Mediation: incomplete information bargaining with filtered communication

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Abstract

We analyze a continuous-time bilateral double auction in the presence of two-sided incomplete information and a smallest money unit. A distinguishing feature of our model is that intermediate concessions are not observable by the adversary: they are only communicated to a passive auctioneer. An alternative interpretation is that of mediated bargaining. Perfect Bayesian Equilibria are characterized. We show that an equilibrium using only the extreme agreements always exists and display the necessary and sufficient condition for the existence of equilibra which yield intermediate agreements. For the symmetric case with uniform-type distribution we numerically calculate the equilibria. We find that the equilibrium which does not use compromise agreements is the least efficient, however the social welfare of the rest of the equilibria is decreasing in the number of compromise agreements used.
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1. Introduction

In this paper, we present an in-depth analysis of mediation in bargaining. Mediation being a wide-spread practice—from international negotiations to divorce proceedings—this is empirically relevant in its own right. Our concurrent intention is more theoretical though: to provide an alternative approach to the study of bargaining with incomplete information.

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