

Supplementary Text

Experiment 1a

Results

Main Task, PC-75/25 Items

Reaction Time (RT)

We found a main effect of congruency ($F(1,58) = 53.22, p < 0.001, \eta_p^2 = 0.48, BF = 5.68 \times 10^4$) and PC ($F(1,58) = 4.50, p = 0.038, \eta_p^2 = 0.07, BF = 5.18$). Participants responded faster on congruent (mean = 651 ms) than incongruent (mean = 660 ms) trials, and in the low (mean = 655 ms) compared to high (mean = 656 ms) PC condition. These effects were qualified by a 3-way interaction between congruency, PC and feedback ($F(1,58) = 4.54, p = 0.037, \eta_p^2 = 0.07, BF = 0.03$), as the effect of PC on congruency (i.e., the ISPC effect) was more pronounced in the feedback group (mean = 6 ms) than the no feedback group (mean = -5 ms). No other significant RT effects were observed (all other effects, $F < 0.51$).

Accuracy (Proportion Correct)

We found a significant main effect of congruency ($F(1,58) = 12.47, p < 0.001, \eta_p^2 = 0.18, BF = 37.57$), as participants were less accurate on incongruent (mean = 89.1%) than on congruent trials (mean = 90.9%). This effect was qualified by a congruency by PC interaction ($F(1,58) = 6.00, p = 0.017, \eta_p^2 = 0.09, BF = 0.91$), as congruency effects were smaller in the low PC (mean = 1.0%) compared to the high PC condition (mean = 3.5%), reflecting the standard ISPC effect. The size of this effect did not vary significantly between the two feedback groups, however, and no other effects reached significance (PC: $F(1,58) = 1.99, p = 0.164, \eta_p^2 = 0.03, BF = 0.43$; feedback: $F(1,58) = 1.65, p = 0.204, \eta_p^2 = 0.03, BF = 0.40$; PC x feedback: $F(1,58) =$

2.22, $p = 0.141$, $\eta_p^2 = 0.04$, $BF = 0.24$; all other effects, $F < 0.60$).

Transfer Run, PC-50/50 Items

Reaction Time

There were no significant effects in the transfer run for mean RT (congruency: $F(1,58) = 2.84$, $p = 0.097$, $\eta_p^2 = 0.05$, $BF = 0.11$; PC: $F(1,58) = 1.28$, $p = 0.263$, $\eta_p^2 = 0.02$, $BF = 0.19$; all other effects, $F < 0.88$).

Accuracy

There were no significant effects in the transfer run for mean accuracy (congruency: $F(1,58) = 2.13$, $p = 0.150$, $\eta_p^2 = 0.04$, $BF = 0.19$; congruency x feedback: $F(1,58) = 2.91$, $p = 0.093$, $\eta_p^2 = 0.05$, $BF = 0.22$; feedback: $F(1,58) = 2.97$, $p = 0.090$, $\eta_p^2 = 0.05$, $BF = 0.50$; all other effects, $F < 1.09$).

Experiment 1b

Results

Main Task, PC-75/25 Items

Reaction Time

We observed significant main effects of congruency ($F(1,118) = 118.99$, $p < 0.001$, $\eta_p^2 = 0.50$, $BF = 3.29 \times 10^{13}$) and PC ($F(1,118) = 34.58$, $p < 0.001$, $\eta_p^2 = 0.23$, $BF = 8.02 \times 10^{10}$).

Participants responded generally faster on congruent (mean = 639 ms) than incongruent (mean = 647 ms) trials, and in the low (mean = 640 ms) compared to high (mean = 646 ms) PC condition.

Participants were also slightly faster to respond when they did not receive feedback (631 ms)

than when they did (654 ms), $F(1,118) = 2.99$, $p = 0.086$, $\eta_p^2 = 0.03$, $BF = 0.40$. However, we observed little evidence that the congruency effect is modulated by the proportion congruent manipulation (PC x congruency x feedback: $F(1,118) = 1.56$, $p = 0.215$, $\eta_p^2 = 0.01$, $BF = 0.01$; all other effects, $F < 0.81$). The ISPC effect was 5 and -1 ms for the no feedback and feedback groups, respectively.

Accuracy

We observed significant main effects of congruency ($F(1,118) = 41.71$, $p < 0.001$, $\eta_p^2 = 0.26$, $BF = 3.96 \times 10^7$) and PC ($F(1,118) = 32.67$, $p < 0.001$, $\eta_p^2 = 0.22$, $BF = 1.30 \times 10^5$). Participants were more accurate on congruent (mean = 93.1%) than incongruent (mean = 91.7%) trials, and in the low (mean = 92.8%) compared to high (mean = 92.0%) PC condition. However, we observed only trending evidence for modulation of the congruency effect by proportion congruent context (congruency x PC: $F(1,118) = 3.66$, $p = 0.058$, $\eta_p^2 = 0.03$, $BF = 1.73$). The ISPC effect for Accuracy was 1.99% and 0.81% for the no feedback and feedback groups, respectively. No other effects were significant (congruency x feedback: $F(1,118) = 1.48$, $p = 0.226$, $\eta_p^2 = 0.01$, $BF = 0.19$; all other effects, $F < 0.80$).

Transfer Run, PC-50/50 Items

Reaction Time

We observed significant main effects of congruency ($F(1,118) = 28.71$, $p < 0.001$, $\eta_p^2 = 0.20$, $BF = 153.84$) and PC ($F(1,118) = 15.37$, $p < 0.001$, $\eta_p^2 = 0.12$, $BF = 5.23 \times 10^4$). Participants responded faster on congruent (mean = 627 ms) than incongruent (mean = 635 ms) trials, and in the low (mean = 626 ms) compared to high (mean = 636 ms) PC condition. They

were also faster to respond when they did not receive performance feedback (618 ms) than when they did (644 ms), $F(1,118) = 4.15$, $p = 0.044$, $\eta_p^2 = 0.03$, $BF = 0.86$.

