1   **Supplemental Online Material Reviewed**
2
3   Table S1
4   Number of squares and switches in each trial

Switch intensity	Squares (switches) in trial						
1 (squares/2.4)	11 (4)	12 (5)[a]	13 (5)	14 (5)	15 (6)	16 (6)	17 (7)
2 (squares/2.2)	11 (5)	12 (5)	13 (5)	14 (6)	15 (6)	16 (7)	17 (7)
3 (squares/1.8)	11 (6)	12 (6)	13 (7)	14 (7)	15 (8)	16 (8)	17 (9)
4 (squares/1.5)	11 (7)	12 (8)	13 (8)	14 (9)	15 (10)	16 (10)	17 (11)
5 (squares/1.3)	11 (8)	12 (9)	13 (10)	14 (10)	15 (11)	16 (12)	17 (13)

5   Note.   The number of switches on each trial are shown in parentheses. The number of
6   switches on each trial was determined by dividing the number of squares by 2.4, 2.2, 1.8, 1.5, or
7   1.3, and rounding down the result to the nearest integer (e.g., 11 / 1.3 = 8).
8   [a] The first trial of the task had 12 squares and switched 5 times from a small to big or big to
9   small square within the same trial. To manipulate task demand, if participants responded
10 correctly, the next trial had 13 squares and 5 switches (move horizontally to the cell on the right
11 in the table). But if participants responded incorrectly, the next trial had 11 squares and 4
12 switches (move horizontally to the cell on the left in the table). If participants responded correctly
13 on a trial with 17 squares (rightmost column), the next trial had 11 squares and the switch
14 intensity increased (move down one row in the table). If participants responded incorrectly on a
15 trial with 11 squares (rightmost column), the next trial had 17 squares and the switch intensity
16 decreased (move up one row in the table).

