**Supplemental Materials**

***Exploratory Interaction Analyses*.** In the Table 1S, we examine whether the three preceding trial factors moderate the relationship between current stimulus intensity and current strategy selection. As described in the main article, three separate models were evaluated, each with a one of the three possible two-way interaction terms. Each interaction effect was added into the full model, which included all the main effects (Model 2 in the full article). The interaction term for current stimulus intensity and preceding strategy choice was not significant, *ß*[SE] = .049[.228], Wald *χ2* = .046, *p* = .83 (Table 1S, S1). The interaction term for current stimulus intensity and preceding negative affect was not significant, *ß*[SE] = -.057[.063], Wald *χ2* = .813, *p* = .367 (Table 1S, S2). The interaction term for current stimulus intensity and preceding stimulus intensity was not significant, *ß*[SE] = .031[.209], Wald *χ2* = .022, *p* = .882 (Table 1S, S3). Of note, none of the QIC values were lower than the final pruned model in the main article (Table 1, M3).

In Table 2S, we considered possible interactions among the preceding trial factors. Three separate models were evaluated, each with one of the three possible two-way interaction terms. Each interaction effect was added into the full model, which included all the main effects (Model 2 in the full article). The interaction term for preceding strategy choice and preceding negative affect was not significant, *ß*[SE] = -.025[.079], Wald *χ2* = .099, *p* = .753 (Table 2S, S4). The interaction term for preceding stimulus intensity and preceding negative affect approached significance, *ß*[SE] = .453[.234], Wald *χ2* = 3.742, *p* = .053 (Table 2S, S5). The interaction term for preceding negative affect and preceding stimulus intensity was not significant, *ß*[SE] = -.043[.073], Wald *χ2* = .351, *p* = .554 (Table S, S6). Of note, the QIC values were all higher than the final pruned model in the main article (Table 1, M3) except for the preceding stimulus intensity and preceding negative affect interaction model, which was slightly lower (1929.42 < 1,929.59).

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| Table 1S  *Coefficients (Standard Error) of Logistic Regression Analyses Predicting the Effect of Preceding Trial Factors on the Relationship between Current Stimulus Intensity and the Probability of Choosing Distraction in the Current Trial* | | | |
| Coefficients | S1 | S2 | S3 |
| Intercept | -.512(.148)\*\*\* | -.555(.163)\*\*\* | -.507(.161)\*\* |
| CURINT | 1.401(.182)\*\*\* | 1.479(.206)\*\*\* | 1.395(.203)\*\*\* |
| PRECHOICE | -.565(.157)\*\*\* | -.581(.140)\*\*\* | -.604(.139)\*\*\* |
| PRENA | .093(.046)\* | .063(.057) | .093(.0464)\* |
| PREINT | .070(.126) | .065(.126) | .091(.181) |
| CURINTxPRECHOICE | .050(.227) | -- | -- |
| CURINTxPRENA | -- | -.057(.063) | -- |
| CURINTxPREINT | -- | -- | .031(.209) |
| QIC | 1940.80 | 1938.93 | 1941.25 |
| *Note. Current Choice – 0 = selection of rethink in current trial & 1 = selection of distract in current trial. Current Intensity (CURINT) – 0 = low-intensity stimulus & 1 = high-intensity stimulus. Preceding Choice (PRECHOICE) – 0 = selection of rethink in preceding trial & 1 = selection of distract in the preceding trial. Preceding Negative Affect (PRENA) – 8-point Likert scale [0 = not negative at all & 8 = very negative]. Preceding Intensity (PREINT) – 0 = low-intensity in the preceding trial & 1 = high-intensity stimuli in the preceding trial. SE – Standard Error. QIC – Quasi-Likelihood Information Criterion.*  *\* p < .05. \*\* p < .01. \*\*\* p < .001.* | | | |