No other effects were significant (PC x congruency x feedback: $F(1,118) = 1.40$, $p = 0.239$, $\eta_p^2 = 0.01$, $BF = 0.01$; all other effects, $F < 0.94$).

Accuracy

We observed significant main effects of congruency ($F(1,118) = 5.04$, $p = 0.027$, $\eta_p^2 = 0.04$, $BF = 0.36$) and PC ($F(1,118) = 5.49$, $p = 0.021$, $\eta_p^2 = 0.04$, $BF = 0.82$). Participants performed better on congruent (mean = 93.5%) than incongruent (mean = 92.7%) trials, and in the low (mean = 93.6%) compared to high (mean = 92.6%) PC condition. Congruency effects were also smaller when participants did not receive feedback (1.6%) than when they did (0.0%), congruency x feedback: $F(1,118) = 5.55$, $p = 0.020$, $\eta_p^2 = 0.05$, $BF = 0.28$). No other effects were significant (all other effects, $F < 0.50$).

Across Experiment 1 Analysis

Main Task Runs, PC-75/25 Items

Reaction Time

We again observed significant main effects of congruency ($F(1,176) = 147.10$, $p < 0.001$, $\eta_p^2 = 0.46$, $BF = 1.66 \times 10^{19}$) and PC ($F(1,176) = 26.29$, $p < 0.001$, $\eta_p^2 = 0.13$, $BF = 9.96 \times 10^{11}$). Participants responded faster on congruent (mean = 643 ms) than incongruent (mean = 651 ms) trials, and in the low (mean = 645 ms) compared to high (mean = 649 ms) PC condition. Moreover, we observed a significant three-way interaction, in which performance feedback significantly reduced the ISPC effect (congruency x PC x feedback: $F(1,176) = 4.96$, $p = 0.027$,

$\eta_p^2 = 0.03$, BF = 0.00). The ISPC effect for RT was 5 ms and -2 ms for the no feedback and feedback groups, respectively.

No other effects were significant (all other effects, $F < 1.53$).

Accuracy

Analyzing mean accuracy, we again observed significant main effects of congruency ($F(1,176) = 45.13$, $p < 0.001$, $\eta_p^2 = 0.20$, BF = 1.09×10^{10}) and context ($F(1,176) = 18.61$, $p < 0.001$, $\eta_p^2 = 0.10$, BF = 4.31×10^4). Participants were more accurate on congruent (mean = 92.4%) than incongruent (mean = 90.8%) trials, and in the low (mean = 91.8%) compared to high (mean = 91.4%) PC condition.

Importantly, we also found congruency effects to be significantly modulated by proportion congruent context across feedback groups (congruency x PC: $F(1,176) = 9.39$, $p = 0.003$, $\eta_p^2 = 0.05$, BF = 4.23). The ISPC effect for Accuracy was 1.9% and 1.6% for the no feedback and feedback groups, respectively.

No other effects were significant (all other effects, $F < 1.35$).

Experiment 2a

Results

ISPC/LWPC influenced, PC-85/15 Items

Reaction Time

We found a significant main effect of congruency ($F(1,56) = 37.15$, $p < 0.001$, $\eta_p^2 = 0.40$, BF = 1.94×10^4). Participants responded faster on congruent (mean = 619 ms) than incongruent (mean = 632 ms) trials. We found an expected interaction between PC and block order (PC x

block order: $F(1,56) = 4.03$, $p = 0.050$, $\eta_p^2 = 0.07$, $BF = 1.04$). Participants who experienced the mostly congruent context first had smaller differences in RT between the contexts (628 (PC-85) vs. 626 (PC-15) ms) when compared to participants who experienced the mostly incongruent context first (618 vs. 633 ms).

We also replicated Experiment 1, showing a significant ISPC/LWPC effect across feedback groups (congruency x PC: $F(1,56) = 8.15$, $p = 0.006$, $\eta_p^2 = 0.13$, $BF = 1.10$), which interacted with block order (PC x congruency x block order: $F(1,56) = 4.26$, $p = 0.044$, $\eta_p^2 = 0.07$, $BF = 0.32$). The ISPC/LWPC effect for RT was 13 ms and 15 ms for the no feedback and feedback groups, respectively. When participants experienced the mostly congruent context first, the RT effect was 18 and 29 ms for the respective feedback groups, which decreased to 7 and 1 ms if participants experienced the mostly incongruent context first.

No other effects were significant (PC: $F(1,56) = 1.85$, $p = 0.179$, $\eta_p^2 = 0.03$, $BF = 0.53$; PC x feedback x block order: $F(1,56) = 1.55$, $p = 0.219$, $\eta_p^2 = 0.03$, $BF = 0.10$; all other effects, $F < 0.96$).

Accuracy

We found a significant main effect of congruency ($F(1,56) = 27.33$, $p < 0.001$, $\eta_p^2 = 0.33$, $BF = 1192.20$) and a trending main effect of PC ($F(1,56) = 2.97$, $p = 0.090$, $\eta_p^2 = 0.05$, $BF = 31.78$). Participants were more accurate on congruent (mean = 91.6%) than incongruent (mean = 89.2%) trials, and in the high (mean = 90.7%) compared to low (mean = 90.1%) PC condition. We found an expected interaction between PC and block order (PC x block order: $F(1,56) = 6.08$, $p = 0.017$, $\eta_p^2 = 0.10$, $BF = 7.76$). Participants who experienced the mostly congruent context first had smaller differences in accuracy between the contexts (88.9% (PC-85) vs. 90.7%

(PC-15)) when compared to participants who experienced the mostly incongruent context first (92.6% vs. 89.4%). Participants also showed slightly smaller congruency effects when they received feedback (1.2%) than when they did not (3.7%), congruency x feedback: $F(1,56) = 3.41, p = 0.070, \eta_p^2 = 0.06, BF = 0.21$.

