

Decision Rules

Multi-Attribute Utility (MAU) based rules

- Multiattribute utility (MAU)
 - This is the sum of the probability weighted utility scores for each attribute reported by the participant. The MAU Total score ranges from -126 to 126 (± 3 (maximum Utility) x 7 (maximum probability) x 6 (maximum number of attributes)).

$$\sum_i p_i U_i$$

- Equal Weights (EW)
 - This is the sum of the unweighted utility scores for each attribute reported by the participant. Whilst MAU weights the utility for each attribute based on the probability, EW assumes an equal weighting. The Equal Weights Total score ranges from -18 to 18 (± 3 (maximum Utility) x 6 (maximum number of attributes)).

$$\sum_i U_i$$

- Tallying
 - This strategy simply counts the number of positive versus negative attribute scores e.g. an alternative with two attributes, worth +3 Utility and +1 Utility respectively, would be scored as a +2.
- First-attribute-only (FAO)
 - A heuristic strategy with rationale related to availability and fluency. This suggests that the first attribute that comes to mind is the most important in making the choice between alternatives. This is a non-compensatory strategy that does not take into account any attributes after the initial one. The unweighted FAO uses only the utility and ignores the probability of the attribute.

$$U_1$$

Free Association rules

- Free Association Utility (FAU)
 - The novel FAU approach tasks participants with generating attributes based on free association and then assigns a utility score to each attribute. There is no probability element to this approach, so the FAU Total score is the sum of the unweighted utility scores. The FAU Total score ranges from -18 to 18 (± 3 (maximum Utility x 6 (maximum number of attributes))).

$$\sum_i U_i$$

- Free Association Utility Tallying (FAU_{tal})
 - As with the tallying method described above, but using the Utility values derived from the free association task (rather than the multiattribute task). The FAU_{tal} method simply counts the number of positive versus negative associates identified by the participants.
- Free Association Utility First-associate-only (FAU_{FAO})
 - As with the FAO method described above, but using the Utility values derived from the free association task.

$$U_1$$

Table S1: Analytic and Associative Ratings

	Attribute-based Values Option A		Attribute-based Likelihood Option A		Attribute-based Values Option B		Attribute-based Likelihood Option B		Associative Option A		Associative Option B	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Exp 1	.64	.98	5.24	1.07	.41	1.02	4.37	1.52	4.88	1.45	4.48	1.84
Exp 2	.67	1.03	5.14	1.12	.35	1.09	4.38	1.42	4.76	1.46	4.13	1.61
Exp 3	.82	1.08	5.15	1.01	.31	1.22	4.47	1.29	1.14	1.27	.31	1.58

Table S2: Expt 1 Satisfaction and Success by Condition

Attributes		Satisfaction				Success					
		Associative		Control		Associative		Control			
Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
5.51	1.11	5.40	1.26	5.51	1.08	5.43	1.20	5.31	1.18	5.40	1.03

Table S3: Expt 1 Pearson correlations of decision rules and decision outcomes

	MAU Chosen	MAU Unchosen	EW Chosen	EW Unchosen	Tally Chosen	Tally Unchosen	FAO Chosen	FAO Unchosen	FAU Chosen	FAU Unchosen	FAU _{TAL} Chosen	FAU _{TAL} Unchosen	FAU _{FAO} Chosen	FAU _{FAO} Unchosen	Control Chosen	Control Unchosen	Satisfaction
MAU Unchosen	.16																
EW Chosen	.94**	.09															
EW Unchosen	.08	.90**	.06														
Tally Chosen	.82**	.01	.90**	-.04													
Tally Unchosen	.09	.81	.07	.91**	-.01												
FAO Chosen	.60**	.02	.59**	.03	.48**	.03											
FAO Unchosen	.07	.38**	.12	.41**	.08	.33**	-.22*										
FAU Chosen																	
FAU Unchosen									.53**								
FAU _{TAL} Chosen									.72**	.54**							
FAU _{TAL} Unchosen									.53**	.74**	.71**						
FAU _{FAO} Chosen									.58**	.17	.11	.06					
FAU _{FAO} Unchosen									.24*	.63**	.18	.21	.15				
Control Chosen																	
Control Unchosen															.07		
Satisfaction	.37**	.10	.35**	.09	.30**	.10	.39**	-.02	.42**	.27*	.16	.09	.43**	.03	.59**	.04	
Success	.35**	.10	.36**	.08	.29**	.09	.33**	.11	.42**	.27	.16	.09	.43**	.24*	.29**	.03	.61**

