

**A Decision Theoretic Approach to Modeling
Multiple Bounded Uncertainty Choice Data¹**

Proposed running title

Address correspondence to

Abstract

1. Introduction

e.g.

2. Review of Prior Findings: Respondent uncertainty and the multiple bounded uncertainty choice format

V_i

$F \cdot$





$$F \cdot V_i = x_i! + \sum_i x_i$$

$G_i \bullet$ i i b

$$P_i V_i b = - G_i b \quad V_i \quad i$$

Pr event occurs = *Pr event occurs* =

 i $b V_i b$

$$b P_i V_i b = - G_i b =$$

individual

4.1 An optimal decision rule for continuous uncertainty responses

$$(1) \quad R_i b = P_i V_i \quad b = -P_i V_i \quad b = -G_i b$$

$$V_i !$$

$$L ! v_i \qquad i$$

(2) $Average\ loss\ of\ \# = E_i l L ! v_i \ \#$

(3) $l L ! v_i \ \# = L ! v_i - \#$

(4) $\# = E_i (L ! V_i - \#)$

(5) $\#^* = E_i L ! v_i$

$$(6) \quad \#^* = E_i L! V_i = \int_{-\infty}^{\infty} L! v dP_i v$$

$$R_i b_k = P_i V_i \quad b_k = -P_i V_i \quad b$$

(8)

$$\mathcal{S} = \{ -\infty \quad b \quad b \quad b \quad b_{K-} \quad b_K \quad b_K \quad \infty \}$$

$$= \{$$

$$\#^* = E_i L ! V_i = P_i V_i b \cdot F$$

(11)

$$WTP_i = \% + \&_i$$

$\&_i$

WTP_i

$\%$



i.e.

6. Conclusions

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Figure 1: Multiple Bounded Uncertainty Choice Sample Response

Table II: Estimation Results for Maine Moose Hunting Study¹

	Definitely Yes Model	Probably Yes Model	Not Sure Model	Benchmark Decision Theory Model

Table III: Estimation Results for Maine Moose Hunting Study–Sensitivity of decision theory estimates to assignment of probabilities¹

Symmetric Assignments		Asymmetric Assignments		
	1, 0.99, 0.5, 0.01, 0	1, 0.6, 0.5, 0.4, 0	Benchmark²: 1, 0.75, 0.5, 0.15, 0	1, 0.99, 0.98, 0.5, 0

Table IV: Estimation Results for Glen Canyon Pilot Study¹

	Definitely Yes Model	Probably Yes Model	Not Sure Model	Benchmark Decision Theory Model
Version 1				
Version 2				
Version 3				

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