We also found a significant ISPC/LWPC effect across feedback groups that was modulated by block order (congruency x PC: $F(1,56) = 14.18, p < 0.001, \eta_p^2 = 0.20, BF = 31.25$; congruency x PC x block order: $F(1,56) = 5.20, p = 0.026, \eta_p^2 = 0.09, BF = 1.85$). The ISPC/LWPC effect for Accuracy was 7.6% and 4.9% errors for the no feedback and feedback groups, respectively. When participants experienced the mostly congruent context first, errors were 12.0% and 8.0% for the respective feedback groups, which decreased to 3.1% and 1.8% if participants experienced the mostly incongruent context first.

No other effects were significant (block order: $F(1,56) = 1.60, p = 0.211, \eta_p^2 = 0.03, BF = 1.91$; all other effects, $F < 1.35$).

LWPC, PC-50/50 Items

Reaction Time

We found a standard congruency effect ($F(1,56) = 49.17, p < 0.001, \eta_p^2 = 0.47, BF = 1.57 \times 10^6$). Participants responded faster on congruent (mean = 664 ms) than incongruent (mean = 680 ms) trials. Participants across feedback groups responded at a similar speed in the mostly incongruent context (672 (feedback) vs. 670 (no feedback) ms), but receiving feedback was associated with responding faster in the mostly congruent context (666 vs 680 ms) (PC x feedback: $F(1,56) = 4.80, p = 0.033, \eta_p^2 = 0.08, BF = 2.03$). We also observed a trending interaction between PC and block order ($F(1,56) = 3.65, p = 0.061, \eta_p^2 = 0.06, BF = 1.19$).

Participants who experienced the mostly congruent context first had slightly larger differences in RT between the contexts (678 (PC-75) vs. 670 (PC-25) ms) when compared to participants who experienced the mostly incongruent context first (668 vs. 672 ms).

However, we did not find a significant LWPC effect (congruency x PC: $F(1,56) = 1.61$, $p = 0.210$, $\eta_p^2 = 0.03$, $BF = 0.22$). The LWPC effect for RT was 6 ms and 2 ms for the no feedback and feedback groups, respectively.

No other effects were significant (congruency x PC x feedback x block order: $F(1,56) = 2.30$, $p = 0.135$, $\eta_p^2 = 0.04$, $BF = 0.00$; all other effects, $F < 1.22$).

Accuracy

We found a standard congruency effect (congruency: $F(1,56) = 3.55$, $p = 0.065$, $\eta_p^2 = 0.06$, $BF = 0.08$) and a trending effect of PC ($F(1,56) = 3.12$, $p = 0.083$, $\eta_p^2 = 0.05$, $BF = 0.84$). Participants were more accurate on congruent (mean = 86.0%) than incongruent (mean = 84.4%) trials, and in the low (mean = 86.4%) compared to high (mean = 83.9%) PC condition. We also found the expected interaction between PC and block order, indicating the extended control-demand context (PC x block order: $F(1,56) = 4.00$, $p = 0.050$, $\eta_p^2 = 0.07$, $BF = 1.32$). Participants who experienced the mostly congruent context first had larger differences in accuracy between the contexts (81.1% (PC-75) vs. 86.5% (PC-25)) when compared to participants who experienced the mostly incongruent context first (86.8% vs. 86.4%).

Finally, we found a significant LWPC effect that was modulated by feedback group (congruency x PC x feedback: $F(1,56) = 5.85$, $p = 0.019$, $\eta_p^2 = 0.10$, $BF = 0.01$; congruency x PC x block order: $F(1,56) = 2.85$, $p = 0.097$, $\eta_p^2 = 0.05$, $BF = 0.05$), with the feedback group showing a larger LWPC effect. The LWPC effect for Accuracy was 2.3% and -5.4% errors for

the no feedback and feedback groups, respectively, indicating that the feedback group showed greater proportion congruency effects than the no feedback group. When participants experienced the mostly congruent context first, the LWPC effect was 0.2% and -8.6% for the no feedback and feedback groups, but was 4.5% and -2.2% when they experienced the mostly incongruent context first. Contrary to expectations, the no feedback group thus showed larger congruency effects in the high vs. low control-demand context, while the feedback group showed a typical LWPC effect.

No other effects were significant (congruency x feedback: $F(1,56) = 2.45, p = 0.123, \eta_p^2 = 0.04, BF = 0.05$; all other effects, $F < 1.32$).

Experiment 2b

Results

ISPC/LWPC influenced, PC-85/15 Items

Reaction Time

We found an expected main effect of congruency ($F(1,116) = 68.34, p < 0.001, \eta_p^2 = 0.37, BF = 3.44 \times 10^9$). Participants responded more quickly on congruent (mean = 613 ms) than incongruent (mean = 627 ms) trials. Participants also showed the expected effects of block order (PC x block order: $F(1,116) = 31.45, p < 0.001, \eta_p^2 = 0.21, BF = 5.10 \times 10^8$), whereby participants had smaller differences in RT across contexts when they first experienced the mostly congruent context (634 (PC-85) vs. 625 (PC-15) ms) rather than mostly incongruent context (598 vs. 623 ms). Participants also showed larger congruency effects when they did not receive feedback (19 ms) versus when they did (9 ms) (congruency x feedback: $F(1,116) = 4.27, p = 0.041, \eta_p^2 = 0.04, BF = 0.34$).

