**Supplemental Material**

Bobadilla-Suarez, S. & Love, B. C. (in prep). Fast or Frugal, but not both: Decision Heuristics under Time Pressure *Psychological Science.* doi:

**Supplemental Material A:** *List of Cues (Statistics for Developing Countries)*

"Competitiveness in medium enterprises",

"Price stability in cheap basic goods",

"Increased employment opportunities",

"Public investment in infrastructure",

"Decreased rates of infectious diseases",

"Increased life expectancy for women",

"Development of civic participation"

**Supplemental Material B:** *Stimuli Sampling Procedure*

Classifying trials based on Take-the-Best difficulty results in Q1, Q2, Q3, Q4, Q5 trials (i.e. trials where looking at the first cue is sufficient, looking at the second is sufficient, etc.). Since only Q1, Q2 & Q3 trials were used this reduces the space to 468 trials.

Classifying trials based on Tallying difficulty results in trials with Δ1, Δ2, Δ3, Δ4 & Δ5 difference between the amount of negatively-valued (red cross) and positively-valued (green checkmark) cues. Since only Δ1, Δ2 & Δ3 trials were used this reduces the space to 462 trials. Cross-tabulating Tallying & Take-the-Best trial spaces results in a space of 452 trials (Table B1).

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| Table B1 | | | | |  |  |
| *Cross Tabulation between TAL & TTB Trial Types* | | | | |  |  |
|  |  | **TAL** | | |  |  |
|  |  | *Δ3* | *Δ2* | *Δ1* |  |  |
| **TTB** | *Q1* | 40 | 100 | 180 |  |  |
| *Q2* | 10 | 30 | 60 |  |  |
| *Q3* | 2 | 8 | 20 |  |  |

In addition to balanced sampling across the two different difficulty classifications, the amount of non-discriminating cues can also affect difficulty in both experimental conditions, (whether participants use TAL or TTB). Trials range from having seven cues with discriminating power down to only three cues with discriminating power. We tried to sample trials with the most diversity possible without repetition of stimuli (Table B2).

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| Table B2 | | | | |  |  |
| *Cross Tabulation between TAL & TTB Trial Types Sampled* | | | | |  |  |
|  |  | **TAL** | | |  |  |
|  |  | *Δ3* | *Δ2* | *Δ1* | *Total* |  |
| **TTB** | *Q1* | 6 | 3 | 3 | 12 |  |
| *Q2* | 5 | 5 | 2 | 12 |  |
| *Q3* | 1 | 4 | 7 | 12 |  |
|  | *Total* | 12 | 12 | 12 | 36 |  |

This results in a total of 36 trials that can be partitioned into 3 blocks of Q1, Q2, Q3 trials or equivalently as 3 blocks of Δ3, Δ2, or Δ1 trials respectively. Now adding the trials where the signs are reversed -for right-left presentation instead of left-right presentation of the stimuli- gives a total of 72 trials.

Globally, all 72 trials can also be partitioned into trials where all cues can discriminate between options (n=8), trials where six cues can discriminate between options (n=8), trials where five cues can discriminate between options (n=28), trials where four cues can discriminate between options (n=16) and trials where three cues can discriminate between options (n=12).

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| Table B3 |  |  |  |  |  |  |  |  |  |  |
| *Cross Tabulations of Trial Diffuclty with Amount of Non-discriminating Cues for TAL & TTB* | | | | | | | | | | |
| **Tallying** | | | |  |  | **Take-the-Best** | | | |  |
| **# of Equals Signs** | **Δ3** | **Δ2** | **Δ1** | **Total** |  | **# of Equals Signs** | **Q1** | **Q2** | **Q3** | **Total** |
| 0 | 6 | 0 | 2 | 6 |  | 0 | 8 | 0 | 0 | 6 |
| 1 | 0 | 8 | 0 | 8 |  | 1 | 4 | 4 | 0 | 8 |
| 2 | 18 | 0 | 10 | 28 |  | 2 | 8 | 12 | 8 | 28 |
| 3 | 0 | 16 | 0 | 16 |  | 3 | 2 | 6 | 8 | 16 |
| 4 | 0 | 0 | 12 | 12 |  | 4 | 2 | 2 | 8 | 12 |
| **Total** | 24 | 24 | 24 | 72 |  | **Total** | 24 | 24 | 24 | 72 |

**Supplemental Material C:** *Cue Subset Models for TAL & TTB*

Number of TAL Subset Models:

, where is the total number of cues ().

Number of TTB Subset Models: , where is the total number of cues () and is the cardinality of the random model ().

Number of TAL and TTB Subset Models Combined:

, where is the cardinality of the **random** model () and is the cardinality of the **single** cue models (), accounting for the fact that single cue models make identical predictions for both TAL and TTB.

Since cue positions were randomized on each trial, the models can be applied to the cues themselves (featural model class) or to their positions on the screen (positional model class).

Total number of Subset Models:

, where the subscripts represent the different model classes ( for featural or for positional) and is the cardinality of the full TAL model that includes **all** cues (), accounting for the fact that this model makes identical predictions for both featural and positional model classes.