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| Table 2S  *Coefficients (Standard Error) of Logistic Regression Analyses Predicting the Joint Effects of Preceding Trial Factors on the Probability of Choosing Distraction in the Current Trial* | | | |
| Coefficients | S4 | S5 | S6 |
| Intercept | -.512(.154)\* | -.598(.148)\*\*\* | -.529(.163)\*\* |
| CURINT | 1.379(.151)\*\*\* | 1.381(.150)\*\*\* | 1.379(.151)\*\*\* |
| PRECHOICE | -.569(.197)\*\* | -.261(.178) | -.606(.141)\*\*\* |
| PRENA | .082(.063) | .095(.047)\* | .065(.075) |
| PREINT | .077(.126) | -.241(.171) | .142(.176) |
| PRECHOICExPRENA | -.024(.079) | -- | -- |
| PRECHOICExPREINT | -- | .456(.234) | -- |
| PRENAxPREINT | -- | -- | -.043(.073) |
| QIC | 1943.63 | 1929.42 | 1941.48 |
| *Note. Current Choice – 0 = selection of rethink in current trial & 1 = selection of distract in current trial. Current Intensity (CURINT) – 0 = low-intensity stimulus & 1 = high-intensity stimulus. Preceding Choice (PRECHOICE) – 0 = selection of rethink in preceding trial & 1 = selection of distract in the preceding trial. Preceding Negative Affect (PRENA) – 8-point Likert scale [0 = not negative at all & 8 = very negative]. Preceding Intensity (PREINT) – 0 = low-intensity in the preceding trial & 1 = high-intensity stimuli in the preceding trial. SE – Standard Error. QIC – Quasi-Likelihood Information Criterion.*  *\* p < .05. \*\* p < .01. \*\*\* p < .001.* | | | |

***Mixed Effects (Mulitlevel) Analyses***. Although, as noted in the text, GEE regression is appropriate for the data and hypotheses in this study, analyses with mixed effects (multilevel) logistic regression models are also appropriate, and perhaps more familiar. Therefore, we also briefly present here those analyses (Table 3S). We followed the same sequence of models as in the GEE analyses and assessed fixed effects prior to random effects as recommended by Hox (2010).

In the baseline model with no predictors (Table 3S, M1), the between-subject variability in the probability of choosing to distraction was significant (σ2u0 **=** 0.378 [0.143], p < 0.001). The intraclass correlation revealed that twenty-one percent of the overall variability in the probability of selecting distraction was between-subjects. The 79% of the variability between stimuli within subjects (Hox, 2010, p. 118) is that to be explained by the current and preceding stimulus factors. Without any predictors, the baseline probability of choosing distract was 0.452.

Next, we added the current stimulus intensity and the 3 preceding trial effects as level-one predictors. As in the GEE analyses, all effects were significant except preceding stimulus intensity (Table 3, M2). Finally, we evaluated a random variance components for each of the 3 significant predictors. Only the random variance for current stimulus intensity was significant (σ2u1 = .711[.506], p < .001). Thus, as in the GEE results, the final model (Table 3S-M3) included current stimulus intensity, preceding strategy choice, and preceding negative affect and, in addition, the current stimulus intensity coefficient varying randomly across participants. Of note, the fixed coefficient for current stimulus intensity with this component as random in the mixed model and in the GEE model were nearly identical (1.369 and 1.371, respectively).

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| Table 3S  *Coefficients (Standard Errors) of Mixed Effects Models Using Logistic Regression to Predict the Probability of Choosing Distraction in the Current Trial* | | | |
| Model | M1-Baseline Model | M-2Full Model (fixed) | M3-Final Model |
| *Fixed components* |  |  |  |
| Intercept (*γ00)* | -.192(.074)\* | -.734(.131)\*\*\* | -.757(.127)\*\*\* |
| Current Intensity (*γ10)* | -- | 1.365(.149)\*\*\* | 1.369(.147)\*\*\* |
| Preceding Choice (*γ20)* | -- | -.266(.123)\* | -.307(.121)\* |
| Preceding Negative Affect (*γ30)* | -- | -.08(.038)\* | -.085(.035)\* |
| Preceding Intensity (*γ40)* | -- | -0.08(0.121) | -- |
| *Random Components* |  |  |  |
| σ2ε | 1.813 | 1.813 | 1.813 |
| σ2u0 | .378(.143)\*\*\* | .489(0.239)\*\*\* | .69(.476)\*\*\* |
| σ2u1 | -- | -- | .711(.506)\*\* |
| σ2u2 | -- | -- | -- |
| σ2u3 | -- | -- | -- |
| Parameters | 2 | 6 | 7 |
| Deviance | 4,833.21 | 4,646.401*†* | 4,634.081*†* |
| *Notes: \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001; † = significant difference between current and baseline models* | | | |

References

Hox, J. (2010). *Multilevel Analysis: Techniques and Applications*, 2nd Edition. New York, NY: Routledge.