We also replicate Experiments 1a, 1b, and 2a, showing a significant ISPC/LWPC effect across feedback groups, which, unlike in Experiment 2a, was not modulated by block order (congruency x PC: $F(1,116) = 18.68, p < 0.001, \eta_p^2 = 0.14, BF = 61.57$; PC x congruency x block order x feedback: $F(1,116) = 3.22, p = 0.075, \eta_p^2 = 0.03, BF = 0$). The ISPC/LWPC effect for RT was 15 ms and 19 ms for the no feedback and feedback groups, respectively. When participants experienced the mostly congruent context first, their ISPC/LWPC effect was 4 and 22 ms for the respective feedback groups and 25 and 15 ms when they experienced the mostly incongruent context first.

No other effects were significant (block order: $F(1,116) = 1.99, p = 0.161, \eta_p^2 = 0.02, BF = 1.47 \times 10^8$; all other effects, $F < 1.13$).

Accuracy

We found an expected main effect of congruency ($F(1,116) = 37.89, p < 0.001, \eta_p^2 = 0.25, BF = 2.15 \times 10^7$). Participants were more accurate on congruent (mean = 94.0%) than incongruent (mean = 91.4%) trials.

We also found a significant ISPC/LWPC effect across feedback groups that, here, was modulated by block order and feedback group (congruency x PC: $F(1,116) = 36.04, p < 0.001, \eta_p^2 = 0.24, BF = 1468.36$; congruency x PC x block order: $F(1,116) = 4.15, p = 0.044, \eta_p^2 = 0.04, BF = 0.09$; congruency x PC x feedback: $F(1,116) = 4.46, p = 0.037, \eta_p^2 = 0.04, BF = 0.04$). The ISPC/LWPC effect for Accuracy was 4.0% and 8.4% errors for the no feedback and feedback groups, respectively. When participants experienced the mostly congruent context first, errors were 6.8% and 9.8% for the respective feedback groups, which decreased to 1.2% and 7.0% if participants experienced the mostly incongruent context first.

No other effects were significant (congruency x feedback: $F(1,116) = 1.90, p = 0.171, \eta_p^2 = 0.02, BF = 0.06$; block order: $F(1,116) = 1.69, p = 0.196, \eta_p^2 = 0.01, BF = 0.10$; all other effects, $F < 1.36$).

LWPC, PC-50/50 Items

Reaction Time

We found standard main effects of congruency ($F(1,116) = 93.35, p < 0.001, \eta_p^2 = 0.45, BF = 6.81 \times 10^{15}$) and PC ($F(1,116) = 8.56, p = 0.004, \eta_p^2 = 0.07, BF = 2020.42$). Participants responded more quickly on congruent (mean = 656 ms) than incongruent (mean = 673 ms) trials, and in the high (mean = 661 ms) compared to low (mean = 668 ms) PC condition. We also found an expected effect of block order (PC x block order: $F(1,116) = 10.09, p = 0.002, \eta_p^2 = 0.08, BF = 171.88$), whereby participants had smaller differences in RT across contexts when they first experienced the mostly congruent context (674 (PC-75) vs. 673 (PC-25) ms) rather than mostly incongruent context (648 vs. 663 ms).

Most importantly, we observed a significant LWPC effect (congruency x PC: $F(1,116) = 4.88, p = 0.029, \eta_p^2 = 0.04, BF = 0.39$) that was modulated by feedback group (congruency x PC x feedback: $F(1,116) = 4.31, p = 0.040, \eta_p^2 = 0.04, BF = 0.02$), such that the feedback group showed a reduced congruency effect for high vs. low control-demand contexts (mean = 10 ms), while the no feedback group did not (mean = 0 ms).

No other effects were significant (block order: $F(1,116) = 1.98, p = 0.162, \eta_p^2 = 0.02, BF = 49.99$; all other effects, $F < 0.89$).

Accuracy

We found a standard main effect of congruency ($F(1,116) = 16.46, p < 0.001, \eta_p^2 = 0.12, BF = 4.50$). Participants were more accurate on congruent (mean = 90.08%) than incongruent (mean = 87.71%) trials. We also found expected effects of block order (block order: $F(1,116) = 3.75, p = 0.055, \eta_p^2 = 0.03, BF = 0.62$; PC x block order: $F(1,116) = 4.99, p = 0.027, \eta_p^2 = 0.04, BF = 1.45$), whereby participants were more accurate when they first experienced the mostly incongruent context (90.4%) versus the mostly congruent context (87.4%), and had smaller differences in accuracy across contexts when they first experienced the mostly congruent context (86.8% (PC-75) vs. 88.1% (PC-25)) rather than mostly incongruent context (91.8% vs. 88.9%).

We also observed a significant LWPC effect that was modulated by block order (congruency x PC x block order: $F(1,116) = 5.17, p = 0.025, \eta_p^2 = 0.04, BF = 0.04$) but not by feedback group (congruency x PC x feedback: $F(1,116) = 0.17, p = 0.677, \eta_p^2 = 0.00, BF = 0$). When participants experienced the mostly congruent context first, errors were -1.5% and -1.8% for the respective feedback groups, which changed to 3.0% and 1.8% if participants experienced the mostly incongruent context first, suggesting that participants only experienced traditional congruency effects if they experienced the mostly congruent context first. No other effects were significant (PC x feedback: $F(1,116) = 2.33, p = 0.130, \eta_p^2 = 0.02, BF = 0.21$; PC x feedback x block order: $F(1,116) = 2.07, p = 0.153, \eta_p^2 = 0.02, BF = 0.24$; all other effects, $F < 0.75$).