Table S2

Bayesian Multilevel Model Parameter Estimates Using Priors Centered Around 0

	Study 1 (20 min)	Study 2 (15 min)	Study 3 (5 min)	Study 4 (10 min)	Overall
Demand ~ condition	1.83 [1.61, 2.04] (BF > 500) d = 1.34 [1.13, 1.56]	1.49 [1.19, 1.78] (BF > 500) d = 1.00 [0.73, 1.27]	2.02 [1.75, 2.30] (BF > 500) d = 1.37 [1.10, 1.64]	1.73 [1.37, 2.07] (BF > 500) d = 1.07 [0.77, 1.40]	2.78 [2.64, 2.91] (BF > 500) d = 2.12 [1.97, 2.27]
Effort ~ condition	1.77 [1.55, 1.98] (BF > 500) d = 1.30 [1.09, 1.52]	1.36 [1.08, 1.65] (BF > 500) d = 0.92 [0.67, 1.18]	2.17 [1.89, 2.44] (BF > 500) d = 1.52 [1.23, 1.80]	1.67 [1.32, 2.01] (BF > 500) d = 1.01 [0.73, 1.32]	2.70 [2.56, 2.83] (BF > 500) d = 2.04 [1.89, 2.19]
Frustration ~ condition	2.01 [1.78, 2.24] (BF > 500) d = 1.48 [1.22, 1.75]	1.10 [0.80, 1.41] (BF > 500) d = 0.72 [0.49, 0.97]	1.32 [1.04, 1.60] (BF > 500) d = 0.84 [0.62, 1.08]	1.22 [0.88, 1.56] (BF > 500) d = 0.75 [0.49, 1.05]	2.05 [1.90, 2.19] (BF > 500) d = 1.46 [1.32, 1.60]
Boredom ~ condition	1.01 [0.76, 1.26] (BF > 500) d = 0.63 [0.46, 0.81]	0.50 [0.20, 0.81] (BF = 72.41) d = 0.31 [0.11, 0.50]	0.43 [0.13, 0.71] (BF = 29.38) d = 0.25 [0.08, 0.42]	0.50 [0.15, 0.84] (BF = 33.16) d = 0.27 [0.08, 0.47]	0.86 [0.69, 1.03] (BF > 500) d = 0.52 [0.41, 0.62]
Fatigue ~ condition	1.93 [1.71, 2.15] (BF > 500) d = 1.52 [1.25, 1.80]	1.20 [0.91, 1.49] (BF > 500) d = 0.80 [0.57, 1.05]	1.73 [1.45, 2.01] (BF > 500) d = 1.09 [0.87, 1.33]	1.69 [1.34, 2.03] (BF > 500) d = 1.02 [0.74, 1.32]	2.44 [2.30, 2.58] (BF > 500) d = 1.82 [1.66, 1.98]
Boundary ~ condition + congruency					
Condition	−0.003 [−0.005, −0.001] (BF = 32.35) d = −0.19 [−0.31, −0.07]	0.00 [−0.003, 0.002] (BF = 0.32) d = −0.03 [−0.19, 0.13]	−0.005 [−0.007, −0.002] (BF > 500) d = −0.29 [−0.43, −0.14]	−0.002 [−0.007, 0.004] (BF = 0.81) d = −0.04 [−0.17, 0.09]	−0.003 [−0.005, −0.001] (BF = 180.73) d = −0.13 [−0.20, −0.06]
Congruency	−0.02 [−0.02, −0.02] (BF > 500) d = −1.12 [−1.25, −0.98]	−0.02 [−0.02, −0.01] (BF > 500) d = −0.94 [−1.13, −0.76]	−0.01 [−0.02, −0.01] (BF > 500) d = −0.88 [−1.04, −0.73]	−0.01 [−0.02, −0.004] (BF = 0.30) d = −0.27 [−0.44, −0.09]	−0.02 [−0.02, −0.01] (BF > 500) d = −0.68 [−0.75, −0.60]
Drift rate ~ condition + congruency					
Condition	−0.006 [−0.01, 0.00] (BF = 1.32) d = −0.11 [−0.23, 0.007]	−0.007 [−0.01, 0.00] (BF = 1.73) d = −0.15 [−0.31, 0.01]	0.004 [−0.003, 0.01] (BF = 0.54) d = 0.07 [−0.06, 0.21]	0.001 [−0.009, 0.01] (BF = 0.44) d = 0.02 [−0.13, 0.18]	−0.002 [−0.006, 0.002] (BF = 0.32) d = −0.04 [−0.11, 0.03]
Congruency	−0.10 [−0.11, −0.10] (BF > 500) d = −2.12 [−2.28, −1.95]	−0.10 [−0.11, −0.10] (BF > 500) d = −2.18 [−2.40, −1.95]	−0.09 [−0.10, −0.09] (BF > 500) d = −1.78 [−1.97, −1.60]	−0.10 [−0.11, −0.09] (BF > 500) d = −1.56 [−1.78, −1.35]	−0.10 [−0.10, −0.10] (BF > 500) d = −1.90 [−2.00, −1.81]
Boundary ~ fatigue	−0.001 [−0.002, 0.00] (BF = 5.40) d = −0.08 [−0.14, −0.02]	0.00 [0.00, 0.002] (BF = 0.20) d = 0.02 [−0.06, 0.10]	−0.002 [−0.002, −0.001] (BF > 500) d = −0.13 [−0.19, −0.07]	0.00 [−0.003, 0.002] (BF = 0.40) d = −0.02 [−0.08, 0.04]	−0.001 [−0.002, 0.00] (BF = 7.70) d = −0.05 [−0.08, −0.02]
Boundary ~ frustration	−0.001 [−0.002, 0.00] (BF = 2.92) d = −0.08 [−0.13, −0.02]	0.00 [0.00, 0.002] (BF = 0.24) d = 0.03 [−0.05, 0.12]	−0.002 [−0.002, 0.00] (BF = 23.13) d = −0.11 [−0.19, −0.05]	0.00 [−0.003, 0.003] (BF = 0.41) d = −0.01 [−0.09, 0.06]	−0.001 [−0.002, 0.00] (BF = 0.61) d = −0.04 [−0.08, −0.005]
Boundary ~ boredom	−0.00 [−0.002, 0.00] (BF = 0.47) d = −0.05 [−0.12, 0.02]	0.00 [−0.001, 0.002] (BF = 0.22) d = 0.02 [−0.08, 0.12]	−0.001 [−0.002, 0.00] (BF = 0.82) d = −0.08 [−0.16, 0.008]	0.002 [−0.002, 0.005] (BF = 0.79) d = 0.04 [−0.04, 0.13]	0.00 [−0.001, 0.001] (BF = 0.23) d = −0.003 [−0.05, 0.04]
Drift rate ~ fatigue	0.00 [−0.003, 0.001] (BF = 0.16) d = −0.02 [−0.08, 0.04]	−0.002 [−0.005, 0.001] (BF = 0.37) d = −0.05 [−0.13, 0.03]	0.00 [−0.002, 0.003] (BF = 0.18) d = 0.02 [−0.04, 0.08]	0.00 [−0.003, 0.004] (BF = 0.19) d = 0.005 [−0.06, 0.07]	0.00 [−0.002, 0.001] (BF = 0.06) d = −0.005 [−0.04, 0.03]
Drift rate ~ frustration	−0.002 [−0.004, 0.00] (BF = 1.11) d = −0.06 [−0.12, −0.003]	−0.002 [−0.005, 0.002] (BF = 0.31) d = −0.04 [−0.13, 0.04]	0.00 [−0.003, 0.003] (BF = 0.18) d = 0.007 [−0.06, 0.07]	0.00 [−0.005, 0.004] (BF = 0.24) d = −0.01 [−0.09, 0.07]	−0.001 [−0.003, 0.00] (BF = 0.22) d = −0.03 [−0.06, 0.008]
Drift rate ~ boredom	−0.003 [−0.006, −0.00] (BF = 3.58) d = −0.09 [−0.16, −0.02]	−0.002 [−0.006, 0.001] (BF = 0.43) d = −0.06 [−0.16, 0.04]	0.00 [−0.004, 0.003] (BF = 0.21) d = −0.01 [−0.09, 0.07]	−0.003 [−0.008, 0.001] (BF = 0.76) d = −0.06 [−0.16, 0.03]	−0.002 [−0.004, −0.001] (BF = 3.80) d = −0.06 [−0.10, −0.02]

Note.   Numbers within brackets are the upper and lower limits of 95% highest posterior density intervals. Bayes factor > 1 indicates evidence for the experimental hypothesis, whereas values < 1 indicates evidence for the null hypothesis. Bayes factors were computed using bridge sampling. BF = Bayes factor.