* = $p < .05$, ** = $p < .01$

Table S4: Expt 2 Satisfaction and Success

Satisfaction		Success	
Mean	SD	Mean	SD
5.44	1.22	5.46	1.07

Table S5: Expt 2 Pearson correlations of decision rules and decision outcomes

	MAU Chosen	MAU Unchosen	EW Chosen	EW Unchosen	Tally Chosen	Tally Unchosen	FAO Chosen	FAO Unchosen	FAU Chosen	FAU Unchosen	FAU _{TAL} Chosen	FAU _{TAL} Unchosen	FAU _{FAO} Chosen	FAU _{FAO} Unchosen	Satisfaction
MAU Unchosen	.18**														
EW Chosen	.94**	.12													
EW Unchosen	.04	.86**	.04												
Tally Chosen	.85**	.09	.93**	.02											
Tally Unchosen	-.001	.80**	-.02	.93**	-.04										
FAO Chosen	.50**	-.03	.53**	-.04	.47**	-.04									
FAO Unchosen	-.01	.50**	-.03	.55**	-.03	.48**	-.26**								
FAU Chosen	.32**	.14*	.30**	.11	.25**	.09	.15*	.09							
FAU Unchosen	.17*	.34**	.13*	.30**	.10	.29**	.01	.19**	.27**						
FAU _{TAL} Chosen	.12	.06	.12	.03	.07	.04	.05	-.01	.65**	.30**					
FAU _{TAL} Unchosen	.18**	.11	.18**	.09	.15*	.10	.09	.05	.30**	.67**	.51**				
FAU _{FAO} Chosen	.25**	.03	.22**	.01	.19**	-.05	.18**	.04	.47**	.01	-.07	-.04			
FAU _{FAO} Unchosen	.06	.21**	.03	.19**	.02	.15*	-.07	.14*	.02	.59**	.07	.15*	-.10		
Satisfaction	.31**	.01	.32**	-.03	.28**	-.04	.29**	-.01	-.09	-.15*	.30**	-.09	.33**	-.05	
Success	.23**	.12	.25**	.06	.21**	.04	.12	.05	-.02	.02	.33**	.09	.36**	.06	.64**

Table S6: Expt 3 Satisfaction and Success

Time 1				Time 2			
Satisfaction		Success		Satisfaction		Success	
Mean	SD	Mean	SD	Mean	SD	Mean	SD
5.46	1.13	5.39	1.17	5.89	1.26	5.64	1.25

Table S7: Expt 3 Pearson correlations of decision rules and decision outcomes

	MAU Chosen	MAU Unchosen	EW Chosen	EW Unchosen	Tally Chosen	Tally Unchosen	FAO Chosen	FAO Unchosen	FAU Chosen	FAU Unchosen	FAU _{TAL} Chosen	FAU _{TAL} Unchosen	FAU _{FAO} Chosen	FAU _{FAO} Unchosen	Satisfaction T1	Success T1	Satisfaction T2
MAU Unchosen	.21**																
EW Chosen	.94**	.21**															
EW Unchosen	.13	.89**	.15*														
Tally Chosen	.85**	.27**	.89**	.23**													
Tally Unchosen	.43**	.74**	.44**	.78**	.61**												
FAO Chosen	.46**	.06	.49**	.03	.46**	.22**											
FAO Unchosen	.09	.54**	.08	.59**	.15*	.49**	-.13										
FAU Chosen	.17*	.17*	.16*	.16*	.22**	.19**	.08	.14*									
FAU Unchosen	.08	.37**	.13	.47**	.19**	.46**	.13	.32**	.10								
FAU _{TAL} Chosen	.15*	.15*	.14*	.14*	.22**	.17*	.06	.14*	.95**	.10							
FAU _{TAL} Unchosen	.08	.35**	.11	.46**	.18*	.46**	.09	.33**	.10	.96**	.11						
FAU _{FAO} Chosen	.13	.21**	.10	.18*	.16*	.17*	.05	.14*	.70**	-.02	.64**	-.02					
FAU _{FAO} Unchosen	.01	.20**	.06	.28**	.12	.29**	.13	.21**	-.02	.72**	-.01	.68**	-.13				
Satisfaction T1	.38**	.04	.42**	.04	.40**	.18**	.32**	.08	.29**	-.02	.27**	-.02	.18**	.00			
Success T1	.33**	.07	.32**	.04	.34**	.17*	.21**	.11	.25**	.07	.21**	.07	.16*	.07	.50**		
Satisfaction T2	.01	.10	.02	.14	.05	.07	.08	.05	.19*	.21**	.15*	.18*	.18*	.11	.20**	.25**	
Success T2	.09	.09	.08	.12	.12	.11	.18*	.06	.34**	.21**	.30**	.21**	.25**	.14	.23**	.33*	.74**