

Supplementary Table 1. Complete ANOVA information for Experiments 2 and 3.

| Dependent measure and ANOVA factor | Experiment 2 | | | | Experiment 3 | | | |
|--|--------------|---------|--------|------------|--------------|--------|--------|------------|
| | df | F | p | η_p^2 | df | F | p | η_p^2 |
| <i>Working memory accuracy</i> | | | | | | | | |
| Load | 1, 47 | 1368.45 | <0.001 | 0.97 | 1, 48 | 486.54 | <0.001 | 0.91 |
| Spatial Compatibility | 1, 47 | 0.45 | 0.50 | 0.01 | 1, 48 | 0.61 | 0.44 | 0.01 |
| Imitative Compatibility | 1, 47 | 0.93 | 0.34 | 0.02 | 1, 48 | 0.06 | 0.81 | <0.01 |
| Load * Spatial Compatibility | 1, 47 | 0.04 | 0.85 | <0.01 | 1, 48 | 1.65 | 0.21 | 0.03 |
| Load * Imitative Compatibility | 1, 47 | 0.67 | 0.42 | 0.01 | 1, 48 | 0.03 | 0.87 | <0.01 |
| Spatial Compatibility * Imitative Compatibility | 1, 47 | 6.42 | 0.02 | 0.12 | 1, 48 | 0.10 | 0.75 | <0.01 |
| Load * Spatial Compatibility * Imitative Compatibility | 1, 47 | 0.26 | 0.61 | 0.01 | 1, 48 | 0.03 | 0.87 | <0.01 |
| <i>SRC accuracy</i> | | | | | | | | |
| Load | 1, 47 | 1.19 | 0.28 | 0.03 | 1, 48 | 0.03 | 0.86 | <0.01 |
| Spatial Compatibility | 1, 47 | 32.96 | <0.001 | 0.41 | 1, 48 | 46.08 | <0.001 | 0.49 |
| Imitative Compatibility | 1, 47 | 36.98 | <0.001 | 0.44 | 1, 48 | 9.40 | 0.00 | 0.16 |
| Load * Spatial Compatibility | 1, 47 | 1.01 | 0.32 | 0.02 | 1, 48 | 5.67 | 0.02 | 0.11 |
| Load * Imitative Compatibility | 1, 47 | 0.02 | 0.89 | <0.01 | 1, 48 | 0.34 | 0.56 | 0.01 |
| Spatial Compatibility * Imitative Compatibility | 1, 47 | 5.33 | 0.03 | 0.10 | 1, 48 | 5.44 | 0.02 | 0.10 |
| Load * Spatial Compatibility * Imitative Compatibility | 1, 47 | 0.02 | 0.89 | <0.01 | 1, 48 | 0.01 | 0.93 | <0.01 |
| <i>SRC reaction time</i> | | | | | | | | |
| Load | 1, 47 | 3.30 | 0.08 | 0.07 | 1, 48 | 1.98 | 0.17 | 0.04 |
| Spatial Compatibility | 1, 47 | 76.59 | <0.001 | 0.62 | 1, 48 | 98.20 | <0.001 | 0.67 |
| Imitative Compatibility | 1, 47 | 30.08 | <0.001 | 0.39 | 1, 48 | 12.72 | <0.001 | 0.21 |
| Load * Spatial Compatibility | 1, 47 | 0.01 | 0.93 | <0.01 | 1, 48 | 0.38 | 0.54 | 0.01 |
| Load * Imitative Compatibility | 1, 47 | 0.27 | 0.61 | 0.01 | 1, 48 | 1.57 | 0.22 | 0.03 |
| Spatial Compatibility * Imitative Compatibility | 1, 47 | 0.18 | 0.68 | <0.01 | 1, 48 | 0.04 | 0.84 | <0.01 |
| Load * Spatial Compatibility * Imitative Compatibility | 1, 47 | 1.11 | 0.30 | 0.02 | 1, 48 | <0.001 | 0.99 | <0.01 |

Supplementary Table 2. Reaction time data in the SRC task during Experiment 1 excluding participants with less than 55% performance in the working memory task.

| Experiment and Condition | Compatibility effect | | |
|------------------------------|--------------------------|---------------|------------------|
| | Milliseconds [95% CI] | Cohen's d_z | BF ₀₁ |
| Exp. 1 (N=48) | | | |
| <i>General compatibility</i> | | | |
| Low load | 70.36 [56.33, ∞] | 1.22 | |
| High load | 64.55 [55.64, ∞] | 1.75 | |
| High – Low load | -5.81 [-16.77, ∞] | -0.13 | 11.24 |

Supplementary Table 3. Reaction time data in the SRC task during Experiments 2 and 3 excluding participants with less than 55% performance in the working memory task.

| Experiment and Condition | Experiment 2 (N=26) | | | Experiment 3 (N=13) | | |
|---|--------------------------|---------------|------------------|--------------------------|---------------|------------------|
| | Compatibility effect | | | Compatibility effect | | |
| | Milliseconds [95% CI] | Cohen's d_z | BF ₀₁ | Milliseconds [95% CI] | Cohen's d_z | BF ₀₁ |
| <i>Spatial compatibility (imitatively compatible)</i> | | | | | | |
| Low load | 38.31 [25.75, ∞] | 1.02 | | 40.77 [25.61, ∞] | 1.33 | |
| High load | 51.84 [37.13, ∞] | 1.18 | | 39.01 [19.10, ∞] | 0.97 | |
| High - Low load | 13.53 [1.54, ∞] | 0.38 | 0.51 | -1.77 [-26.78, ∞] | -0.04 | 3.93 |
| <i>Spatial compatibility (imitative incompatible)</i> | | | | | | |
| Low load | 42.09 [25.38, ∞] | 0.84 | | 31.59 [10.88, ∞] | 0.75 | |
| High load | 32.42 [16.89, ∞] | 0.70 | | 19.91 [-12.96, ∞] | 0.30 | |
| High - Low load | -9.67 [-27.63, ∞] | -0.18 | 8.51 | -11.68 [-39.50, ∞] | -2.10 | 5.68 |
| <i>Imitative compatibility (spatially compatible)</i> | | | | | | |
| Low load | 26.85 [11.88, ∞] | 0.60 | | 16.19 [-3.52, ∞] | 0.41 | |
| High load | 31.83 [19.43, ∞] | 0.86 | | 32.11 [3.48, ∞] | 0.55 | |
| High - Low load | 4.98 [-10.25, ∞] | 0.11 | 2.98 | 15.92 [-6.81, ∞] | 0.35 | 1.09 |
| <i>Imitative compatibility (spatially incompatible)</i> | | | | | | |
| Low load | 30.64 [12.38, ∞] | 0.42 | | 7.00 [-15.42, ∞] | 0.15 | |
| High load | 12.42 [-3.64, ∞] | 0.26 | | 13.00 [-7.16, ∞] | 0.32 | |
| High - Low load | -18.22 [-37.53, ∞] | -0.32 | 11.40 | 6.01 [-21.29, ∞] | 0.11 | 2.63 |