It is possible that components categorized as abstraction may be better understood to tax working memory. In this case, conditions in Experiment 2 may be decomposed into an abstraction and a working memory score, as some conditions require individuals to remember a stimuli that was presented prior to the subtask. For this alternate coding scheme, the abstraction and working memory codings are as follows:

**Control**: Participants must determine whether a current stimulus follows the previous stimulus in the sequence. Working memory is not required. As such, it is assigned an abstraction value of 2 and a working memory value of 0.

**Delay**: Participants must determine whether a current stimulus follows the previous stimulus in the sequence. Working memory is required to remember the stimulus presented before the subtask, for an average of 4 trials. As such, it is assigned an abstraction value of 2 and a working memory value of 4.

**Restart**: Participants must determine whether a current stimulus follows the previous stimulus in the sequence. During and after the subtask, participants are required to restart the order of the task in question. Working memory is not required. As such, it is assigned an abstraction value of 3 and a working memory value of 0.

**Dual**: Participants must determine whether a current stimulus follows the previous stimulus in the sequence. During the subtask, participants are required to restart the order of the task in question. Working memory is required to remember the stimulus presented before the subtask, for an average of 4 trials. As such, it is assigned an abstraction value of 3 and a working memory value of 4.

The glmulti analyses were run for data on Experiment 2 using this alternative coding, with the variable of Working Memory added in as a possible explanatory variable. Results for Experiment 2 are presented on the following page; notably, abstraction remains the variable with the highest importance.

**Table 1**

*Estimates, number of models, confidence intervals, and importance for candidate variables for Experiment 2.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Estimate** | **N. Models** | **CI Lower** | **CI Upper** | **Importance** |
| **Abstraction** | -0.4763 | 512 | -0.6164 | -0.3362 | 0.9526 |
| **WorkingMem** | -0.0517 | 448 | -0.0852 | -0.0183 | 0.9136 |
| **SelectionErr** | 0.1502 | 512 | -0.3298 | 0.6303 | 0.4750 |
| **SelectionRT** | 0.0000 | 512 | -0.0001 | 0.0001 | 0.3263 |
| **Abstraction:SelectionErr** | -0.0225 | 240 | -0.1174 | 0.0723 | 0.0732 |
| **Abstraction:WorkingMem** | 0.0006 | 76 | -0.0036 | 0.0048 | 0.0637 |
| **SelectionRT:WorkingMem** | -3.18E-06 | 48 | -1.59E-05 | 9.53E-06 | 0.0611 |
| **SelectionErr:SelectionRT** | 2.02E-06 | 136 | -1.09E-05 | 1.49E-05 | 0.0437 |
| **SelectionErr:WorkingMem** | -1.64E-03 | 29 | -8.82E-03 | 5.55E-03 | 0.0336 |
| **Abstraction:SelectionRT** | 1.41E-06 | 352 | -4.88E-06 | 7.70E-06 | 0.0314 |

The variables with importance above .5 were iteratively added to a model as predictor variables of selection rates in Experiment 2.

A model with only abstraction explained a significant amount of variance (F(1,72)=122.4, p<.001).

Adding working memory to the model significantly increased the explanatory power (X2(2)=32.2, p<.001).