Across Experiment 2 Analysis

Reaction Time

We again found the standard congruency effect ($F(1,172) = 122.45, p < 0.001, \eta_p^2 = 0.42, BF = 1.55 \times 10^{23}$). Participants responded more quickly on congruent (mean = 658 ms) than

incongruent (mean = 676 ms) trials. We found an expected effect of the extended PC manipulation (PC x block order: $F(1,172) = 11.49$, $p < 0.001$, $\eta_p^2 = 0.06$, $BF = 1249.44$).

Participants had smaller differences in RT across contexts when they first experienced the mostly congruent context (675 (PC-75) vs. 672 (PC-25) ms) rather than mostly incongruent context (655 vs. 666 ms).

Importantly, we found a significant unbiased LWPC effect that did not depend on feedback group or block order (PC x congruency: $F(1,172) = 5.31$, $p = 0.022$, $\eta_p^2 = 0.03$, $BF = 0.16$). The LWPC effect was 8 and 2 ms for the no feedback and feedback groups, respectively.

No other effects were significant (PC x congruency x feedback x block order: $F(1,172) = 2.65$, $p = 0.105$, $\eta_p^2 = 0.02$, $BF = 0$; all other effects of interest, $F < 1.73$).

Accuracy

We found a standard congruency effect ($F(1,172) = 14.98$, $p < 0.001$, $\eta_p^2 = 0.08$, $BF = 1.63$). Participants were more accurate on congruent (mean = 88.7%) than incongruent (mean = 86.6%) trials. We also found expected effects of block order (PC x block order: $F(1,172) = 8.80$, $p = 0.003$, $\eta_p^2 = 0.05$, $BF = 29.27$; block order: $F(1,172) = 4.17$, $p = 0.043$, $\eta_p^2 = 0.02$, $BF = 6.52$). Participants were more accurate when they first experienced the mostly incongruent context (89.1%) than the mostly congruent context (86.2%), and had smaller differences in accuracy across contexts when they first experienced the mostly incongruent context (90.1% (PC-75) vs. 88.1% (PC-25)) rather than mostly congruent context (84.9% vs. 87.5%).

We also found a significant unbiased LWPC effect that depended, separately, on both feedback group and block order (PC x congruency x feedback: $F(1,172) = 6.25$, $p = 0.013$, $\eta_p^2 = 0.04$, $BF = 0$; PC x congruency x block order: $F(1,172) = 7.81$, $p = 0.006$, $\eta_p^2 = 0.04$, $BF = 0.03$).

The LWPC effect was not present for the no feedback group (1.3%) but was for the feedback group (-1.8%). When participants experienced the mostly incongruent context first, errors were 3.5% and 0.5% for the no feedback and feedback groups, respectively, and -0.9% and -4.1% when they experienced the mostly congruent context first.

No other effects were significant (all other effects of interest, $F < 1.37$).

Table S1. Mean Experiment 1a Behavioral Data within No Feedback Group

	Correct Reaction Times (ms)				
	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	665, [639, 690]	656, [628, 684]	655, [627, 682]	658, [632, 685]	649, [623, 676]
<i>MC.IC</i>	682, [655, 710]	671, [642, 700]	666, [639, 693]	673, [646, 699]	654, [629, 680]
<i>MIC.C</i>	661, [637, 685]	648, [623, 673]	650, [630, 670]	652, [631, 674]	643, [620, 666]
<i>MIC.IC</i>	668, [645, 692]	654, [630, 677]	660, [638, 682]	661, [639, 683]	646, [624, 668]

	Accuracy (Proportion Correct)				
	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	0.92, [0.90, 0.95]	0.92, [0.90, 0.95]	0.93, [0.91, 0.95]	0.92, [0.90, 0.95]	0.93, [0.91, 0.95]
<i>MC.IC</i>	0.89, [0.84, 0.95]	0.88, [0.82, 0.93]	0.92, [0.89, 0.96]	0.90, [0.86, 0.94]	0.92, [0.90, 0.95]
<i>MIC.C</i>	0.91, [0.88, 0.95]	0.90, [0.84, 0.97]	0.93, [0.90, 0.97]	0.92, [0.88, 0.95]	0.92, [0.89, 0.94]
<i>MIC.IC</i>	0.90, [0.86, 0.94]	0.89, [0.83, 0.96]	0.93, [0.90, 0.96]	0.91, [0.87, 0.94]	0.93, [0.90, 0.95]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent; *main* = PC-75/25; *transfer* = PC-50. All confidence intervals are 95%.

Table S2. Mean Experiment 1a Behavioral Data within Feedback Group

	Correct Reaction Times (ms)				
	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	653, [631, 675]	645, [627, 662]	647, [630, 665]	648, [630, 665]	648, [627, 669]
<i>MC.IC</i>	658, [635, 681]	661, [641, 681]	659, [638, 681]	659, [640, 677]	648, [629, 667]
<i>MIC.C</i>	641, [618, 663]	641, [623, 660]	639, [621, 657]	640, [622, 658]	643, [625, 661]
<i>MIC.IC</i>	661, [638, 684]	656, [638, 675]	654, [634, 674]	657, [637, 676]	649, [629, 669]

	Accuracy (Proportion Correct)				
	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	0.88, [0.82, 0.93]	0.90, [0.86, 0.94]	0.91, [0.88, 0.94]	0.89, [0.86, 0.93]	0.90, [0.87, 0.94]
<i>MC.IC</i>	0.80, [0.72, 0.87]	0.88, [0.83, 0.92]	0.88, [0.85, 0.92]	0.85, [0.82, 0.89]	0.88, [0.84, 0.93]
<i>MIC.C</i>	0.90, [0.86, 0.95]	0.89, [0.84, 0.93]	0.91, [0.87, 0.95]	0.90, [0.86, 0.94]	0.89, [0.85, 0.93]
<i>MIC.IC</i>	0.87, [0.82, 0.91]	0.90, [0.86, 0.94]	0.90, [0.86, 0.94]	0.89, [0.85, 0.92]	0.87, [0.82, 0.92]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent; *main* = PC-75/25; *transfer* = PC-50. All confidence intervals are 95%.

