**2) What's the main question being asked or hypothesis being tested in this study?**  
When facing difficult decisions with many options and limited time, people will construct a subset of those options to evaluate thoroughly, and will be more likely to include options that were good in the past. We test this in an experiment with two stages. In Stage 1, people are trained to associate a series of fourteen English words with different values. In Stage 2, people use those words to make a series of difficult decisions. We investigate the effect of Stage 1 value on Stage 2 decisions.  
  
**3) Describe the key dependent variable(s) specifying how they will be measured.**  
The dependent variable is word choice in Stage 2. There will be nine decisions total. For each one, we will describe the decision (e.g. "Give us a word from Stage 1 with the most number of horizontal lines. You'll get 10 points for each horizontal line in the word you describe"), give an example, a comprehension check, and then a textbox to submit a response. To parse participants' answers, we will compare their response to the list of Stage 1 words using the Optimal String Alignment method in the "amatch" function of R package "stringdist" (with a maximum distance of 2). Any response that fails to match a Stage 1 word will be coded as NA. All decisions will have time limits, which were calibrated a priori to the difficulty of the question.  
  
**4) How many and which conditions will participants be assigned to?**  
For each participant, half of the Stage 1 words will be randomly assigned to be high point value, and half to be low point value. There are no between-subject conditions. We treat Stage 1 value as a dichotomous variable.  
  
**5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.**  
First, we predict a positive interaction between Stage 1 and Stage 2 point values on word choice. We will estimate a mixed multinomial logit model (using the package "mlogit" in R), regressing word choice on (centered) Stage 1 value, (centered) Stage 2 value, and their interaction. (The Stage 1 value of a word is a dummy variable for "high" or "low". The Stage 2 value of a word for each Stage 2 decision is its rank on that decision - 1 if it is the worst of the 14 words, 14 if it is the best of the 14 words, etc. If several words are tied for the same rank, we give them all the maximum.) We assume that the distribution of slopes across subjects is normal, use the default Halton procedure for model estimation, disallow correlation among random effects, set the number of pseudo-random number draws to 1000, and set the gradient tolerance to .001. We will include word-specific intercepts, but drop them if the model fails to converge. For each participant, we will specify their potential options to include only the words that they could remember at all (as measured by a free recall test at the end of the experiment.) We will run a right-tailed t-test on the interaction regressor (using the t values given by mlogit) to test for a significant positive interaction.  
  
Second, we will fit eight computational models to trial-level choices. Four models will sample a subset of options (using a softmax function over Stage 1 value, Stage 2 value, a linear combination of the two, or neither), and then choose among those options with another softmax (with an independent temperature parameter). The other four models will sample a single option (with the same variants). We will find the maximum a posteriori parameters for each model (with a Gamma(4.5, 1) prior and [0, 10] range for the inverse temperatures, and a uniform prior and {2, 3, 4} range for the subset size). We will then compute the Laplace approximation to the model-evidence for each subject for each model, and compare them using Bayesian model selection. (If the Hessian is degenerate for any subject, we will replace the Laplace approximation for that subject with the BIC.) We predict that the choice set model which uses both Stage 1 and Stage 2 value to construct choice sets will have the highest protected exceedance probability.  
  
**8) Anything else you would like to pre-register?   
(e.g., data exclusions, variables collected for exploratory purposes, unusual analyses planned?)**  
We will exclude participants for whom any of the following is true: They don't complete the study, they successfully recall less than 75% of the words or values during Stage 1 training, they show a Pearson correlation between Stage 1 value and Stage 1 choices of less than .75, they fail to give a Stage 1 word for more than 2 of the 5 Stage 2 trials, they repeat an answer in Stage 2 more than twice (people were not allowed to repeat words on consecutive trials), they pass less than 50% of the Stage 2 comprehension checks, they recall less than 5 words in the free recall question, or they write things down physically during the experiment (as measured by a probe at the end). We will also exclude any trials in which the participant did not give a response that matched a Stage 1 word.