | 1 | 0 | 1 | 1 | 18.00% | -0.98 | -0.171 | 50 | 50 |
| Broughton & Alexander(1997) - EC | 101.3 | 1 | 1 | 0 | 1 | 1 | 37.30% | 1.81 | 0.267 | 51 | 51 |
| Cardeña & Marcusson-Clavertz (2020) | 143 | 1 | 0 | 0 | 0 | 1 | 22.86% | -0.1 | -0.05 | 35 | 35 |
| da Silva, Pilato & Hiraoka (2003) - Ganzfeld condition | 113.1 | 1 | 1 | 1 | 0 | 1 | 33.33% | 1.26 | 0.184 | 37 | 54 |
| Dalton (1997) - Experiment 2[b] | 133.2 | 1 | 1 | 0 | 1 | 0 | 53.00% | 5.06 | 0.584 | 64 | 64 |
| Dalton (1997) - Experiment 3 | 133.3 | 1 | 1 | 0 | 1 | 0 | 41.00% | 2.75 | 0.343 | 64 | 64 |
| Goulding, Westerlund, Parker & Wackermann (2004) - Receivers' judging[a] | 127 | 1 | 1 | 1 | 1 | 1 | 14.00% | -1.88 | -0.28 | 64 | 64 |
| Honorton et al. (1990) - PRL Experienced 301 | 103.7 | 1 | 1 | 1 | 1 | 1 | 30.00% | 0.65 | 0.112 | 25 | 50 |
| Honorton et al. (1990) - PRL Experienced 302[a] | 103.8 | 1 | 1 | 1 | 1 | 1 | 64.00% | 4.26 | 0.807 | 25 | 25 |
| Honorton et al. (1990) - PRL Novice 101 | 103.1 | 1 | 1 | 1 | 1 | 1 | 24.00% | 0 | -0.023 | 50 | 50 |
| Honorton et al. (1990) - PRL Novice 102 | 103.2 | 1 | 1 | 1 | 1 | 1 | 36.00% | 1.63 | 0.24 | 50 | 50 |
| Honorton et al. (1990) - PRL Novice 103 | 103.3 | 1 | 1 | 1 | 1 | 1 | 30.00% | 0.65 | 0.112 | 50 | 50 |
| Kanthamani & Broughton (1994) - Series 1 | 105.1 | 0 | 1 | 0 | 0 | 1 | 19.40% | -0.32 | -0.135 | 31 | 31 |
| Kanthamani & Broughton (1994) - Series 3 | 105.3 | 0 | 0 | 0 | 0 | 1 | 20.00% | -0.25 | -0.12 | 20 | 40 |
| Kanthamani & Broughton (1994) - Series 4[b] | 105.4 | 0 | 0 | 0 | 0 | 1 | 36.90% | 2.08 | 0.259 | 65 | 65 |
| Kanthamani & Broughton (1994) - Series 7 | 105.7 | 0 | 0 | 0 | 0 | 1 | 26.10% | 0 | 0.025 | 27 | 46 |
| Kanthamani & Broughton (1994) - Series 8 | 105.8 | 0 | 0 | 0 | 0 | 1 | 26.00% | 0 | 0.023 | 15 | 50 |
| Lau (2004) - Long-ganzfeld study 1 | 139.1 | 0 | 1 | 0 | 0 | 1 | 45.00% | 1.8 | 0.423 | 20 | 20 |
| Lau (2004) - Long-ganzfeld study 2 | 139.2 | 0 | 1 | 0 | 0 | 1 | 40.00% | 1.29 | 0.322 | 20 | 20 |
| Lau (2004) - Long-ganzfeld study 3 | 139.3 | 0 | 1 | 0 | 0 | 1 | 20.00% | -0.26 | -0.12 | 20 | 20 |
| Lau (2004) - Long-ganzfeld study 4 | 139.4 | 0 | 1 | 0 | 0 | 1 | 25.00% | 0 | 0 | 20 | 20 |
| Lau (2004) - Long-ganzfeld study 5 | 139.5 | 0 | 1 | 0 | 0 | 1 | 30.00% | 0.26 | 0.112 | 20 | 20 |
| Lau (2004) - Long-ganzfeld study 6 | 139.6 | 0 | 1 | 0 | 0 | 1 | 20.00% | -0.26 | -0.12 | 20 | 20 |
| Marcusson-Clavertz & Cardeña (2011) | 134 | 1 | 0 | 0 | 0 | 0 | 27.00% | 0 | 0.044 | 25 | 26 |
| McDonough et al. (1994) | 131 | 0 | 1 | 1 | 1 | 1 | 30.00% | 0.26 | 0.112 | 20 | 20 |
| Morris et al. (1993) - Cunningham | 110.1 | 0 | 1 | 0 | 0 | 1 | 40.60% | 1.84 | 0.334 | 32 | 32 |
| Morris et al. (1995) - Honorton replication | 107 | 1 | 1 | 1 | 1 | 1 | 34.00% | 1.02 | 0.068 | 32 | 32 |
| Morris, Summers & Yim (2003) | 119 | 1 | 1 | 0 | 1 | 1 | 37.50% | 1.643 | 0.271 | 40 | 40 |
| Parker & Westerlund (1998) Study 5 | 118.1 | 0 | 1 | 0 | 0 | 1 | 40.00% | 1.27 | 0.261 | 30 | 30 |
| Parker, Fredenksen & Johansson (1997) - Study 1 | 102.1 | 0 | 0 | 0 | 0 | 1 | 20.00% | -0.42 | -0.12 | 30 | 30 |
| Parker, Fredenksen & Johansson (1997) - Study 2 | 102.2 | 0 | 1 | 0 | 0 | 1 | 37.00% | 1.27 | 0.261 | 30 | 30 |
| Parker, Fredenksen & Johansson (1997) - Study 3 | 102.3 | 0 | 1 | 0 | 0 | 1 | 37.00% | 1.27 | 0.261 | 30 | 30 |
| Parker, Grams & Petterson (1998) - Study 4 | 108.4 | 0 | 1 | 0 | 0 | 1 | 47.00% | 2.53 | 0.464 | 30 | 30 |
| Roe, Holt & Simmonds (2002) - Human series | 136 | 1 | 1 | 1 | 0 | 1 | 35.00% | 1.28 | 0.219 | 40 | 40 |
| Roe, McKenzie & Ali (2001) | 135 | 0 | 0 | 0 | 0 | 1 | 20.83% | -0.24 | -0.099 | 24 | 24 |
| Roe, Sherwood & Holt (2004) - Sender condition | 137.1 | 1 | 1 | 1 | 0 | 1 | 26.10% | 0.12 | 0.025 | 23 | 23 |
| Simmonds-Moore & Holt (2007) - Ganzfeld condition | 141.1 | 1 | 1 | 1 | 0 | 1 | 23.10% | 0 | -0.044 | 26 | 26 |
| Smith & Savva (2008) | 114 | 1 | 1 | 0 | 0 | 1 | 34.20% | 2.16 | 0.202 | 114 | 114 |
| Wright & Parker (2003) - One session | 129.1 | 1 | 1 | 0 | 0 | 0 | 44.73% | 2.62 | 0.418 | 10 | 38 |
| **Totals (factor, participants, trials)** | | **22** | **32** | **12** | **15** | **37** | **31.85%[c]** | **0.91[c]** | **0.130[c]** | **1496** | **1624** |

*Note*. [a] indicates the three studies that were removed from both Models 1, 1.1 and 2 due to influence [b] indicates the three studies removed from Model 1.2 due to influence [c] is the column mean.