

Risk Aversion and the proportional Solution in Two Person Bargaining Games

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For bargaining over the distribution of commodities, or other riskless outcomes, Nash's solution predicts that risk aversion is a disadvantage in bargaining. In this paper we consider the proportional solution for bargaining games, and we demonstrate that, for such solutions, risk aversion need not always be a disadvantage in bargaining. If the pay-off transformations satisfy some additional conditions on the derivative, then however, risk aversion proves to be an advantage for the opponent. Otherwise, it is not necessarily so.

1. INTRODUCTION

Several investigators have considered how risk aversion influences the outcome of bargaining, as modelled by Nash (1950). Kannai (1977) noted that when bargaining concerns distribution of a divisible commodity between two risk averse individuals, than Nash's solution assigns a larger share of the commodity to a bargainer as his utility function becomes less risk averse. Thus, risk aversion is a disadvantage in this situation, according to Nash's model. Kihlstrom, Roth and Schmeidler (1981) and Roth (1979) generalized this observation to the case where bargaining concerns selecting the Nash solution from a set of riskless outcomes on which the two bargainers each have concave utility functions. Risk aversion is again a disadvantage. This has been elaborated by Sobel (1981), who considers the case of bargaining over the distribution of several divisible commodities. Thomson (1980) has independently reported related results. All these results find risk aversion to be a disadvantage in bargaining over a set of riskless outcomes.

It is not amiss to ask at this juncture whether the presence of risk aversion being disadvantageous in bargaining situations is a characteristic property of Nash's solution alone. It is possible that other solutions do not share this property. That this may indeed be the case and