MBS 02-09

Increasing Increment Generalizations
Of Rank-Dependent Theories

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Empirical evidence from both utility and psychophysical experiments suggests that people respond quite differently-perhaps discontinuously-to stimulus pairs when one consequence or signal is set to "zero." Such stimuli are called unitary. The author's earlier theories assumed otherwise. In particular, the key property of segregation relating gambles and joint receipts (or presentations) involves unitary stimulti. Also, the representation of unitary stimulti was assumed to be separable (i.e., multiplicative). The theories developed here do not invoke separability and segregation simultaneously. In the communtative case with identity e, which is relevant to utility, a class of representations more general than rank-dependent utility (RDU) is found when V is an additive representation of joint receipt, namely,

$$V(x,C;y) + Mc[V(x) - V(y)] \quad (x \; y \; e),$$

where $Mc(0) = 0$ and $Mc(R)$ is strictly increasing in R This form and its natural generalization to gambles of order $n > 2$, which is also axiomatized, appear to encompass models of configural weights and decision affect. For joint receipts that either are non-commutative with a one-sided identity or are idempotent with no identity, which are the cases relevant to psychophysics, the results for non-unitary stimuli include the prediction of a conjoint additive representation and a prediction of constant bias independent of signal intensity.

Keywords: distributivity, generalized RDU, increasing increments, segregation, unitary stimulti