

Consider uncertain alternatives for which an event has two consequences (binary gambles, "gambles" for short) and over them an operation of joint receipt which need not be closed and may be non-commutative. The two structures are linked by a distributivity property called segregation and a preference order. Utility functions order nonnegative numbers to consequences and gambles. Utility representations describe how the utility of a gamble depends on the utilities of consequences and on the "weight" of necessary and sufficient conditions, often in form of functional equations, for certain properties of representations. We first give a functional characterization of the often postulated event commutativity stating that two events can be interchanged in a special composite gamble where one outcome is a consequence but the other is itself a gamble. A utility representation is separable if it is multiplicative for gambles with one consequence having 0 utility. We give three more specific characterizations of separable representations by segregation, by homogeneity and event commutativity, and by homogeneity and segregation, and show that in the last case event commutativity follows.