Supplemental Materials for

Knowledge Updating in Real-World Estimation: Connecting Hindsight Bias and Seeding Effects

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Sensitivity of Results to Prior Specification

Table S1

Results of Experiment 1 with Skeptical Priors [and Weakly Informative Priors]

	Control		Concurrent		Preceding	
Direct-learning effects						
Phase	0.02	[0.04]	>10,000	[>10,000]	>10,000	[>10,000]
Phase × itemtype	-		999	[>10,000]	>10,000	[>10,000]
Phase (control)	-		>10,000	[>10,000]	0.9	[2.1]
Phase (experimental)	-		>10,000	[>10,000]	>10,000	[>10,000]
Hindsight effects						
Phase	0.01	[0.02]	>10,000	[>10,000]	15.4	[33.9]
Phase × itemtype	-		7,166	[>10,000]	0.2	[1.9]
Phase (control)	-		1.4	[3.6]	0.02	[0.04]
Phase (experimental)	-		>10,000	[>10,000]	8,100	[>10,000]
Transfer-learning effects						
Phase	0.01	[0.01]	>10,000	[>10,000]	3.5	[7.6]

Note. Shown are Bayes Factors quantifying the evidence of the alternative model incl. the fixed-effect predictor of interest to a baseline model without the fixed-effect predictor of interest (BF_{10}) with a skeptical prior on the slope parameter, `normal(0, 2.5)`. For comparison, BF_{10} for analyses with the weakly informative prior on the slope parameter, `normal(-0.5, 1)` (reported in the main text), are shown in brackets. Control = Control condition, Concurrent = Concurrent-feedback condition, Preceding = Preceding-feedback condition, Phase = Effect of phase, Phase (control) = Effect of phase for control items, Phase (experimental) = Effect of phase for experimental items.

Table S2

Results of Experiment 2 with Skeptical Priors [and Weakly Informative Priors]

	Control		Feedback		Domain		Irrelevant	
Hindsight effects								
Phase	< 0.01	[0.01]	$> 10,000$	[$> 10,000$]	38	[88]	< 0.01	[0.01]
Transfer-learning effects								
Phase	< 0.01	[0.01]	$> 10,000$	[$> 10,000$]	$> 10,000$	[$> 10,000$]	0.03	[0.07]

Note. Shown are Bayes Factors quantifying the evidence of the alternative model incl. the fixed-effect predictor of interest to a baseline model without the fixed-effect predictor of interest (BF_{10}) with a skeptical prior on the slope parameter, `normal(0, 2.5)`. For comparison, BF_{10} for analyses with the weakly informative prior on the slope parameter, `normal(-0.5, 1)` (reported in the main text), are shown in brackets. Control = Control condition. Feedback = Feedback condition. Domain = Domain-information condition. Irrelevant = Irrelevant-information condition. Phase = Effect of phase.

OJ = ROJ Cases

Table S3

Hindsight Effects in Experiment 1 After Excluding OJ = ROJ Cases

	Control		Concurrent		Preceding	
Phase	0.02	[0.01]	$> 10,000$	[$> 10,000$]	48.9	[33.9]
Phase × itemtype	-		$> 10,000$	[$> 10,000$]	0.36	[1.9]
Phase (control)	-		5.3	[3.6]	0.04	[0.04]
Phase (experimental)	-		$> 10,000$	[$> 10,000$]	$> 10,000$	[$> 10,000$]

Note. Shown are Bayes Factors quantifying the evidence of the alternative model incl. the fixed-effect predictor of interest to a baseline model without the fixed-effect predictor of interest (BF_{10}). For comparison, BF_{10} for analyses including all cases (OJ = ROJ, OJ ≠ ROJ, as reported in the main text) are shown in brackets. Control = Control condition. Concurrent = Concurrent-feedback condition. Preceding = Preceding-feedback condition.

Table S4

Hindsight Effects in Experiment 2 After Excluding OJ = ROJ Cases

	Control		Feedback		Domain		Irrelevant	
Phase	0.02	[0.01]	$> 10,000$	[$> 10,000$]	291	[88]	0.01	[< 0.01]

Note. Shown are Bayes Factors quantifying the evidence of the alternative model incl. the fixed-effect predictor of interest to a baseline model without the fixed-effect predictor of interest (BF_{10}). For comparison, BF_{10} for analyses including all cases (OJ = ROJ, OJ ≠ ROJ, as reported in the main text) are shown in brackets. Control = Control condition. Feedback = Feedback condition. Domain = Domain-information condition. Irrelevant = Irrelevant-information condition. Phase = Effect of phase.

Additional Anchoring Analyses Exp. 2

We ran several additional analyses to test if the information presented to the irrelevant-information group resulted in anchoring effects. First, we tested whether participants were influenced by the mean of the presented information during the AV phase. To do so, we computed the (log-transformed) discrepancy between the mean of the actual values and the estimated values, separately for the OJ and ROJ phase. As with the analyses described in the main text, hypothesis tests were conducted by comparing a full model that contains the main effect of phase (OJ vs. ROJ) to the baseline model that does not contain the main effect of phase. The results showed that there was no anchoring effect (BF_{10} = .04). We repeated the analysis for the median of the presented information, and again found no anchoring effect (BF_{10} = .03).

Second, we tested whether participants were influenced by the mean of the last pieces of the presented information (i.e., a recency-based anchoring effect). To do so, we computed the (log-transformed) discrepancy between the mean of the last five values presented during the AV phase and the estimated values. Again, we found no anchoring effect (BF_{10} = .04). We repeated the analysis for the median of the last five values, and again found not anchoring effect (BF_{10} = .02).