Table S3. Mean Experiment 1b Behavioral Data within No Feedback Group

	Correct Reaction Times (ms)				
	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	632, [615, 649]	625, [608, 642]	632, [615, 649]	630, [613, 646]	617, [601, 633]
<i>MC.IC</i>	654, [637, 671]	645, [628, 663]	640, [622, 658]	647, [630, 663]	626, [609, 642]

<i>MIC.C</i>	627, [606, 647]	613, [595, 630]	622, [605, 639]	620, [602, 638]	611, [593, 628]
<i>MIC.IC</i>	639, [620, 657]	627, [609, 644]	632, [615, 650]	632, [615, 649]	618, [601, 635]

Accuracy (Proportion Correct)

	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	0.92, [0.89, 0.94]	0.93, [0.91, 0.95]	0.93, [0.92, 0.95]	0.93, [0.91, 0.94]	0.93, [0.91, 0.95]
<i>MC.IC</i>	0.87, [0.84, 0.91]	0.90, [0.87, 0.93]	0.89, [0.86, 0.91]	0.89, [0.86, 0.91]	0.92, [0.90, 0.94]
<i>MIC.C</i>	0.93, [0.90, 0.95]	0.94, [0.91, 0.96]	0.95, [0.93, 0.97]	0.94, [0.92, 0.96]	0.95, [0.92, 0.97]
<i>MIC.IC</i>	0.90, [0.87, 0.92]	0.93, [0.91, 0.95]	0.93, [0.91, 0.95]	0.92, [0.90, 0.94]	0.93, [0.91, 0.95]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent; *main* = PC-75/25; *transfer* = PC-50. All confidence intervals are 95%.

Table S4. Mean Experiment 1b Behavioral Data within Feedback Group

Correct Reaction Times (ms)

	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	662, [641, 683]	651, [631, 672]	650, [629, 671]	654, [634, 674]	648, [627, 670]
<i>MC.IC</i>	679, [658, 700]	666, [645, 686]	660, [639, 680]	668, [648, 687]	652, [632, 673]
<i>MIC.C</i>	651, [629, 672]	633, [613, 653]	638, [618, 658]	640, [621, 660]	634, [614, 655]
<i>MIC.IC</i>	664, [643, 684]	649, [630, 669]	652, [633, 671]	654, [635, 674]	643, [623, 663]

Accuracy (Proportion Correct)

	<u>Run 1 Main</u>	<u>Run 2 Main</u>	<u>Run 3 Main</u>	<u>Overall Main (1-3)</u>	<u>Run 4 Transfer</u>
<i>MC.C</i>	0.92, [0.90, 0.93]	0.94, [0.92, 0.95]	0.94, [0.92, 0.95]	0.93, [0.92, 0.94]	0.93, [0.91, 0.95]
<i>MC.IC</i>	0.87, [0.83, 0.90]	0.92, [0.90, 0.94]	0.93, [0.91, 0.95]	0.91, [0.88, 0.93]	0.93, [0.91, 0.95]
<i>MIC.C</i>	0.93, [0.91, 0.95]	0.95, [0.93, 0.97]	0.95, [0.93, 0.97]	0.94, [0.93, 0.96]	0.93, [0.91, 0.95]
<i>MIC.IC</i>	0.91, [0.89, 0.93]	0.94, [0.92, 0.95]	0.94, [0.93, 0.96]	0.93, [0.91, 0.94]	0.93, [0.92, 0.95]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent; *main* = PC-75/25; *transfer* = PC-50. All confidence intervals are 95%.

Table S5. Mean Experiment 2a Behavioral Data within No Feedback Group for PC-85/15 items.

Correct Reaction Times (ms)

	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	630, [595, 666]	618, [587, 648]	610, [570, 650]	620, [584, 657]	619, [596, 643]
<i>MC.IC</i>	666, [616, 716]	643, [597, 688]	632, [596, 669]	643, [612, 673]	646, [620, 671]
<i>MIC.C</i>	638, [587, 690]	613, [568, 658]	613, [577, 649]	615, [584, 647]	620, [593, 646]
<i>MIC.IC</i>	652, [608, 695]	628, [584, 673]	623, [592, 654]	629, [595, 662]	633, [608, 659]

Accuracy (Proportion Correct)

	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.85, [0.78, 0.93]	0.92, [0.88, 0.96]	0.96, [0.93, 0.98]	0.94, [0.91, 0.97]	0.92, [0.89, 0.95]
<i>MC.IC</i>	0.72, [0.60, 0.85]	0.82, [0.74, 0.91]	0.92, [0.89, 0.95]	0.85, [0.79, 0.90]	0.83, [0.78, 0.88]
<i>MIC.C</i>	0.90, [0.82, 0.98]	0.93, [0.89, 0.97]	0.90, [0.86, 0.94]	0.88, [0.82, 0.94]	0.90, [0.87, 0.93]
<i>MIC.IC</i>	0.83, [0.68, 0.97]	0.93, [0.90, 0.97]	0.89, [0.86, 0.93]	0.91, [0.87, 0.95]	0.89, [0.85, 0.93]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.

Table S6. Mean Experiment 2a Behavioral Data within Feedback Group for PC-85/15 items.

	Correct Reaction Times (ms)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	632, [604, 659]	618, [588, 649]	609, [573, 644]	619, [582, 656]	619, [598, 640]
<i>MC.IC</i>	654, [621, 687]	651, [620, 681]	630, [596, 664]	635, [600, 670]	641, [621, 661]
<i>MIC.C</i>	609, [570, 648]	615, [577, 652]	636, [600, 671]	626, [586, 665]	622, [598, 645]
<i>MIC.IC</i>	632, [596, 668]	629, [594, 665]	632, [597, 668]	622, [585, 660]	629, [606, 652]

	Accuracy (Proportion Correct)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.91, [0.86, 0.97]	0.93, [0.90, 0.95]	0.92, [0.88, 0.96]	0.91, [0.86, 0.96]	0.92, [0.89, 0.94]
<i>MC.IC</i>	0.84, [0.71, 0.98]	0.85, [0.77, 0.92]	0.88, [0.80, 0.95]	0.90, [0.82, 0.98]	0.87, [0.82, 0.92]
<i>MIC.C</i>	0.90, [0.83, 0.97]	0.92, [0.86, 0.97]	0.93, [0.89, 0.97]	0.90, [0.84, 0.95]	0.91, [0.88, 0.94]
<i>MIC.IC</i>	0.91, [0.85, 0.96]	0.90, [0.85, 0.95]	0.92, [0.88, 0.96]	0.92, [0.88, 0.95]	0.91, [0.88, 0.94]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.

Table S7. Mean Experiment 2a Behavioral Data within No Feedback Group for PC-50 items.

	Correct Reaction Times (ms)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	684, [636, 732]	656, [617, 694]	672, [626, 719]	667, [626, 708]	669, [641, 697]
<i>MC.IC</i>	697, [654, 740]	689, [654, 723]	692, [644, 740]	688, [641, 736]	691, [664, 719]
<i>MIC.C</i>	669, [622, 716]	658, [613, 704]	671, [635, 708]	652, [614, 690]	662, [635, 689]
<i>MIC.IC</i>	691, [638, 744]	679, [634, 723]	676, [646, 706]	672, [642, 702]	678, [653, 704]

	Accuracy (Proportion Correct)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.78, [0.66, 0.89]	0.84, [0.76, 0.92]	0.89, [0.86, 0.93]	0.85, [0.77, 0.93]	0.84, [0.80, 0.89]
<i>MC.IC</i>	0.76, [0.63, 0.89]	0.84, [0.77, 0.92]	0.85, [0.78, 0.92]	0.85, [0.78, 0.92]	0.83, [0.78, 0.87]
<i>MIC.C</i>	0.88, [0.79, 0.96]	0.91, [0.86, 0.96]	0.85, [0.78, 0.93]	0.86, [0.81, 0.90]	0.87, [0.84, 0.91]

MIC.IC 0.78, [0.63, 0.93] 0.87, [0.82, 0.92] 0.84, [0.77, 0.90] 0.85, [0.78, 0.92] 0.83, [0.79, 0.88]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.

Table S8. Mean Experiment 2a Behavioral Data within Feedback Group for PC-50 items.

	Correct Reaction Times (ms)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	671, [636, 707]	666, [635, 696]	646, [607, 686]	655, [614, 695]	659, [636, 683]
<i>MC.IC</i>	697, [655, 738]	674, [639, 710]	670, [631, 708]	660, [623, 697]	674, [651, 698]
<i>MIC.C</i>	670, [633, 708]	669, [633, 706]	672, [634, 710]	653, [615, 690]	665, [642, 689]
<i>MIC.IC</i>	681, [644, 718]	671, [639, 703]	691, [656, 727]	671, [633, 709]	678, [656, 701]

	Accuracy (Proportion Correct)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.84, [0.74, 0.94]	0.83, [0.74, 0.92]	0.90, [0.83, 0.97]	0.86, [0.79, 0.93]	0.86, [0.81, 0.91]
<i>MC.IC</i>	0.77, [0.64, 0.91]	0.82, [0.74, 0.90]	0.86, [0.80, 0.92]	0.87, [0.79, 0.95]	0.83, [0.77, 0.89]
<i>MIC.C</i>	0.88, [0.80, 0.96]	0.86, [0.77, 0.95]	0.85, [0.78, 0.93]	0.87, [0.82, 0.91]	0.86, [0.82, 0.90]
<i>MIC.IC</i>	0.87, [0.80, 0.94]	0.88, [0.81, 0.94]	0.92, [0.87, 0.97]	0.88, [0.83, 0.93]	0.89, [0.86, 0.92]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.

Table S9. Mean Experiment 2b Behavioral Data within No Feedback Group for PC-85/15 items.

	Correct Reaction Times (ms)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	634, [598, 671]	627, [592, 662]	578, [558, 599]	577, [556, 597]	604, [583, 625]
<i>MC.IC</i>	650, [612, 688]	654, [617, 691]	617, [592, 643]	606, [582, 630]	632, [611, 654]
<i>MIC.C</i>	623, [597, 649]	592, [570, 613]	616, [576, 657]	610, [569, 650]	610, [588, 632]
<i>MIC.IC</i>	632, [609, 654]	599, [581, 618]	633, [595, 671]	627, [589, 665]	623, [602, 643]

	Accuracy (Proportion Correct)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.93, [0.90, 0.97]	0.93, [0.90, 0.97]	0.95, [0.93, 0.97]	0.95, [0.93, 0.97]	0.94, [0.93, 0.96]
<i>MC.IC</i>	0.86, [0.81, 0.91]	0.87, [0.81, 0.94]	0.88, [0.83, 0.94]	0.92, [0.88, 0.96]	0.88, [0.85, 0.92]
<i>MIC.C</i>	0.93, [0.90, 0.97]	0.96, [0.94, 0.98]	0.92, [0.87, 0.96]	0.90, [0.85, 0.96]	0.93, [0.90, 0.95]
<i>MIC.IC</i>	0.87, [0.79, 0.95]	0.94, [0.93, 0.96]	0.93, [0.90, 0.96]	0.90, [0.85, 0.94]	0.91, [0.88, 0.93]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.

Table S10. Mean Experiment 2b Behavioral Data within Feedback Group for PC-85/15 items.

	Correct Reaction Times (ms)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	637, [615, 659]	625, [601, 649]	611, [585, 638]	608, [583, 632]	620, [604, 637]
<i>MC.IC</i>	662, [638, 687]	645, [621, 670]	636, [607, 664]	624, [595, 653]	642, [624, 660]
<i>MIC.C</i>	632, [602, 663]	622, [595, 650]	621, [592, 650]	627, [600, 653]	625, [607, 644]
<i>MIC.IC</i>	640, [613, 666]	626, [601, 652]	626, [602, 650]	622, [599, 644]	628, [612, 645]

	Accuracy (Proportion Correct)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.93, [0.90, 0.96]	0.94, [0.92, 0.96]	0.95, [0.93, 0.96]	0.96, [0.94, 0.97]	0.94, [0.93, 0.95]
<i>MC.IC</i>	0.86, [0.82, 0.91]	0.86, [0.81, 0.91]	0.90, [0.86, 0.94]	0.89, [0.85, 0.93]	0.88, [0.85, 0.91]
<i>MIC.C</i>	0.91, [0.86, 0.95]	0.92, [0.89, 0.95]	0.91, [0.87, 0.95]	0.91, [0.88, 0.94]	0.91, [0.89, 0.93]
<i>MIC.IC</i>	0.91, [0.87, 0.95]	0.94, [0.93, 0.96]	0.93, [0.91, 0.96]	0.94, [0.92, 0.96]	0.93, [0.91, 0.95]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.

Table S11. Mean Experiment 2b Behavioral Data within No Feedback Group for PC-50 items.

	Correct Reaction Times (ms)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	671, [633, 709]	655, [620, 691]	637, [614, 659]	622, [604, 641]	646, [626, 667]
<i>MC.IC</i>	692, [654, 730]	675, [640, 710]	659, [635, 683]	638, [614, 662]	666, [645, 687]
<i>MIC.C</i>	655, [633, 677]	637, [617, 658]	667, [632, 703]	665, [627, 703]	656, [636, 676]
<i>MIC.IC</i>	690, [659, 721]	650, [627, 672]	688, [652, 725]	682, [644, 720]	675, [654, 697]

	Accuracy (Proportion Correct)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.89, [0.84, 0.94]	0.89, [0.85, 0.94]	0.93, [0.90, 0.96]	0.91, [0.87, 0.95]	0.91, [0.88, 0.93]
<i>MC.IC</i>	0.85, [0.79, 0.92]	0.88, [0.83, 0.93]	0.90, [0.86, 0.94]	0.93, [0.89, 0.96]	0.89, [0.86, 0.92]
<i>MIC.C</i>	0.89, [0.85, 0.93]	0.92, [0.89, 0.95]	0.89, [0.84, 0.94]	0.85, [0.79, 0.92]	0.89, [0.86, 0.92]
<i>MIC.IC</i>	0.82, [0.74, 0.90]	0.91, [0.88, 0.95]	0.88, [0.83, 0.93]	0.84, [0.77, 0.91]	0.86, [0.83, 0.90]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.

Table S12. Mean Experiment 2b Behavioral Data within Feedback Group for PC-50 items.

	Correct Reaction Times (ms)				
	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>

<i>MC.C</i>	671, [646, 695]	659, [636, 682]	653, [627, 679]	639, [614, 665]	655, [638, 672]
<i>MC.IC</i>	685, [659, 710]	682, [658, 706]	672, [649, 694]	667, [641, 693]	677, [661, 693]
<i>MIC.C</i>	676, [648, 704]	657, [632, 681]	672, [650, 695]	657, [634, 680]	665, [649, 682]
<i>MIC.IC</i>	686, [660, 712]	667, [644, 690]	685, [659, 711]	668, [644, 692]	677, [660, 693]

Accuracy (Proportion Correct)

	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	<u>Overall</u>
<i>MC.C</i>	0.85, [0.78, 0.91]	0.91, [0.87, 0.94]	0.92, [0.89, 0.95]	0.93, [0.90, 0.96]	0.90, [0.88, 0.93]
<i>MC.IC</i>	0.80, [0.74, 0.87]	0.87, [0.82, 0.91]	0.90, [0.87, 0.93]	0.93, [0.91, 0.95]	0.88, [0.85, 0.90]
<i>MIC.C</i>	0.89, [0.85, 0.94]	0.92, [0.89, 0.94]	0.91, [0.88, 0.94]	0.91, [0.87, 0.94]	0.91, [0.89, 0.93]
<i>MIC.IC</i>	0.86, [0.81, 0.91]	0.90, [0.86, 0.93]	0.88, [0.85, 0.92]	0.89, [0.85, 0.93]	0.88, [0.86, 0.90]

MC = mostly congruent; *MIC* = mostly incongruent; *C* = congruent; *IC* = incongruent. All confidence intervals are 95%.